Committee for Enterprise, Trade and Investment

Report on the Committee's Review into Electricity Policy

Part 1: Security of Electricity Supply

Together with the Minutes of Proceedings of the Committee Relating to the Report, Minutes of Evidence, Written Submissions and Research Papers

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Membership and Powers

Powers

The Enterprise, Trade & Investment Committee is a Statutory Committee established in accordance with paragraphs 8 and 9 of the Belfast Agreement, Section 29 of the Northern Ireland Act 1998 and under Assembly Standing Order 46. The Committee has a scrutiny, policy development and consultation role with respect to the Department for Enterprise, Trade & Investment and has a role in the initiation of legislation.

The Committee has power to:

- Consider and advise on Departmental Budgets and Annual Plans in the context of the overall budget allocation;
- Approve relevant secondary legislation and take the Committee stage of relevant primary legislation;
- Call for persons and papers;
- Initiate inquiries and make reports; and
- Consider and advise on matters brought to the Committee by the Minister for Enterprise, Trade & Investment.

Membership

The Committee has 11 members, including a Chairperson and Deputy Chairperson, and a quorum of five members.

The membership of the Committee is as follows:

Democratic Unionist Party	Sydney Anderson[1] Sammy Douglas[2] Gordon Dunne Paul Frew
Green Party	Steven Agnew
Sinn Féin	Phil Flanagan (Deputy Chairperson) Maeve McLaughlin Mitchel McLaughlin[3]
Social Democratic & Labour Party	Patsy McGlone (Chairperson) Fearghal McKinney[4]
Ulster Unionist Party	Sandra Overend

1 With effect from 16th September 2013 Mr Sydney Anderson replaced Mr Stephen Moutray

2 With effect from 16th September 2013 Mr Sammy Douglas replaced Mr Robin Newton

3 With effect from 21st October 2013 Mr Mitchel McLaughlin replaced Ms Sue Ramsey

4 With effect from 7th October 2013 Mr Fearghal McKinney replaced Mr Alban Maginness

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List of Abbreviations and Acronyms used in the Report

AES	Applied Energy Services
CBI	Confederation of British Industry
DETI	Department of Enterprise, Trade and Investment
EU	European Union
I&C	Industrial & Commercial
IED	Industrial Emissions Directive
LCPD	Large Combustion Plant Directive
MW	Mega Watt
NIAUR	The Northern Ireland Authority for Utility Regulation (The Utility Regulator)
NIE	Northern Ireland Electricity
SEF	Strategic Energy Framework
SEM	Single Electricity Market
SONI	System Operator for Northern Ireland
RoI	Republic of Ireland
TNP	Transitional National Plan

Executive Summary

Background and Purpose of the Review

1. The System Operator for Northern Ireland (SONI) tracks the electricity capacity that is available to Northern Ireland, through generation and interconnection, to ensure there will be sufficient generation to meet future demand.

2. SONI published its latest statement in January 2013. The statement demonstrates that the current generation surplus margin of 600 Mega Watt (MW) will reduce to 200MW from 31st December 2015. This is not considered sufficient margin to ensure security of supply in the event of a prolonged outage of a large generating plant. It reported that unless steps are taken to address the problem, Northern Ireland's security of supply would be at risk from the start of 2016 and in deficit from 2021. Further detail on this is provided in an Assembly Research Paper on the issue at Appendix 4.[1] The problem arises because:

   - From 2016 the EU (European Union) Industrial Emissions Directive (IED) will result in the closure of three units at Ballylumford B station;
   - From 2021 Kilroot power station will be on reduced capacity due to restrictions on emissions from coal;
   - There is a fault on the Moyle Interconnector resulting in reduced capacity and reliability problems;
   - The North-South Interconnector, which was estimated in the Strategic Energy Framework (SEF) to be completed by 2014, has been delayed and will not be completed until 2018 at the earliest.

3. The Committee agreed to conduct a review of the evidence in order to determine the extent of the problem and what scope there may be to resolve the situation without unduly impacting on electricity consumers.

Summary of Findings

4. It is clear from the evidence that there is going to be a reduced surplus margin in electricity supply from the end of 2015 due to the closure of Ballylumford B station.

5. It is currently unknown what margin would be sufficient to maintain security of supply or what costs would be considered reasonable to mitigate any risk. It is difficult to calculate cost without understanding what level of margin would be sufficient.

6. The interim solutions brought forward relate to the temporary fix on the Moyle Interconnector, seeking derogation from the EU Industrial Emissions Directive for Ballylumford B station, finding additional new generation capacity or upgrading Ballylumford B station to make it compliant. However:

   - The Moyle Interconnector interim fix is not considered reliable enough to mitigate any risk;
   - Because Ballylumford B is already in a derogation position, further derogation is not possible;
   - New conventional generation would add costs to consumers and there is no new conventional generation currently planned for Northern Ireland; and
   - There would be significant cost associated with upgrading Ballylumford B station to make it compliant with the IED. The owners, AES, would probably seek some form of capacity payment to undertake this work. In addition, a decision needs to be made quickly as some components may be required which can take up to 18 months to source.

1 Appendix 4: Research and Information Services Research Paper

7. Another possibility which came to the Committee was the concept of aggregation of units and demand-side management. Aggregation of units is a concept whereby large energy users, which have significant standby generation capacity, are permitted to pool resources and bid into the electricity market. Demand-side management is where large energy users receive an incentive to shed load at times of peak demand in order to alleviate pressure on supply. There is, however, a lack of clarity around the legislation and mechanisms for any initiative in this area. The Utility Regulator has informed the Committee that the aggregation of units is likely to be around 100MW to 200MW and not enough to bridge the gap to ensure security of supply.

8. The Committee also considered the possibility of utilising two existing cross-border standby connections at Enniskillen and Letterkenny to import electricity during times of peak demand. These have each a capacity of up to 125MW and are currently used to provide back-up when there are faults.

9. The North-South Interconnector, though not relevant to the interim solution, is required to ensure security of supply post 2021. No alternatives are currently under consideration. Northern Ireland Electricity (NIE) informed the Committee that there is currently no mechanism for providing community benefits to those communities on which the Interconnector will impact.

Summary of Committee Position

10. Despite the fact that this issue has been know about for a considerable period of time, the Department of Enterprise, Trade & Investment (DETI), SONI and the Utility Regulator have not yet determined what constitutes sufficient supply margin in order to mitigate any risk to security of supply. In the absence of this figure, it is not possible to calculate the scale of requirements or the cost of any potential solution.

11. The Moyle Interconnector interim repair is still considered a high-risk fix which will not contribute to the security of supply issue. However, there is no indication that the level of risk has been quantified.

12. There seems to be confusion about whether aggregation of units and demand-side management have been included in SONI's calculations on surplus margin. There also seems to be little understanding of what contribution can be made by any initiative in this area.

13. There is currently no new conventional generation planned for Northern Ireland. Any new generation which would constitute a high-cost, long-term solution to a short-term problem could not be supported by the Committee.

14. AES has yet to determine if modifications will be needed to certain components in Ballylumford B station to make it compliant with the IED. As these take up to 18 months to make, this information needs to be known in order to determine the urgency attached to making a decision which includes Ballylumford B station.

15. Any solution which includes Ballylumford B station may be a high-cost, long-term solution to a short-term problem. The cost of any upgrade has yet to be determined by AES. The Company should be able to answer these questions by the end of 2013 and at this stage any decisions then need to be taken by the DETI, SONI and the Utility Regulator. The Committee would be reluctant to support any proposal which results in a significant increase in consumers' bills.

16. In relation to the next security of supply issue in 2021, the North-South Interconnector is the only solution under consideration. A solution, either way, will be required soon in order to either get the Interconnector built in time or to enable other sources of generation to be considered which mitigate the risk.

17. NIE has not considered any provision for community benefits to those communities on which the Interconnector will impact, should the North-South Interconnector be built.

Summary of Recommendations

Key Recommendations to Ensure Security of Supply Beyond 2015

18. In order to make a decision on how to address the security of supply issue, the Department, SONI and the Utility Regulator must urgently undertake work to establish:

    i. A full understanding of the estimated level of surplus margin required to ensure security of supply;

    ii. A full understanding of the level of risk that would be posed by the interim repair to the Moyle Interconnector; and

    iii. An understanding of the level of additional capacity and reduced demand that can be temporarily achieved through aggregation of units and demand-side management, coupled with the utilisation of the two existing cross-border standby connections (it may be that this solution coupled with the interim repair to the Moyle Interconnector is sufficient to diminish the risk to an acceptable level).

19. The information gained from the implementation of recommendations i to iii will provide the required information to determine the level of any remaining gap in the required surplus margin. This will enable DETI, the Utility Regulator and SONI to:

    iv. Determine the statistical probability of an electricity outage and the extent and duration of any outage; and

    v. Undertake a consumer focussed cost/benefit analysis of the options to either commission new generation, support an upgrade of one or more units at Ballylumford B station or accept the risk and do nothing.

Key Recommendations to Ensure Security of Supply Beyond 2020

20. The North-South Interconnector is considered a key infrastructure project to ensure Northern Ireland's long-term security of supply. Given the delays in securing a planning decision for this application, as time moves on, it becomes increasingly unlikely that an alternative could be developed and planning secured before Northern Ireland moves into a supply deficit in 2021.

    vi. The Planning Appeals Commission must set an early date to reconvene the Inquiry into the planning application for the North-South Interconnector so that a decision can be made.

21. There has been no consideration given to providing community benefits to those affected by the North-South Interconnector in the event that planning is approved. The visual impact alone could be considered to be at least as significant as the impact of a large-scale wind farm on a community.

22. In the event that planning permission for the current application is granted, NIE should explore opportunities for providing community benefits to those host communities affected by the North-South Interconnector. It may be appropriate for NIE to engage with DETI and the System Operator to consider how this can best be achieved.

Introduction

Background

23. Following representations from Manufacturing Northern Ireland regarding the high cost of electricity for large manufacturing companies, the Committee took oral evidence from large Industrial & Commercial (I&C) electricity consumers about the problems and issues they face as a result of current electricity pricing policies. The Committee believes that competitive energy pricing is essential to attract and retain the large manufacturing businesses which are essential to sustaining, rebalancing and growing the economy and for providing and sustaining employment.

24. The Chair and members met with the trade unions which represent the employees in Ballylumford Power Station and heard that there is potential for future problems relating to security of electricity supply. The possible reduction in generation capacity in the future results from a combination of three factors: changes to EU legislation; problems with the Moyle Interconnector; and delays in constructing the North-South Interconnector.

25. The Committee is very concerned at the large increase in electricity prices announced by suppliers, which came into effect from 1st July 2013. Following the announcement, the Committee agreed to receive oral evidence from the Utility Regulator, Energia, Power NI and Airtricity to fully understand and scrutinise the reasons for the increase. The Committee Chair also met with the Northern Ireland Independent Retail Trade Association and Pubs of Ulster to consider the impact of price increases on the retail and hospitality sectors.

26. Having established that there are considerable current and potential future problems relating to electricity pricing and security of supply, the Committee agreed to undertake a review of relevant policies.

27. The purpose of the review is to:

- Identify the reasons for recent electricity price increases and for wide fluctuations in electricity prices year-on-year;
- Identify the reasons why large I&C consumers face significantly higher costs for electricity than their counterparts in other jurisdictions especially within the Single Electricity Market (SEM);
- To explore the reasons for potential security of supply issues;
- To consider options for addressing the problems identified; and
- To bring forward recommendations on how these problems can be resolved in the interests of consumers and the local economy.

Terms of Reference for the Review

28. The Committee agreed to critically examine the legislation, the policies and the practices that are currently in place for electricity pricing. The review is intended to identify the key issues which result in fluctuations in electricity pricing and which result in large I&C consumers paying high prices for electricity.

29. The Committee also agreed to examine the reasons why and the extent to which security of supply may be a problem in the future.

30. Both the issue of Security of Supply and the issue of Electricity Pricing are of considerable concern for both business and domestic consumers. They are also distinct areas for consideration. For this reason, the Committee agreed that two separate reports will be produced, one on Security of Supply and one on Electricity Pricing. This report considers only the key issues and findings relating to Security of Supply.

Key Issues and Findings – Security of Supply

General

31. In March 2013, the Committee considered correspondence from the Employee Representatives' Committee of the Trade Unions representing employees in Ballylumford and Kilroot power stations.[2] This correspondence highlighted concerns about security of supply for electricity consumers in Northern Ireland following the implementation of the EU Industrial Emissions Directive at the end of 2015. This led to the Committee decision to include the issue of security of electricity supply as a key strand of its review into Electricity Policy.

32. When providing oral evidence to the Committee, DETI informed members that the purpose of the IED is to limit power stations' emissions, which will result in the curtailment of the operation of some older generation plant, particularly in respect of Ballylumford and the running hours of the coal-fired station at Kilroot.[3] Compliance with the IED is a requirement across the EU and Northern Ireland must meet the compliance date.

33. DETI informed the Committee that AES Corporation, which owns both power stations, is undertaking engineering evaluations of its affected plant and the cost of compliance. Detailed discussions are underway with the Utility Regulator on the matter.[4]

34. AES informed the Committee, during oral evidence, that Kilroot has two 260MW main units fired on coal and heavy fuel oil and Ballylumford B station has three gas-fired 180MW units.[5]

35. All power stations must comply with the EU Large Combustion Plant Directive (LCPD) until the end of 2015 and with its successor, the IED, from 1 January 2016. AES informed the Committee that the options open to the company in order to comply with the IED, include:

- Limited hours of operation up to 2023;
- Operating under a Transitional National Plan (TNP), which would allow restricted operation until 2020; or
- Investing to make the plants fully compliant with IED emissions limits from 1 January 2016.[6]

36. The view of AES detailed in its written submission was that Kilroot will opt into the TNP, which will limit the capacity of the affected units in Kilroot to approximately 45% from 2016 to 2020, with a further reduction in operations to 1,500 hours per annum from 2020. AES also informed the Committee that, in 2007, Ballylumford B station was opted out of the LCPD by the previous owner, Premier Power Ltd. The plant is scheduled to cease operations on 31 December 2015.[7]

37. AES further informed the Committee that, on the basis of discussions with SONI, DETI and the Utility Regulator, they understand that there is an increased risk to Northern Ireland's security of electricity supply from 2016. They believe that this is driven by a combination of the continued delay in the second North-South Interconnector, potential restrictions to Kilroot due to capacity limitations under IED, closure of Ballylumford B station at the end of 2015 and reduced capacity of the Moyle Interconnector.[8]

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2 Appendix 3: Ballylumford and Kilroot Employee Representatives' Written Submission

3 Appendix 2: DETI Hansard

4 Ibid

5 Appendix 2: AES Hansard

6 Ibid

7 Ibid

8 Ibid

38. The Department informed the Committee that, although the Minister has responsibility for policy, there are very few levers available to her as almost all of the delivery is outside her hands. Officials stated that the Utility Regulator's role is pivotal as the Regulator has a high degree of independence. However, DETI seeks to influence regulation so that it reflects the policy goals of the Executive.[9]

Surplus Margin

39. The key concern for security of electricity supply between 2016 and 2020 relates to the surplus margin. This is the level of surplus supply which it is believed is required to have in place to ensure supply in the event of a prolonged outage of a generation plant. In January 2016 the IED comes into effect resulting in some of the large generating units at Ballylumford power station having to be taken out of service.[10]

40. SONI confirmed to the Committee that the surplus margin will be tight until the commissioning of the second North-South Interconnector and that this is the only solution presently under consideration that will resolve the supply risks in Northern Ireland. There is currently surplus generation in the Republic of Ireland (RoI) but, in the absence of the North-South Interconnector, network limitations mean that the RoI surplus cannot be utilised in Northern Ireland.[11]

41. SONI's 'All Island Generation Capacity Statement'[12] identifies that the surplus margin from January 2016 will reduce from approximately 600MW to 200MW. The Utility Regulator confirmed this in both its written submission to the Committee[13] and oral evidence.[14] The Utility Regulator further informed the Committee that this reduction would pose a risk to supply in the event of a prolonged outage of a large generation plant or the Moyle Interconnector.[15] The Utility Regulator further informed the Committee that they are working with SONI to define the extent of the additional generation capacity required to manage the risk.[16] The Utility Regulator also stated that they are working with DETI to progress feasible options and associated costs for securing additional generation capacity to operate from January 2016, at least cost to the consumer.[17]

42. Mutual Energy indicated to the Committee that the issue of security of supply is both real and current. They informed members that, when the Moyle Interconnector was completely out of service in January 2012, the system was very tight. They stated that DETI held weekly meetings during this time, to consider how things could be managed in the event of a supply deficit where load-shedding would be required.[18]

43. In a further oral evidence session, the Utility Regulator informed the Committee that the issue is that Northern Ireland is dependent on a small number of large capacity generating units. A prolonged problem with any one of those large units will, therefore, cause a significant effect on consumers. The Utility Regulator is working with SONI to determine the scale of the risk and to consider whether the risk can be managed at reasonable cost to the consumer. The Utility Regulator stated that, if the risk has a very low likelihood, and mitigating that risk has a high cost, a different decision may be called for.[19]

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9 Appendix 2: DETI Hansard

10 Appendix 2: Utility Regulator 2 Han

11 Appendix 3: SEMO, SONI, Eirgrid Written Submission

12 Ibid

13 Appendix 3: Utility Regulator Written Submission 2

14 Appendix 2: Utility Regulator 2 Hansard

15 Appendix 3: Utility Regulator Written Submission 1

16 Appendix 3: Utility Regulator Written Submission 2

17 Ibid

18 Appendix 2: Mutual Energy Hansard

19 Appendix 2: Utility Regulator 2 Hansard

Future Capacity

44. The Utility Regulator informed the Committee that the short-term options for increasing capacity are interim repair to the Moyle Interconnector, derogation to the IED or additional generating capacity introduced before 2016.[20] The Utility Regulator is currently working with DETI and SONI to assess the scale of the requirement for additional generation capacity and to progress feasible options and associated costs for securing that capacity from January 2016, at least cost to the consumer.[21] However, SONI informed the Committee that there is no evidence of new conventional generators coming into the market.[22]

45. The submission from the Utility Regulator also outlined the long-term requirements as completion of the North-South Interconnector and repair of the Moyle Interconnector.[23] Energia confirmed that there is currently surplus generation on the island of Ireland but in the North there is a deficit with the only new generation being built in Northern Ireland being wind. They also informed the Committee that there are no plans to build any conventional generation in Northern Ireland, which means the North-South Interconnector is critical for security of supply. DETI officials informed the Committee that investment in new generation plant would put extra cost onto electricity bills. Also, Northern Ireland would be less reliant on that additional capacity once the North-South Interconnector is in place,[24] suggesting that this would be a high-cost, long-term solution to a relatively short-term problem. In response to follow-up questions from the Committee, DETI stated that they are currently considering, in conjunction with SONI and the Utility Regulator, the need for additional conventional generating capacity to maintain security of supply.[25]

46. In its written submission to the Committee, AES stated that it is technically possible to modify Ballylumford B station units to comply with the IED. However, any investment would be subject to securing AES internal approvals and relevant environmental and planning consents. It also stated that it is likely that a capacity contract would be required to make this a commercially attractive project. AES is conducting an extensive engineering evaluation to outline the full business case. This is expected to be completed by the end of 2013.[26] In oral evidence to the Committee,[27] AES stated that if the company can get some clarity around what the commercial arrangements look like and the investment required, the B station can play an important part in mitigating any concerns that people would have about security of supply and the reliability of the Moyle Interconnector.

Kilroot Power Station

47. SONI informed the Committee that there will be limited run-hours on Kilroot power station from 2021 due to strict emissions restrictions on coal fired generation from that time.[28] In its oral evidence to the Committee, representatives from AES outlined in more detail the options open to the company in respect of Kilroot power station.[29]

48. In relation to the Transitional National Plan (TNP) AES stated that this is an attempt to move the market into long-term compliance to meet long-term emission goals. Representatives informed the Committee that, in the past, Kilroot has run at up to 85% capacity but that the TNP will result in the plant being allocated a specific annual allocation. When emissions limits have been met, the plant will have to shut down for the remainder of the year. It is estimated

20 Appendix 3: Utility Regulator Written Submission 1

21 Appendix 2: Utility Regulator 2 Hansard

22 Appendix 3: SEMO, SONI, Eirgrid Written Submission

23 Appendix 3: Utility Regulator Written Submission 1

24 Appendix 2: DETI Hansard

25 Appendix 3: DETI Written Submission 2

26 Appendix 3: AES Written Submission

27 Appendix 2: AES Hansard

28 Appendix 3: SEMO, SONI, Eirgrid Written Submission

29 Appendix 2: AES Hansard

that, under the TNP, Kilroot will run at 45% capacity from 2016 to 2020. There is concern within AES that this could result in the plant suffering a loss.

49. The company is currently evaluating the economics of making the main units at Kilroot compliant with the IED from 2016. The initial view, based on current market conditions and discussions with a number of equipment suppliers, is that it looks promising. There is, however, a further engineering design review being completed this year and an appropriate risk mitigation strategy will be developed to manage the risk. AES reiterated that investment at either Kilroot or Ballylumford would be subject to AES internal approval processes and all relevant environmental and planning consents. Representatives informed the Committee that the company is well-positioned to avail of that option where the capacity factor could be at 70%.[30] However, as stated above, the current view within AES is that Kilroot will opt into the TNP. In SONI's presentation to the Committee on its All-Island Generation Capacity Statement 2012-2021 this was taken into account.[31] The coal units at Kilroot power station have a total capacity of 476MW. Making Kilroot compliant would result in its full capacity being available rather than the 45% under the TNP.[32]

Ballylumford B Station

50. This section is mainly a summary of the oral evidence provided to the Committee by AES in relation to requirements to make Ballylumford B station compliant with the IED.[33]

51. Further investment and modifications to the boiler units in Ballylumford B station would be required to make the plant IED compliant. AES has conducted preliminary engineering assessments and considers this technically possible. It is currently unknown whether this would also require changes to some steam components in the plants. This is significant because it would take 18 months to order these components. If this is required then the decision becomes much more urgent. AES will know if this is required by the end of 2013 when a more extensive engineering evaluation is completed to outline the full business case and the full extent of investment required. AES believes that anticipated changes to the electricity market in 2016 will play a key part in determining the overall project risks.[34] If Ballylumford B station were to be made compliant, this should result in sufficient capacity until delivery of the North-South Interconnector.[35]

52. AES informed the Committee that the amount of investment required would depend on three factors. Namely, the investment required to make the appropriate changes to reduce emissions; further changes which will have to be made as a consequence of this; and whether or not changes are required to major steam components which would, in turn, increase the capital cost significantly. The company believes it likely that a capacity contract would be required to make the project commercially attractive as, on the basis of its current calculations, investment in the market would not be economically viable. If AES can make the investment, by whatever means, it believes the security of supply issue will be much less urgent, stating that such an investment would bridge the gap until the completion of the North-South Interconnector.[36]

53. A major reform project will soon be launched by the regulators, North and South, to ensure that the SEM complies with EU directives. This is creating uncertainty about the revenue stream for AES which has increased the risk.

30 Ibid

31 Appendix 3: SEMO, SONI, Eirgrid Written Submission

32 Appendix 3: Utility Regulator Written Submission 3

33 Appendix 2: AES Hansard

34 Ibid

35 Appendix 3: Utility Regulator Written Submission 3

36 Appendix 2: AES Hansard

54. From an investment strategy viewpoint, Ballylumford B station is only a backup supply. It operates very little but is an inherent part of the system because the backup capacity it provides is required in the event of a major failure of any other unit. If a capacity contract is provided, any risk would be borne by the consumer to a certain extent. If it is done by AES, the risk would be theirs. It is therefore very important to AES to understand the full investment cost structure. If some form of capacity contract is required to make the upgrading of Ballylumford B station viable, that will be a decision for SONI, the Utility Regulator and DETI combined. AES needs such a decision to be made as soon as possible so that plans can be made. In the current market, there are ancillary service contracts for the provision of services to support the system, such as reserve reactive power. AES believes an ancillary service contract could be offered, which is adjusted to reflect a capacity support mechanism for a period when Northern Ireland needs the capacity offered by the B station.[37] Ancillary Service Contracts are payments and charges paid or levied outside the Single Electricity Market by the Transmission System Operators for services necessary for the secure operation and restoration of the electricity system.[38]

55. In addition to the impact of the closure of Ballylumford B station on security of electricity supply, AES representatives informed the Committee that, if Ballylumford B station ceased to operate, there will be no alternative for the Company but to reduce the workforce by approximately 85 employees.[39]

Derogation from EU Industrial Emissions Directive

56. The Committee has extensively investigated the option of derogation from the IED being sought in respect of Ballylumford B station. Such derogation would allow the station to operate as usual for an agreed period of time until the North-South Interconnector is completed. Derogation would provide the most cost effective option and would allow Northern Ireland to maintain its security of supply for the period of the derogation.

57. AES informed the Committee that its understanding is that, because Ballylumford B station opted out of the LCPD in 2007 under the previous owner, there is no legal opportunity for the station to go through a derogated process.[40] DETI[41] and the Utility Regulator[42] confirmed that the possibility of derogation from the IED requirements has been investigated with the Department of the Environment (the Emissions Regulator) and it is clear that an appropriate derogation is not possible. The Utility Regulator stated that Ballylumford is already in a derogation position (from the LCPD) and, as a result, there is no scope for a further derogation.

Moyle Interconnector

58. The Moyle Interconnector is a high-voltage, direct-current interconnector, consisting of two 250MW units. Each unit has a cable that runs under the sea between Scotland and Northern Ireland. NIE completed the cable in 2001. The Interconnector was purchased by Mutual Energy in 2003. When fully functional, the Moyle Interconnector produces 500MW of capacity, which, according to Mutual Energy, avoids the need to build a 500MW power station in Northern Ireland.[43]

59. Since 2010, four similar cable faults have occurred on the cable. Three have been repaired and, as a consequence of the fourth not having been repaired, the Interconnector is operating at half capacity of 250MW. There is also a significant risk that there will be further

37 Ibid

38 SONI Website http://www.soni.ltd.uk/Operations/AncillaryServices/ Accessed 4th November 2013

39 Appendix 2: AES Hansard

40 Appendix 2: Ibid

41 Appendix 3: DETI Written Submission

42 Appendix 2: Utility Regulator 2 Hansard

43 Appendix 2: Mutual Energy Hansard

cable faults in the future.[44] The cost for repairs to the Interconnector will, ultimately, fall to consumers.[45]

60. The Utility Regulator made it clear that responsibility for solving the problem with the Moyle Interconnector lies with Mutual Energy. The Regulator informed the Committee that it is the responsibility of Mutual Energy to state what it intends to do to resolve the problem in the short-term and the long-term.[46]

61. Mutual Energy has been engaged in discussions with DETI, the Utility Regulator and DoE with a view to implementing a temporary option to restore the Interconnector to its full capacity before the end of 2015. The company is also working on long-term plans to lay two new cables along the rout of the existing cables to provide a permanent restoration of the Interconnector to full operating capacity by 2017.[47] The cost of the permanent solution is estimated at around £60 million. The cost of the interim repair is between £2 million and £4 million and the time frames are for the temporary solution to be in place by the end of 2014.[48] The Utility Regulator has indicated support for the proposed short-term and long-term solutions.[49]

62. Mutual Energy informed the Committee that the company will need to ensure that any investment on behalf of consumers is clearly beneficial and that it is at the best cost and is sufficient to meet requirements. This will require properly testing and challenging any potential solutions against alternatives which may be available.[50]

63. The Utility Regulator informed the Committee that, although the interim solutions are progressing and look very positive for delivery in 2014 (well before Ballylumford B Station is due to cease operations), these solutions are novel and rely on the existing cables which are failing. They do not, therefore, negate the risk and work is still on-going with SONI to determine the quantum of that risk and the additional capacity needed to ensure security of supply.[51] The permanent solution, due for completion by 2017, still leaves a gap of up to two years following the closure of Ballylumford B Station at the end of 2015, where there is considerable uncertainty regarding the security of electricity supply.

North-South Interconnector

64. According to NIE, the North-South Interconnector is the most significant electricity infrastructure project developed since the 1960s. It is a cross-border project which is being developed at the request of the regulators and governments on both sides of the border because it is recognised as a 'key enabler' for the effective operation of an efficient all-island electricity market. NIE states that for Northern Ireland in particular, the Interconnector will also increase the security of supply by enabling increased power flow between Northern Ireland and the RoI to meet peak demand.[52] This view is supported by DETI which, in its written submission to the Committee, stated that the Interconnector is a major electricity infrastructure project which is required to meet the strategic energy needs of both jurisdictions.[53] The view was also fully supported by the Utility Regulator,[54] the Confederation

44 Ibid
45 Appendix 3: Mutual Energy Written Submission
46 Appendix 2: Utility Regulator Hansard
47 Appendix 3: DETI Written Submission
48 Appendix 2: DETI Hansard
49 Appendix 3: Mutual Energy 2 Written Submission
50 Appendix 2: Mutual Energy Hansard
51 Appendix 2: Utility Regulator 2 Hansard
52 Appendix 3: NIE Written Submission
53 Appendix 3: DETI Written Submission
54 Appendix 2: Utility Regulator 2 Hansard

of British Industry (CBI)[55] and AES. AES informed the Committee that the Interconnector is a key element in the long-term strategy because it would allow access to the most cost-efficient unit at any one time.[56]

65. The employee representatives from Kilroot and Ballylumford drew the Committee's attention to the increased risk posed to security of electricity supply by the closure of Ballylumford B Station and restrictions on Kilroot power station at the end of 2015.[57] This was confirmed by the Utility Regulator who informed the Committee that there is a heightened risk to security of supply from the start of 2016 due to the delay in the delivery of the North-South Interconnector, which the Strategic Energy Framework assumed would be delivered in 2013-2014.[58] NIE considers the earliest possible completion date for the Interconnector to be the end of 2017, stating that there are likely to be serious shortfalls in supplies in the coming years, resulting in electricity supply to some areas being switched off during peak demand in order to prevent power system failure.[59] The Utility Regulator also informed the Committee that SONI has identified a deficit of supply from 2021 unless the interconnector is completed before that date.[60] This view is confirmed in SONI's written submission to the Committee.[61] SONI informed the Committee in oral evidence that, on completion of the North-South Interconnector the electricity generated in the RoI can be exported to Northern Ireland and the deficit can be closed. Representatives emphasised that, in the absence of any other proposals in Northern Ireland, the North-South Interconnector is the only single proposal that they are aware of, that would change the situation.[62]

66. In the view of the Utility Regulator,[63] the failure to deliver the North-South Interconnector within the SEF projected timeframe is very significant. The Regulator considers that, an optimistic prediction of the earliest date for delivery of the Interconnector is probably 2018. NIE informed the Committee that, if planning permission is not granted for the Interconnector, there is no Plan B. It then becomes an issue for DETI and the Utility Regulator to decide on an alternative course of action to deal with the security of supply issue. NIE believes that any alternative will cost more money and result in an increase in prices for consumers.[64]

67. In its written submission to the Committee, NIE stated that there is currently no scheduled date for the public inquiry in to the planning application for the North-South Interconnector to reconvene. The timetable is a matter for the DoE Planning Service and the Planning Appeals Commission to determine. NIE informed the Committee that, in the RoI, EirGrid plans to submit an application to An Bord Pleanála (the Irish Planning Service) in early 2014.[65] In oral evidence to the Committee NIE stated that the increasingly difficult and time-consuming consenting process is leading to concerns about when the Interconnector will be operational. They stated that the targeted completion date of 2017 is becoming increasingly challenging[66]; supporting the view of the Utility Regulator that a completion date of 2018 now looks more likely.

68. In relation to the on-going debate around the costs and impacts of an underground versus an overhead solution to the planning difficulties surrounding the North-South Interconnector, Mr Robert Wasson, Asset Management Director, NIE, informed the Committee that,

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55 Appendix 3: CBI Written Submission

56 Appendix 2: AES Hansard

57 Appendix 3: Ballylumford and Kilroot Employee Representatives' Written Submission

58 Appendix 3: Utility Regulator Written Submission

59 Appendix 3: NIE Written Submission

60 Appendix 3: Utility Regulator 2 Written Submission

61 Appendix 3: SEMO, SONI, Eirgrid Written Submission

62 Appendix 2: SEMO, SONI, EirGrid Hansard

63 Appendix 3: Utility Regulator 2 Written Submission

64 Appendix 2: NIE Hansard

65 Appendix 3: NIE Written Submission

66 Appendix 2: NIE Hansard

"Any debate around the relative merits and costs of underground versus overhead is, frankly, pointless. As NIE has pointed out in planning submissions, an underground cable option for this type of connection is technically unproven anywhere in the world. That is a fact. It is especially true for a tiny, weakly interconnected system such as we have on this island. Were we to proceed with it, there is the nightmare prospect of the customer having to fund hundreds of millions for a project that might well not work. NIE would never bring such a proposal to the Regulator for approval, and, rightly, the Regulator would not approve it. We believe that it would help everybody and this process if that point were realised and the question of underground put to bed once and for all. I state unequivocally that it is not feasible technically, it is unproven, and people should stop considering it as if it were an option. It is not."

69. The Committee raised the matter of possible community benefit to those effected by the North-South Interconnector, suggesting that there could be some benefit provided to communities in the same way as operates for large-scale wind farms. NIE informed the Committee that, although they recognised that this is raised in many parts of the world as a way in which infrastructure projects can gain better support in communities, there is no mechanism in place in Northern Ireland for this. It would be a matter for the Utility Regulator to consider as consumers would ultimately have to pay for those benefits.[67]

Aggregation of Units and Demand Side Management

70. Representing the CBI, Mr Declan Billington, Managing Director of Thompson's Ltd, outlined to the Committee the potential for aggregation of back-up generation capacity by large energy users.[68] Under an agreement with the Utility Regulator, companies with stand-by generators designed for use during power cuts, would pool their generation capacity and bid into the generation pool and get payment for that asset and receive capacity payments. Aggregation of units would increase the capacity of the system during periods of peak demand thereby helping to provide the required capacity to ensure security of supply.

71. Mr Billington also outlined the potential for managing demand of large energy users during peak periods of electricity demand.[69] Under this type of agreement large energy users would receive a payment to either self-generate or stop manufacturing during periods of peak demand. He stated that a lot of businesses running two shifts could stagger shifts to enable this to happen. Demand side management would reduce demand during peak periods thereby decreasing the required capacity and assisting in ensuring security of supply.

72. SONI informed the Committee that the opportunity for aggregation of units exists and there is no reason why it could not be more widely deployed. In relation to demand side management, SONI stated that this is probably more difficult to organise as the legislation and mechanisms are not currently in place in Northern Ireland. SONI stated that, if DETI and the Utility Regulator were to move the matter more quickly, it would be interesting to see whether industry would follow.[70] The CBI confirmed that clarity is needed regarding changes in legislation or other technical constraints.[71]

73. The Utility Regulator informed the Committee that SONI has been asked to look at any additional potential there may be with demand side management and aggregation of units. The Regulator stated that SONI may have already factored that into the equation in its capacity statement. SONI has informed the Utility Regulator that the scale is likely to be

67 Ibid

68 Appendix 2: CBI Hansard

69 Appendix 2: Ibid

70 Appendix 2: SEMO, SONI, EirGrid Hansard

71 Appendix 2: CBI Hansard

around 100MW to 200MW. The Regulator does not consider this sufficient to bridge the gap to ensure security of supply.[72]

74. In response to a follow-up question from the Committee, DETI officials stated that aggregation of small, physically dispersed generation units is permitted with the SEM market trading rules, following modifications to the Trading and Settlement Code by the SEM Committee. Officials went on to state that, although current licence categories do not cover aggregation of units, the Utility Regulator has asked DETI to make provision for the activity through the legislative process.[73]

75. DETI also stated that it fully supports enhancing/maximising the use of aggregation and demand side measures and has been engaged in discussion with the Utility Regulator to identify the barriers there may be in the current regulatory framework to demand side management. DETI and the Utility Regulator are working through the necessary policy development process but there are complex legal issues and new primary legislation may be required. DETI considers the immediate priority to be to encourage the Utility Regulator to find a workable arrangement for demand side measures under the existing legislative and regulatory framework.

Existing Cross-Border Standby Connections

76. The Committee is aware of the close proximity of centres of population in border regions, north and south. Members wanted to explore the possibility of establishing local distribution connections between communities in order to import electricity during times of peak demand, in order to assist in increasing the surplus margin available from the end of 2015.

77. The Committee explored the possibility with NIE during oral evidence and it emerged that there are two existing cross-border standby connections. One in Enniskillen and one near Letterkenny. These are small standby connections between the networks. They are limited in their power transfer capability and are currently used to provide back-up when there are faults.[74]

78. In order to get an idea of the capacity of the two cross-border connections, the Committee contacted the Utility Regulator. The Utility Regulator informed the Committee that the lines can go up to 125MW. Until 2001 they each operated in a standby mode but were then converted into permanent connections by the deployment of power flow controllers rated at 125MW.[75]

72 Appendix 2 Utility Regulator 2 Hansard

73 Appendix 3: DETI Written Submission 2

74 Appendix 2: NIE Hansard

75 Appendix 3: Utility Regulator Written Submission 3

Conclusions & Recommendations – Security of Supply

Required Surplus Margin

79. It is not currently known what would be sufficient surplus margin to ensure security of supply. This should have been determined before now. The impact of the IED on Ballylumford B station has been known for some time. Considering the importance of the contribution it currently makes to Northern Ireland's security of supply, the impact of its closure should have been calculated as a matter of urgency. This could enable work to begin on determining the costs associated with any potential solutions.

Interim Moyle Interconnector Repair

80. The Committee has been informed that the Moyle Interconnector repair will be a temporary repair and will not mitigate the risk to the security of supply issue. The extent of the risk still posed following the repair of the Moyle Interconnector has not been determined.

Aggregation of Units and Demand-Side Management

81. There seems to be a high degree of uncertainty between SONI and the Utility Regulator in relation to whether the capacity for aggregation of units and demand-side management has already been factored into the SONI capacity statement. SONI stated that the opportunity exists and there is no reason why it could not be more widely deployed. The Utility Regulator informed the Committee that 100MW to 200MW is likely to be available however this is not considered sufficient to bridge the gap.

82. The legislation and mechanisms that would be required have not been fully investigated.

Existing Cross-Border Standby Connections

83. No consideration has been given to utilising these existing connections as part of the solution to assist in overcoming security of supply issues. The Committee questioned NIE about these two connections; however, representatives from NIE seemed to understand that the Committee had been suggesting this as an alternative to the North-South Interconnector. This was not the Committee's intention. The Committee has considered this purely as a potential option to assist with security of supply from 2016 until the Moyle Interconnector permanent solution is in place in 2017 and, if necessary, until the completion of the North-South Interconnector.

84. The two existing connections each have a capacity of up to 125MW. A full assessment should be made of the suitability of these connections to access generation from the RoI and contribute to security of supply during times of peak demand. If feasible, this would allow generation from within Northern Ireland to be diverted to other areas where it is required.

Option to Commission New Generation

85. The proposed increase in renewable generation between now and 2020 has already been factored into the SONI capacity statement. The only other available option to increase generation capacity is therefore to commission new conventional generation.

86. The commissioning of any additional conventional generation in Northern Ireland in order to alleviate the security of supply issue from 2016 to 2018, which would constitute a high-cost, long-term solution to solve a short-term problem, could not be supported by the Committee.

Option to Make Kilroot Power Station IED Compliant

87. Should AES opt to make Kilroot power station fully IED compliant by the end of 2015, it is estimated that the plant can run at 70% capacity rather than the 45% capacity estimated under the TNP. Given that the full capacity of Kilroot is 560MW, this should provide an additional 25% or 130MW of capacity to the grid. However, as AES has indicated that Kilroot will probably opt into the TNP, this scenario is unlikely to transpire.

Option to Upgrade Ballylumford B Station

88. AES have stated that they will have a good understanding of the requirements and costs to upgrade Ballylumford B station by the end of 2013 when an extensive engineering evaluation is completed to outline the full business case and the extent of the investment required. AES currently believes that some form of capacity contract would be required to make the project commercially attractive. The Committee would be very reluctant to support any proposal for a solution which results in a significant increase to consumers' bills.

89. Ballylumford B station consists of three 180MW units. It is important that the feasibility of upgrading only one or two of the units is explored so that, in the event that only a proportion of Ballylumford B station capacity is required, consumers are not covering the cost of upgrading all three units.

90. DETI, SONI and the Utility Regulator must engage with AES at an early stage to determine the company's cost requirements for a capacity contract; and in relation to the time scale before a decision is required. This is especially urgent if a requirement is identified to replace some steam components in the generating plant which have an 18 month lead time.

North-South Interconnector

91. The current estimated earliest completion date for the North-South Interconnector is 2018. The Interconnector or any potential alternative, will not, therefore, contribute to a solution to the security of supply issue from the end of 2015.

92. The Planning Appeals Commission has not yet set a date to reconvene the Inquiry into the application for the North-South Interconnector. The delay in this decision is adding to uncertainty. If the Interconnector is to be built as proposed, the completion date must be before the 2021 deadline where Northern Ireland will move into a deficit of capacity during peak times. If the decision is to refuse planning permission, there must be time to plan and implement an alternative solution prior to the 2021 deadline. The North-South Interconnector is a key infrastructure project to ensure Northern Ireland's long-term security of supply.

93. When asked about the possibility of providing community benefits to those affected, in the event the North-South Interconnector is to be built, NIE informed the Committee that there is no mechanism in this jurisdiction to consider such benefits. NIE considers it a matter for the Utility Regulator to decide if it was worth adding the cost of community benefits to electricity bills for all customers.

Key Recommendations to Ensure Security of Supply Beyond 2015

94. In order to make a decision on how to address the security of supply issue, DETI, SONI and the Utility Regulator must urgently undertake work to establish:

i. A full understanding of the estimated level of surplus margin required to ensure security of supply;

ii. A full understanding of the level of risk that would be posed by the interim repair to the Moyle Interconnector; and

iii. An understanding of the level of additional capacity and reduced demand that can be temporarily gained through aggregation of units and demand-side management, coupled with the utilisation of the two existing cross-border standby connections (it

may be that this solution coupled with the interim repair to the Moyle Interconnector is sufficient to diminish the risk to an acceptable level).

95. The knowledge gained from the implementation of recommendations i to iii will provide the information required to determine the extent of any remaining gap in the required surplus margin. At this stage, AES should also have the required information to make an informed decision on the future of Kilroot power station. This will enable DETI, the Utility Regulator and SONI to:

iv. Determine the statistical probability of an electricity outage and the extent and duration of any outage; and

v. Undertake a consumer focussed cost/benefit analysis of the options to either commission new generation, support an upgrade of one or more units at Ballylumford B station or accept the risk and do nothing.

Key Recommendations to Ensure Security of Supply Beyond 2020

96. The North-South Interconnector is considered a key infrastructure project to ensure Northern Ireland's long-term security of supply. Given the delays in securing a planning decision for this application, as time moves on, it becomes increasingly unlikely that an alternative could be developed and planning secured before Northern Ireland moves into a supply deficit in 2021.

vi. The Planning Appeals Commission must set an early date to reconvene the Inquiry into the planning application for the North-South Interconnector so that a decision can be made.

97. There has been no consideration given to providing community benefits to those affected by the North-South Interconnector in the event that planning is approved. The visual impact alone could be considered to be at least as significant as the impact of a large-scale wind farm on a community.

vii. In the event that planning permission for the current application is granted, NIE should explore opportunities for providing community benefits to those host communities affected by the North-South Interconnector. It may be appropriate for NIE to engage with DETI and the System Operator to consider how this can best be achieved.

Northern Ireland Assembly

Appendix 1

Minutes of Proceedings (Extracts)

Appendix 1 – Minutes of Proceedings (extracts)

1. 31 January 2013 – Mutual Energy
2. 6 June 2013 – Manufacturing NI
3. 6 June 2013 – Utility Regulator
4. 13 June 2013 – Energia
5. 13 June 2013 – Power NI
6. 27 June 2013 – SONI
7. 4 July 2013 – Airtricity
8. 19 September 2013 – CBI
9. 19 September 2013 – SEMO
10. 26 September 2013 – AES
11. 3 October 2013 – Consumer Council NI
12. 3 October 2013 – Invest NI
13. 10 October 2013 – DETI
14. 24 October 2013 – Northern Ireland Electricity
15. 7 November 2013
16. 14 November 2013
17. 28 November 2013

31 January 2013
Room 30, Parliament Buildings 10.00am

Present: Mr. Patsy McGlone (Chairperson)
Mr. Phil Flanagan (Deputy Chairperson)
Mr. Gordon Dunne
Mr. Paul Frew
Mr. Alban Maginness
Mr. Steven Moutray
Ms Maeve McLaughlin
Mr. Robin Newton
Ms Sandra Overend
Ms Sue Ramsey

In Attendance: Mr. Jim McManus (Assembly Clerk)
Ms Kate McCullough (Assistant Assembly Clerk)
Mr Christopher McNickle (Clerical Supervisor)
Ms Michelle Whitaker (Clerical Officer)

5. Moyle Interconnector: - Oral Briefing from Mutual Energy

10:20am Representatives joined the meeting.

10:22am Sue Ramsey joined the meeting.

Members received an oral briefing from Mr Paddy Larkin, Chief Executive, Mutual Energy and Mr Gerard McIlroy, Finance Director, Mutual Energy.

Key issues discussed included: the positive and negative features of the Moyle Electricity Interconnector and the proposals to develop the Islandmagee gas storage project.

10:29am Stephen Moutray joined the meeting.

10:54am Patsy McGlone joined the meeting and took the Chair.

11:41am Sue Ramsey left the meeting.

12:15pm Sandra Overend left the meeting.

Mr Patsy McGlone
Chair
Committee for Enterprise, Trade and Investment

07 February 2013

[EXTRACT]

6 June 2013
Room 30, Parliament Buildings 10.00am

Present: Mr. Patsy McGlone (Chairperson)
Mr. Phil Flanagan (Deputy Chairperson)
Mr. Steven Agnew
Mr. Gordon Dunne
Mr. Paul Frew
Mr. Alban Maginness
Ms Maeve McLaughlin
Ms Sandra Overend
Ms Sue Ramsey

In Attendance: Mr. Jim McManus (Assembly Clerk)
Ms Kate McCullough (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms. Jacqueline Holt (Clerical Officer)

Apologies: Mr. Stephen Moutray
Mr. Robin Newton

5. Electricity Prices: - Oral Briefing from Utility Regulator

10:43am Representatives joined the meeting

Members received an oral briefing from Mr. Shane Lynch, Utility Regulator and Mr. Kevin Shiels, Director of Retail and Social.

Key issues discussed included: recent price increases, security of supply and energy costs to businesses.

11:29am Sue Ramsey rejoined the meeting.

12:10pm Alban Maginness left the meeting.

12:16pm Gordon Dunne rejoined the meeting.

Agreed: to receive from the Utility Regulator information on the next steps arising from the consultation.

Agreed: to receive an oral briefing from Airtricity and SSE on this issue.

12:16pm Representatives left the meeting.

6. Electricity Prices:- Oral Briefing from Manufacturing NI

12:18pm Representatives joined the meeting.

Members received an oral briefing from Bryan Gray, Chief Executive, Manufacturing Northern Ireland, Wilton Crawford, Managing Director, Michelin Tyres PLC, Conleth O'Neill, Financial Director, Harland and Wolff, Niall Irwin, Joint Managing Director, Irwin's Bakery, Cecil McBurney, Director Plant Engineering, Bombardier Aerospace.

12.55pm Paul Frew joined the meeting.

Key issues discussed included: energy costs for larger businesses, security of supply and the energy policy framework.

1:20pm Representatives left the meeting.

Mr Patsy McGlone

Chair
Committee for Enterprise, Trade and Investment

13 June 2013

[EXTRACT]

13 June 2013
Room 30, Parliament Buildings 10.00am

Present: Mr. Patsy McGlone (Chairperson)
Mr. Phil Flanagan (Deputy Chairperson)
Mr. Steven Agnew
Mr. Gordon Dunne
Mr. Paul Frew
Mr. Alban Maginness
Mr. Stephen Moutray
Ms Sandra Overend
Ms Sue Ramsey

In Attendance: Mr. Jim McManus (Assembly Clerk)
Ms Kate McCullough (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Ms. Maeve McLaughlin
Mr. Robin Newton

6. Electricity Prices: - Oral Briefing from Energia

10:33am Representatives joined the meeting.

Members received an oral briefing from Mr. Tom Gillen, Managing Director, Energia, Mr. John Mawhinney, Operations Manager, Energia, Mr. John Newman, Trading and Regulation Director, Energia.

10:50am Sandra Overend joined the meeting.

10:55am Sue Ramsey left the meeting.

11:18am Gordon Dunne left the meeting.

Key issues discussed included: the Energia Group, supply competition, and Northern Ireland vs Republic of Ireland price divergence for business and domestic consumers.

11:42am Representatives left the meeting.

11:42am The Chairperson left the meeting.

11:42am The deputy Chairperson took the Chair.

7. Electricity Prices: Oral Briefing from Power NI

11:43am Representatives joined the meeting.

Members received an oral briefing from Ms. Kerstie Forsyth, Head of Home Marketing & Communications, Power NI and Mr. Stephen McCully, Managing Director, Power NI

Key issues discussed included: recent pricing trends, price drivers and price comparisons.

11:53am The Chairperson rejoined the meeting.

12:12pm Phil Flanagan left the meeting.

12:22pm Stephen Moutray left the meeting.

12:43pm Representatives left the meeting.

Agreed: to receive statistics on the percentage of keypad meter customers in arrears at various percentages of debt recovery.

Agreed: to commission research on how the Moyle and North/South interconnectors' models were agreed and alternatives may have been considererd.

Agreed: Chairperson to share research on the profit margins of renewable energy.

Mr Patsy McGlone

Chair
Committee for Enterprise, Trade and Investment

20 June 2013

[EXTRACT]

27 June 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Phil Flanagan (Deputy Chairperson)
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Mr Stephen Moutray
Ms Maeve McLaughlin
Mr Robin Newton
Ms Sandra Overend

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Mr Patsy McGlone (Chairperson)
Ms Sue Ramsey

7. Review of Electricity Policy

Members considered the proposal, including the terms of reference, for the forthcoming review of electricity policy.

Agreed: that the Terms of Reference are accepted as amended.

Mr Phil Flanagan

Deputy Chair
Committee for Enterprise, Trade and Investment

27 June 2013

[EXTRACT]

04 July 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mt Steven Agnew
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Mr Stephen Moutray
Ms Maeve McLaughlin
Ms Sandra Overend
Ms Sue Ramsey

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr James Westland (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Mr Robin Newton

5. Electricity Pricing - Oral Briefing from Airtricity and SSE

10:32am Representatives joined the meeting

Members received an oral briefing from David Manning, Director of Corporate Affairs, Fiona Hannon, Supply Regulation Manager and Andrew Greer, Commercial Sales Manager.

Key issues discussed included: pricing policy, flexibility for customers in getting information and sources of energy generation and supply.

10:52am Sue Ramsey left the meeting.

Agreed: SSE to clarify the profit figures and margins for the period 2011/12

Agreed: SSE to provide the profit figures for the period 2012/13

11:06am Stephen Moutray left the meeting.

Steven Agnew declared an interest as an Airtricity customer.

Agreed: SSE to provide information on how much money Airtricity lost during the period when the price was reduced.

Agreed: SSE to provide information on how many customers switched to SSE in the period between Power NI's price increase in July 2013 and Airtricity's subsequent price increase the following week.

Agreed: SSE to provide details of a review which is currently underway and is expected to be available at the end of Summer.

Agreed: To raise the DS3 programme with SONI and get further information on this.

11.21am Sandra Overend joined the meeting.

11:32am Stephen Moutray returned.

11:46am Representatives left the meeting.

Mr Patsy McGlone

Chair
Committee for Enterprise, Trade and Investment

4 July 2013

[EXTRACT]

19 September 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mt Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Ms Sandra Overend

In Attendance: Mrs Cathie White (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Ms Sue Ramsey

5. Electricity Policy Review - Oral Briefing from Confederation of Business Industry

11:00am Representatives joined the meeting

Members received an oral briefing from Colin Walsh, Vice-Chairman, CBI Northern Ireland, Declan Billington, Managing Director, John Thompsons and Sons and Nigel Smyth, Director, CBI Northern Ireland.

Key issues discussed included: the cost of electricity and the security of supply.

Agreed: that an invitation to the Committee to meet the Large Users Forum in CBI would be welcomed and that the CBI representatives are to provide information on what the implications of distortion, caused by two different systems, were for businesses in Northern Ireland.

11:44am Patsy McGlone left the meeting.

11:44am Phil Flanagan took the Chair.

12:01pm Patsy McGlone rejoined the meeting.

12:10pm Patsy McGlone resumed the Chair.

12:11pm Phil Flanagan left the meeting.

12:23pm Paul Frew joined the meeting.

12:28pm Representatives left the meeting.

6. Electricity Policy Review - Oral Briefing from Single Electricity Market Operator

12:30pm Representatives joined the meeting

Members received an oral briefing from Robin McCormick, General Manager, SEMO and Brendan O'Sullivan, Power Market Consultant.

Key issues discussed included: the cost of electricity and security of supply.

1:15pm Representatives left the meeting.

Agreed: that the Committee would produce two separate reports for the Electricity Policy Review as there are two very separate aspects to the Review, namely pricing and security of supply.

Agreed: that the Committee would receive a briefing from management representatives of Ballylumford Power Station.

Agreed: to ask Action Renewables for a written briefing on the Electricity Policy Review.

Agreed: that the Committee would consider an updated Terms of Reference at the next meeting.

Mr Patsy McGlone

Chair
Committee for Enterprise, Trade and Investment

26 September 2013

[EXTRACT]

26 September 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mt Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Ms Sandra Overend

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Ms Sue Ramsey

5. Electricity tariffs; components and legislative underpinnings – Assembly Research Paper

Members considered the Assembly Research Paper regarding Electricity tariffs: components and legislative underpinnings.

Agreed: that the research is included in the Electricity Policy Review.

Agreed: to ask the Utility Regulator where the balance of the sum stated comes from.

6. Electricity Policy Review - Oral Briefing from AES

10:24am Representatives joined the meeting.

Members received an oral briefing from Mark Miller, Vice President, UK and Irish Markets, AES Ballylumford, Roger Casement, UK Plant Manager, AES Ballylumford and Ian Luney, UK Commercial Manager, AES Ballylumford.

Key issues discussed included: security of supply and funding options.

10:33am Alban Maginness joined the meeting.

10:44am Steven Agnew joined the meeting.

10:49am Sandra Overend joined the meeting.

11:15am Representatives left the meeting.

7. Electricity Policy Review - Oral Briefing from Assembly Research

11:16am The researcher joined the meeting.

Members received an oral briefing from Aidan Stennett, Researcher regarding interconnector financing models.

11:25am The researcher left the meeting.

Mr Patsy McGlone

Chairperson
Committee for Enterprise, Trade and Investment

3 October 2013

[EXTRACT]

3 October 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mt Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Alban Maginness
Ms Sandra Overend

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Mr Paul Frew
Ms Sue Ramsey

13. Power NI: tariff methodology – Assembly Research Paper

Members considered an Assembly Research Paper regarding Power NI tariff methodology.

Agreed: to include the research in the Electricity Policy Review.

3. Electricity Policy Review - Oral Briefing from Consumer Council

10:54am Representatives joined the meeting.

10:54am Alban Maginness left the meeting.

Members received an oral briefing from Aodhan O'Donnell, Interim Chief Executive and Richard Williams, Senior Consumer Affairs Officer, Energy.

Key issues discussed included: security of supply and the cost to consumers.

11:25am The Chairperson left the meeting.

11:25am The deputy Chairperson took the chair.

11:54am Sydney Anderson left the meeting.

11:57am Representatives left the meeting.

Agreed: to discuss the decision and timetabling of the appointment of a permanent Chief Executive at a forthcoming briefing on the Consumer Council Review.

4. Electricity Policy Review - Oral Briefing from Invest NI

11:59am Representatives joined the meeting.

Members received an oral briefing from Olive Hill, Director of Innovation and Technology and David Bell, Manager, Sustainable Development.

Key issues discussed included: security of supply and large energy users.

12:14pm Sammy Douglas left the meeting.

12:14pm Representatives left the meeting.

Mr Patsy McGlone

Chairperson
Committee for Enterprise, Trade and Investment

10 October 2013

[EXTRACT]

10 October 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Fearghal McKinney

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: Mr Steven Agnew
Mr Sydney Anderson
Ms Maeve McLaughlin
Ms Sandra Overend
Ms Sue Ramsey

3. Electricity Policy Review - Oral Briefing from DETI

10:19am Representatives joined the meeting

Members received an oral briefing from David Sterling, Permanent Secretary, Fiona Hepper, Head of Energy Division, Alison Clydesdale, Principal, Renewable Electricity Policy and Legislation, Bill Stevenson, Principal, Energy Markets External and Fred Frazer, Principal, Energy Markets Domestic.

Key issues discussed included: security of supply and the cost to consumers.

Agreed: that the Permanent Secretary ask the Minister for Consumer Council papers in adequate time to allow the Chairperson and deputy Chairperson to consider them in detail.

11:29am Phil Flanagan left the meeting.

11:31am Sammy Douglas left the meeting.

11:33am The meeting became inquorate and was suspended.

11:36am Phil Flanagan returned to the meeting.

11:36am The meeting recommenced.

11:38am Sammy Douglas returned to the meeting.

11:46am Fearghal McKinney joined the meeting.

Agreed: that the Department respond in writing to any further questions the Committee may have.

11:48am Representatives left the meeting.

11:49am Paul Frew left the meeting.

Agreed: that the Committee is content to receive an oral briefing from the new Utility Regulator on their forthcoming paper, which focuses on increasing transparency on electricity prices in Northern Ireland, to inform the review.

Agreed: to put back the reports on the electricity policy review until after the Committee has had an opportunity to consider the findings in the Utility Regulator's report which is soon to be published.

Agreed: that the Committee is content to prioritise the report on security of supply with the report on pricing to follow.

Mr Patsy McGlone

Chairperson
Committee for Enterprise, Trade and Investment

17 October 2013

[EXTRACT]

24 October 2013
Room 30, Parliament Buildings 10.00am

Present:	Mr Patsy McGlone (Chairperson) Mr Phil Flanagan (Deputy Chairperson) Mr Steven Agnew Mr Sammy Douglas Mr Gordon Dunne Mr Paul Frew Mr Fearghal McKinney Ms Maeve McLaughlin Ms Sandra Overend
In Attendance:	Mr Jim McManus (Assembly Clerk) Ms Stephanie Mallon (Assistant Assembly Clerk) Mr Nathan McVeigh (Clerical Supervisor) Ms Jacqueline Holt (Clerical Officer)
Apologies:	Mr Sydney Anderson Mr Mitchel McLaughlin

3. Electricity Policy Review - Oral Briefing from Northern Ireland Electricity

10:12am Representatives joined the meeting.

11:15am Paul Frew left the meeting.

Members received an oral briefing from Peter Ewing, Deputy Managing Director and Director of Regulatory Affairs, Mr Robert Wasson, Asset Management Director with responsibility for the overall asset base of Northern Ireland Electricity, Mr David de Casseres, Transmission Project Director and Mr Michael Atkinson, Head of Generation Connections.

Key issues discussed included: security of supply and the cost to consumers.

11:55am Representatives left the meeting.

11:57am Fearghal McKinney left the meeting.

11:57am Sandra Overend left the meeting.

11:57am Phil Flanagan left the meeting.

Mr Patsy McGlone

Chairperson
Committee for Enterprise, Trade and Investment

7 November 2013

[EXTRACT]

7 November 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Fearghal McKinney
Ms Maeve McLaughlin
Mr Mitchel McLaughlin
Ms Sandra Overend

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Noreen Hayward (Clerical Officer)
Mrs Sharon Young (Clerical Officer)

3. European electricity price comparisons and Electricity Security of Supply – Update from Assembly Research

10:11am Representative joined the meeting.

Members were briefed by Aidan Stennett, Researcher.

Key issues discussed included: security of supply and the variance in cost of domestic and commercial electricity across Europe.

10:21am Paul Frew joined the meeting.

10:37am The representative left the meeting.

15. Eletricity Policy Review – Closed session

Members discussed the Committee's Electricity Policy Review.

Agreed: to consider the key issues and findings of the review at next week's meeting.

12:31pm The Chair adjourned the meeting.

Mr Patsy McGlone

Chairperson
Committee for Enterprise, Trade and Investment

14 November 2013

[EXTRACT]

14 November 2013
Room 30, Parliament Buildings 10.00am

Present:	Mr Phil Flanagan (Deputy Chairperson) Mr Steven Agnew Mr Sydney Anderson Mr Sammy Douglas Mr Gordon Dunne Mr Paul Frew Ms Maeve McLaughlin Mr Mitchel McLaughlin Ms Sandra Overend
In Attendance:	Mr Jim McManus (Assembly Clerk) Ms Stephanie Mallon (Assistant Assembly Clerk) Mr Nathan McVeigh (Clerical Supervisor) Ms Jacqueline Holt (Clerical Officer)
Apologies:	Mr Patsy McGlone (Chairperson) Mr Fearghal McKinney

12.54pm The meeting went into closed session.

15. Electricity Policy Review – Closed Session

Members considered the draft report for the Committee Electricity Policy Review.

1.39pm The Chair adjourned the meeting.

Mr Patsy McGlone
Chairperson
Committee for Enterprise, Trade and Investment

28 November 2013

[EXTRACT]

28 November 2013
Room 30, Parliament Buildings 10.00am

Present: Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Fearghal McKinney
Ms Maeve McLaughlin
Mr Mitchel McLaughlin
Ms Sandra Overend

In Attendance: Mr Jim McManus (Assembly Clerk)
Ms Stephanie Mallon (Assistant Assembly Clerk)
Mrs Angela McParland (Assistant Assembly Clerk)
Mr Nathan McVeigh (Clerical Supervisor)
Ms Jacqueline Holt (Clerical Officer)

Apologies: None

1.14pm The meeting went into closed session.

15. Electricity Policy Review – Closed Session

Members considered the draft report for the Committee Electricity Policy Review.

Agreed: Members are content with the final report.

Agreed: Members are content for the Chairperson to approve the extract of minutes of today's meeting for inclusion in the report.

Agreed: Members are content to debate the report in plenary session during week commencing 9 December 2013, subject to Business Committee scheduling.

Agreed: Members agreed the motion for debate.

1.32pm The Chair adjourned the meeting.

Mr Patsy McGlone

Chairperson
Committee for Enterprise, Trade and Investment

12 December 2013

[EXTRACT]

Appendix 2

Minutes oF Evidence

Appendix 2 – Minutes of Evidence

1. 31 January 2013 – Mutual Energy
2. 6 June 2013 – Manufacturing NI
3. 6 June 2013 – Utility Regulator
4. 13 June 2013 – Energia
5. 13 June 2013 – Power NI
6. 27 June 2013 – SONI
7. 4 July 2013 – Airtricity
8. 19 September 2013 – CBI
9. 19 September 2013 – SEMO
10. 26 September 2013 – AES
11. 3 October 2013 – Consumer Council NI
12. 3 October 2013 – Invest NI
13. 10 October 2013 – DETI
14. 24 October 2013 – Northern Ireland Electricity
15. 5 November 2013 – Utility Regulator

31 January 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mr Stephen Moutray
Mr Robin Newton
Mrs Sandra Overend
Ms Sue Ramsey

Witnesses:

Mr Paddy Larkin *Mutual Energy*
Mr Gerard McIlroy

1. **The Deputy Chairperson**: I welcome Mr Paddy Larkin, chief executive of Mutual Energy, and Mr Gerard McIlroy, the company's finance director. Please make an opening statement after which members will have an opportunity to ask questions.

2. **Mr Paddy Larkin (Mutual Energy)**: Thank you very much, Chairperson. *[Interruption.]*

3. **Mr Dunne**: Are you bringing gifts? *[Laughter.]*

4. **Mr A Maginness**: He has brought the interconnector.

5. **Mr Larkin**: This is a piece of one of the cables from the Moyle interconnector.

6. **Mr Dunne**: No wonder it is not working. *[Laughter.]*

7. **The Deputy Chairperson**: Do you think he should put it back, Gordon?

8. **Mr Larkin**: This is a piece of the cable that was at the bottom of the sea for 10 years. It was taken out around the end of 2011 and the beginning of last year. That is just to give you a idea of what the cable looks like. I will pass round some information that will give members a detailed breakdown. The point is that the inside of the cable is extremely complex; it is not just a piece of copper inside an outer sheath.

9. **The Deputy Chairperson**: Thanks for that update, Paddy; it is very useful. My first question is this: how did you manage to get that thing through security?

10. **Mr Larkin**: With very little bother actually.

11. **The Deputy Chairperson**: You are setting a dangerous precedent. *[Laughter.]*

12. **Mr Frew**: The faults have occurred between the outer insulation and what is effectively a neutral conductor. One cable is completely out of commission, so we are using only one cable. Are we not even using the main conductor within the faulty cable?

13. **Mr Larkin**: I talked about the short-term solution. If we get a fault on the other cable, we have a reconfiguration, whereby we basically use the good conductor on each of the cables to keep half the interconnector going. There is quite a bit of testing to be done on that at each side, mostly from an earthing point of view, and while this is a neutral conductor, because the length of the is cable 63 kilometres, it is at zero volts at one side but at 1,000 volts at the other side. So, even though it is a neutral, there is quite a bit of voltage. If we get a fault in the other cable, the short-term solution is to use the good parts of the cables to make sure that half the interconnector stays reliable.

14. **Mr Frew**: You can easily reconfigure your instruments at either side of the land mass to counter that.

15. **Mr Larkin**: There is a bit of work and cost in it. It probably cost about £150,000. That included link cables at each side, but we had to test it all. We ran into telephone interference at first, but we got that sorted out and eventually, in August, took the

interconnector out and tested it. We did the same in December. The system operator is now content that this works and so it is a good backup to have.

16. **Mr Frew**: No one here needs to be sold how useful and important interconnection is in this day and age. It is as important as generation to any region or state. However, that should be a two-way flow. We should import cheaper electricity but also have the ability to export. With the present configuration, where only one cable is being used, can we also go the other way? Can we import and export?

17. **Mr Larkin**: The simple answer is yes. When it is fully available, Moyle is 500 MW and, technically, able to go both ways. There is a restriction at the Scotland end on how much it can receive. It restricts the amount that we can export to 350 MW, but now that we are now working at half load — 250 MW — that restriction does not bite. We are able to go to 250 MW each way.

18. **Mr Frew**: When the cable was laid, it was classed as cutting-edge technology and a new way of doing things due to the design of the cable. However, faults started to occur, and I notice that they all occurred in the warmer period of the year. Has that been part of your fault diagnosis?

19. **Mr Larkin**: The investigations to find out exactly, not just roughly, why that happened and why it did so after 10 years and not after two or three is still ongoing, and experts from as far away as South Africa are working on it. Yes, temperature is a lot to do with it, and we have been looking at things like the moving of the Gulf stream and the very cold winters that occurred beforehand. The summers in which the faults occurred were not particularly abnormal, but the winters that preceded them were. There were very cold winters followed by moderate summers. So, we are considering all those things, and we do not have a definitive answer yet on the precise cause. Knowing the precise cause may well lead to knowing whether there is anything that we can do to prevent it. The answer to that is probably not unless we can manage the climate. We also want to know whether there is anyone else responsible who we can look to to assist us in the cost of repair.

20. **Mr Frew**: Has that type of cable been laid anywhere else in the world since?

21. **Mr Larkin**: No, is the simple answer. However, a very similar cable is going in currently in Estonia by the same cable manufacturer. I am very surprised that they have not asked us about it, but it is currently being installed.

22. **Mr Frew**: I see that the latest fault is still to be located. I imagine that, if there are two faults on that single cable, it makes it triply hard to locate.

23. **Mr Larkin**: The first one has been repaired. A fault occurred on land, and it was fixed and put back in service. Then, during the summer of 2011, there was a fault on each of the sub-sea cables. They were both repaired and put back in service by January or February 2012. In June 2012, a further fault occurred, so there is just a single fault in that cable.

24. **Mr Frew**: I understand. When the cable is faulty, how do you know that there are not two faults occurring simultaneously?

25. **Mr Larkin**: We only know that after the event. We can do what are known as "Wheatstone bridge tests" from each end which give us an approximate location, to the nearest kilometre, for the fault. We can tell then that, if there are two faults, they are within the same kilometre. With faults, what happens is that you get a breach between the copper and the steel; in effect, the earth. On the outside of the cable, you might get a pinprick or something the size of a 5p or 10p coin. The cable is 53 kilometres in length, under the seabed, under the sea and that is the size of the fault that we are trying to find. People ask: "What are you still looking for it?" And we have to tell them: "Yes". It is possible to dive and access some of this cable, and that is the case with this current fault. However, much of this cable is *[Inaudible.]* with water.

You cannot send divers to it, and you must use remotely operated vehicles. There are operated remotely from a boat that has to hold its position within 30 centimetres of the fault.

26. **Mr Frew**: When we get to the *[Inaudible.]* fixing the fault. If you have to lift the cable up back to the surface, or you have to do it on the ground, must you put two joints in at either end of the fault?

27. **Mr Larkin**: Yes. The cable is laid at the seabed. When you take it to the surface, there is a gap between the two pieces so, basically, you cannot just join it together and put it back down. You have to cut out the faulty section, and then you join them with a spare piece of cable. You cannot then lay it back down onto the seabed, or it will crumple. So the new piece of cable has to go in like a loop. So it comes up out of the sea onto the boat in a loop, and sits back down almost like a hairpin.

28. **Mr McIlroy**: The weight of this cable is significant. We did not pass this sample around because it is very heavy.

29. **Mr Frew**: By fixing the fault and putting in two joints, you open up a potential for a weakness, not only in the outer sheath and the neutral conductor, but also in the main conductor.

30. **Mr Larkin**: Yes. I totally agree with that. We want to minimise the number of joints that we make offshore, because it is a high-risk area. I would say, however, that the inner part of the cable, which is the high-tech or high-voltage end, has oil-impregnated paper insulation, and that is very well understood. It is a technology commonly used in many cables. It is the low-tech end of this cable which is unique to it, and that is the feature whereby another conductor is wrapped around the cable, and then insulation is wrapped around that. That is the bit that has been giving us trouble. We have never had to fix the inner bit. Because it is high-voltage, it generally fails only for electrical reasons. We are able to test it electrically.

31. **Mr Frew**: As you join that cable, you are weakening it.

32. **Mr Larkin**: Certainly, every joint that we put in increases the risk. We would be much better with a uniform cable.

33. **Mr Frew**: Which brings me to my point. Surely, instead of fixing each fault as it occurs, when it is really the split-concentric or the neutral cable which is the problem, would it not be better — you said that it cost £60 million to replace a fault.

34. **Mr Larkin**: No. It would cost £60 million to put in a new cable that will replace that conductor.

35. **Mr Frew**: How much does it cost to fix a fault?

36. **Mr Larkin**: We spent £30 million in fixing two faults, so they cost about £15 million each on average.

37. **Mr Frew**: Would it not be better to lay two new neutral cables alongside each of those cables, and then you can get both cables back up, and you get to full capacity?

38. **Mr Larkin**: I would have to agree with you. However, we have quite a bit of work to do on the feasibility of that and to get a properly challenged and scrutinised set of costs, with time estimates and everything else. The simple answer to your question is yes; it is a much more robust plan to fix the thing properly, rather than be chasing our tail, spending £15 million now, and maybe the same again next time. Every time we fix it, we are introducing more risk into the cable by putting another joint into it.

39. **Mr McIlroy**: Using the same cable.

40. **Mr Larkin**: Yes, so you go between plus 250,000 volts and minus 250,000 volts, whereas the two 250 MW units go between plus 250,000 volts and zero, and zero and minus 250,000 volts. That is all on-land work; a complete —

41. **Mr Frew**: A reconfiguration of your switch gear.

42. **Mr Larkin**: Yes. There are a number of longer-term solutions that basically

mean that we do not need that suspect part of the cable any more.

43. **Mr Frew**: My concern is that, while we repair and fix faults, we are actually damaging and weakening the conductor, which, in the long term, could be suspect. With any joint, no matter how good the joint or the technology is, there will always be *[Inaudible.]*

44. **Mr Larkin**: We have a fault at the minute about 2 kilometers off the shore of Scotland. We have not taken a decision to repair that fault. That is still an open-ended question. We need to find it so that we can see it from the outside and see what has caused the damage, whether it has been damaged by something scraping along it or whether something odd has happened. Only when we have that information will we decide whether it is worth fixing. It could be something different from what we saw before.

45. **Mr Frew**: That investigation would have to take place. It is not only about the potential of the cable — the main conductor — to be weakened; it is the fact that you have to lift the cable and then lay it down again. Surely there is potential for a trawler or something to damage it —

46. **Mr Larkin**: I might look to employ you shortly.

47. **Mr Frew**: Give me a shout in a couple of years' time. I might need that.

48. **Mr Larkin**: Exactly. Gerard talked about hanging off a boat. There could be a 7-ton cable hanging off the boat. That is a huge pull on it. When you are repairing it and manhandling the cable, you can create problems. The cable is 2 kilometres off Scotland. The one that we repaired in 2011 was in and around the same area. The big question is whether the current fault has been caused because we manhandled the cable.

49. **Mr Frew**: What about cost? It is costing someone. I think that I read somewhere about the insurance capacity taking a hit. Surely that has to be paid somehow. How is the company paying for that, and how much is the consumer paying?

50. **Mr Larkin**: All the costs to date have been paid from the company's reserves. When the boat was there, we paid for it from the company reserves. We have insurance cover to cover the costs to date. The insurance was paid and settled for the fault that occurred in 2010. The claim is ongoing for the faults that occurred in 2011. Dealing with an insurance company for a £30 million claim, I expect that it will be ongoing. It is more than likely that it is going to be years rather than months for that size of a claim. That is the costs to date. To a certain extent, because we had the insurance and that in place, we very quickly decided to fix the fault because the costs were covered. From this point on, there is no insurance cost; there is no safety net. Any costs that are incurred to the extent that we have the cash reserves, we pay for them out of the cash reserves, but that will be depleted pretty quickly whenever you do a £60 million project. The difference is basically collected through the use of system tariff on customers, so the costs of any repairs, any replacement cables or any reconfiguration on the onshore section from this point forward will, ultimately, fall on consumers. That is one side of the equation. The other is that consumers get the benefit of interconnection. When interconnection comes back in and lowers the wholesale price of energy, all consumers get a lower price for electricity. The key thing is to ensure that, whatever we do, customers clearly benefit from it. On one side, this is a good investment for customers that gives a better return than what they pay out. The second thing is to ensure that the way that we organise the costs is properly tendered and engineered so that the cost is as low as possible and then we ensure that it is carried out as efficiently as possible to bring it through. That is the gist of our plans going forward.

51. **Mr McIlroy**: Time is also an important aspect. We have costs in time. When we come for the decision process, we

will expect to have two or three long-term engineering solutions identified, each with a different cost and each with a different timeline. The importance of timeline is a system question, so, from our point of view as a business, we can see what is the best engineering cost balance and say that that is the one that we want to go with. However, the system operator may have a view that, if our best cost engineering solution is introduced in 2018, the one that is introduced in 2016 is a better one for the system because, in 2018, he has problems in other areas.

52. **Mr Larkin**: On that, I do not know whether you are aware that, for environmental reasons, the old station at Ballylumford needs to close in 2016. It is unclear what is happening with Kilroot and so on. So, there are capacity pinch points coming up, and the cheapest way to do this might be with a five-year programme, and you might have to pay more money to accelerate it to get it in earlier. The system operator may well say that, if it does not have this interconnector, it needs a new power station, so someone has to do it.

53. **Mr Frew**: That brings me to my last question. Security of supply here is a big issue, and what we have is this interconnector sitting at half capacity with a big risk and a very high percentage chance that the live cable will go this summer. We would then have nothing coming through.

54. **Mr Larkin**: That is why it is was so important to us to get this reconfiguration that we talked about where we are using the central core, and that is why we spent so much time testing it and proving it. At this stage, we have a fallback situation if that happens, and that fallback situation will put it back in at 250 MW, and it will be reliable at 250 MW.

55. **Mr McIlroy**: It will take probably 24 or 48 hours —

56. **Mr Larkin**: Less than that. It would take less than a day to switch it over. That is a very good point, and, in fact, last year, when the interconnector was out completely in January 2012, the system was really tight, to the extent that the Department was holding weekly meetings to consider how we would manage this if this went to the plan of load-shedding. With 500 out, the system is really tight. With 250 in, it is comfortable. It would be more comfortable if there was 500 there, but it is manageable. So far, throughout this winter, the interconnector has been sitting at 250 and it has been fine.

57. **Mr Frew**: That is the end of my questions. I stress that I do not think that people realise how close Northern Ireland came to having a blackout, a lights out or a load-shedding scenario over the past couple of years. Interconnection is vitally important, and the Moyle interconnector is only one aspect of it. The North/South interconnector is a totally different ball game, and I get frustrated that our plans for that are not more advanced at this stage. My humble opinion is that we need to get to the point with the Moyle interconnector that when we are laying the two new neutral cables to use the cable when we can and forget about using faults on the neutral cable. We are storing up the potential for more damage and problems in the future for the most important element of the cable, which is the main conductor. Thank you.

58. **The Chairperson**: Before I bring in Mr Newton, I want to apologise to you, Mr Larkin, for missing your presentation. It is good to see you again.

59. **Mr Newton**: I suppose that Paul has covered many of the points. Mr McIlroy, from a business perspective, you must be in a very concerned position with so many imponderables and with your insurance company having indicated that it is going to withdraw support for any future claims.

60. **Mr McIlroy**: It is obviously very difficult to say the least. When we lost both cables, we lost all revenue instantly and for a prolonged period. The travel agents TUI suffered a 5% to 10% drop

off in its revenue and got itself into real difficulties. We were in the fortunate position that we run the business in a very conservative manner so that we were in a position to be able to find £30 million at short notice to build a new cable. We still have cash reserves.

61. **Mr Newton**: Should consumers be concerned about the potential for what might be regarded as a major energy downturn in supply ? I was going to say "disaster", but maybe that is too strong a word.

62. **Mr Larkin**: I suppose that there are two elements —

63. **Mr Newton**: Mr Frew also raised the point about your ability to raise money by exporting energy. The Moyle interconnector not being there affects customers in two ways. One is the cost to fix it. We talked a lot about that; potentially £60 million over a couple of years. At the other end is probably a bigger issue, which is that you have less of that cheap power — half of it — coming in from Britain. From that point of view, you would expect the price to rise. It is very difficult to take a single instance and put that straight through the bills because there are a number of things that affect the cost of bills, mostly the price of fuel. If the price of fuel is going up and down, bills will go up and down, and that will have another ripple effect.

64. **Mr McIlroy**: You asked about the export. We run the Moyle interconnector and provide the capacity for the supply companies to move the power from A to B, and the market price determines what way that flows. In every year bar one that has been a very strong flow from GB to Northern Ireland. There was one year — I think it was 2008 — when it was very flat and there was some flow the other way. You will see a lot about wind in Ireland and Northern Ireland and the potential to export that back into GB. From a market perspective, when the system gets excess power, which is usually wind in the night-time, the system operator sometimes has to pay GB to take it, so the market signals for that movement of wind, when we have plenty of it and they need it, are just not there at the moment. It is quite unusual to see lots of —

65. **Mr Larkin**: But we do expect that that is going to become a bigger issue as time goes by. At the moment there is really only excess wind during the night. It is supply and demand, so the amount of wind stays the same, but the demand has gone down, so you have excess wind. It happens at night. Prices are pretty darn low and they are running nuclear across the water, so the wholesale prices are down next to nothing anyway. However, as more and more wind comes on, you will see excess wind in the shoulder periods of the day and in the morning time. We do expect that there will be more demand for exports on the interconnector. In fact, we are actually working with the National Grid to try to remove the limitation I talked about earlier on the GB end, so that, by 2020, there will be no restriction on exports. You actually need the interconnection to allow it. Some of them will not build wind generators unless they know that they are going to be able to generate. It is interconnectors that give access to the market for that.

66. **Mr Newton**: I do not think there is any question about the interconnector. You indicated that it was the only one of its type in the world, yet, in your paragraphs outlining the longer-term solution, you state:

"The number and nature of the faults is abnormal for underground cables and raises questions in relation to the future reliability of part of the cables."

67. **Mr McIlroy**: Switch it off.

68. **Mr Larkin**: Is anyone recording this? *[Laughter.]* The language may not be too pretty.

69. **A Member**: Unfortunately, they are.

70. **Mr Larkin**: In terms of the uniqueness of the cable, there are not very many HBDC interconnectors in the world, and each has a unique cable designed specifically for that interconnector. We have a

specific type of cable that no one else has. The special thing about this type of cable is that it is known as an integrated return conductor. To make a light work from a battery you need a + and a - , so it is two pieces of copper as conductors. This cable puts the two pieces of copper inside the same cable but concentrically, so you have a central piece of copper and then an outer piece of copper. That is what is unique.

71. **Mr Frew**: A split concentric cable is not a new thing but it must be the insulation.

72. **Mr Larkin**: In 275 KV it is. When you pass electricity through a cable you create heat. At high voltage and high power the key thing is to get rid of that heat. There is no insulation on the overhead lines, so the heat gets away straight away. Once you put it in the ground, you start to enclose that heat. As the temperature rises, it gets harder to get the electricity through it. On the face of it, you would say that putting all those layers on the cable is really bad because you are really insulating that central core and causing problems, so that is generally one reason why it is not used. If you go on higher power and voltage, it just gets too big, there is too much insulation and it does not work.

73. **A Member**: Fascinating.

74. **Mr Newton**: Paragraph 2·3 states that feasibility studies are continuing into a long-term solution. In eight weeks' time, you will have concluded those studies and have an answer in the second quarter of 2013.

75. **Mr Larkin**: Yes, hopefully.

76. **Mr Newton**: This is such a serious situation. You indicated that you are keeping all parties up to date.As soon as Mutual Energy comes to a decision on the future, the consumer needs to know so that they have confidence. Northern Ireland, generally, needs to know to have the confidence that we are going to face the challenge and that we can come out of it successfully. According to your schedule, we are a number of months off realising the full picture and the solution is. We need to know what that is going to be.

77. **Mr Larkin**: I am happy to come back to the Committee when we have made the decision to fill you in on the factors that went into that decision and why we took the decision. The idea is to get to a decision and then get out to tender to get it firmed up. I am happy to do that if you want me to.

78. **The Chairperson**: I think that everybody would be in agreement with that. It is important that we are kept as fully up to date as possible. That would be very helpful.

79. **Mr Newton**: At the end of quarter 1 — really only for confirmation at that stage, before you make your decision — could we know when the studies have been completed?

80. **Mr Larkin**: Yes. The studies are an evolutionary process. The first cut of the studies have been done, but that raises other questions that need to be looked into.

81. **Mr Newton**: That is what gives me concern. You have tied yourself into the timetable of the studies being completed in quarter 1 and the decision and a tender being issued in quarter 2. When you complete your studies, you will have raised a number of questions that need to be addressed in the longer term. That indicates that the second phase of that tendering issue may not be achieved.

82. **Mr Larkin**: The studies are well under way. As it stands, we are at the second and third passes of the studies. We have built in time to hopefully get to the bottom of the problems. However, I take your point: this is new. It is cutting-edge stuff. Unexpected things can happen, but you have to have a plan.

83. **The Chairperson**: So, you will keep us as fully appraised as you possibly can at the various stages?

84. **Mr Larkin**: Yes.

85. **Mrs Overend**: Thanks very much for coming today. It has been really

interesting to hear the technical details. The outworkings for the consumer are of great concern. Forgive me for simplifying this — you might have said it earlier — but what was the life expectancy of the cable when you first put it in?

86. **Mr Larkin**: It was a 30-year design life. If you design something to last for 30 years, you expect that it will be more. It is very hard to design something to go for 30 years and then break and be useless.

87. **Mrs Overend**: You buy a car, and you expect how long you are going to get out of it. You build in a return or a savings plan to be able to afford to buy your next car once you have paid off the car. Did you have some sort of mechanism built in for the available resources?

88. **Mr Larkin**: Apart from the insurance, we did not make any other provisions for the thing breaking at 10 years or needing that level of investment at 10 years. If you buy a car, you expect it to last for 10 years; you do not expect it to be complete scrap after two years. I am not saying that it is complete scrap, but you do not expect a major investment, such as an engine rebuild, after two years.

89. **Mr McIlroy**: In the financing, we had to allow for the chance that a boat with an anchor could drag across and hit it. Something disastrous could happen; one of your converter stations could require a rebuild. When the bit came to the bit, we had the money and we were able to do it.We have an expectation, but we have to allow for the risks of bad, unexpected things happening. The nature of the equipment and the kit is that everything is expensive. For some of the pieces of equipment, if you went to order a new one you would have a three-year lead time. All of those things had to be taken into account when we had to design how much money we ran with, how much we kept in reserves, how quickly we would be able to get it if we needed it and how we managed that. To that extent, we always had to allow for the fact that, not this particular problem, but a big problem could happen.

90. **Mrs Overend**: In making your decision on whether to lay a new cable for the long-term solution, there are huge things that you will have to take into consideration, like the life expectancy of the next cable that you put down.

91. **Mr Larkin**: In fairness, the manufacturer of it did design it for 30 years. All underground cables have at least a 30-year design life, so any further ones will have the same design life. You scrutinise that. Obviously the cable providers are the experts. You ask them as many questions and put them over as much detail as possible, and you get as long a warranty as you possibly can on it. It was not us but NIE that put that cable in place, and we were not there, but in any of the documents that we have seen, NIE assessed the design to the extent that it could. It required a 30-year design life and the manufacturer provided that. It required a warranty for as long as possible and got a five-year warranty on the cable at sea, recognised that joints were a higher risk at sea and actually got a 10-year warranty on joints at sea. I guess it got as much as it could at that point in time. I suppose the other question is whether the manufacturer was fraudulent in what they did. Were they trying to pull the wool over people's eyes and did they slip something in? All of those questions are other things that we are looking at that may well arise, but at this stage it would be premature to say anything on that.

92. **Mrs Overend**: It will be interesting to hear that as your discussions go on.

93. **The Chairperson**: Clearly, your company will be seeking legal advice around those matters.

94. **Mr Larkin**: Quite a lot of legal advice. The legal advice is ongoing.

95. **Mr Dunne**: Thanks very much, gentlemen, for your presentation. I think a lot of the issues have been covered. We appreciate you bringing in the sample, and we all joke about it, but it does give you the scale of it at first hand.

96. **Mr Larkin**: You are welcome to lift it. *[Laughter.]*

97. **Mr Dunne**: To me, it is a major quality issue. There is a major failure here by the supplier. You asked the question, and Sandra touched on it. Was the cable tested and verified? It had met the specification. You touched on that briefly and said that you looked at the documentation. I suppose, to be fair to you, you were not there. You were not involved in the project when it was going in. Part of your investigation is looking back at how the cable was manufactured, how the processes were controlled and where the failures are in order to find out the real root cause of what happened. I take it that you are doing that?

98. **Mr Larkin**: Yes. Since the second fault came out of the water and we confirmed that it was the same as the first fault, we have started the process. There is a lot of technical work to be done to find out, as I was saying earlier, exactly what has caused it — not just roughly what has caused it, but exactly what has caused it.

99. **Mr Dunne**: You will obviously look very closely at the specification of a replacement; how they have tested and validated it.

100. **Mr Larkin**: I want to see one that has been operating for quite a long time.

101. **Mr Dunne**: Yes. You would need to be assured that it is fit for purpose, has been tested and validated and the evidence is there to prove it. I suppose that that is what you are trying to look at again.

102. **Mr Larkin**: The one thing that I would say is that the type of cable that we will be laying — Paul will probably understand this better — is a straightforward low-voltage cable. It is not high tech. So, we hope that we will have a reasonable choice. That having been said, there are probably six factories in the world that could make it. We are hoping that all six of them would give us a choice and, hopefully, there is a standard design. It would be even better if there were an off-the-shelf cable that has been in place and used. Based on our experience, you can be assured that reliability will be a key part in choosing a new cable.

103. **Mr Dunne**: Like a lot of engineering failures, it is the basic rather than a rocket science issue that you —

104. **Mr Larkin**: The high-tech end of this cable —

105. **Ms S Ramsey**: Because most of them were men. *[Interruption.]* Sorry, I was just stating a fact.

106. **Mr Larkin**: The high-tech end of this cable has been fine and given us no problems. It is the low-tech end, and perhaps —

107. **Mr Dunne**: Basics

108. **Mr Larkin**: — when you go to do something, the concentration and the brainpower are put into the bit that is new and scary; whereas, the low-tech end is par for the course.

109. **Mr Dunne**: Insulation. I will just ask a couple of questions on the gas bit. The gas storage facility will consist of seven caverns, which are obviously there.

110. **Mr Larkin**: No.

111. **Mr Dunne**: Are they not?

112. **Mr McIlroy**: What you have is a salt sequence. You create the cavern by putting in seawater that dissolves the salt, and then you take the brine out. So, you create the caverns by pumping in seawater in various fancy ways. You can shape the cavern. The idea is to make it egg-shaped, which is the strongest for holding gas. The salt is sealed around the outside and it becomes a natural salt cavern.

113. **Mr Dunne**: A natural liner then. There is no —

114. **Mr McIlroy**: Yes, the cavern itself is just salt. There is no other man-made substance added to it.

115. **Mr Dunne**: What about the environmental impact? I will get in there first before somebody else does.

116. **Mr McIlroy**: The issue of the environmental impact has been going on since 2007 or 2008. On the plus side, salt storage may be new to Northern Ireland and relatively so in Britain as well because Britain has always had North Sea gas and has not needed this, it is not new in Europe. That is because places such as Germany and France, which do not have natural gas, needed the storage. So, the technology in how to make this has been 40 or 50 years in the making. That is quite good, unlike the Moyle cable, where we were the pioneers. This time, we have got 40- or 50-years' worth of other people doing it and to come up with the analysis.

117. **Mr Dunne**: Any gas storage that I am aware of has to be pressure-tested. Will this be pressure-tested?

118. **Mr Larkin**: Absolutely. You have to be specially licensed for gas safety by the Health and Safety Executive. It will be a control of major accident hazards (COMAH) site, for example . I think that gas is stored at 200 bar of pressure. Our gas pipelines transport gas at around 70 bar maximum, but the 200 bar subsurface all has to be fully tested. At a mile beneath the ground, it will not have any effect, but, as it gets closer to the surface, all the linings in the holes going down to the caverns have to checked and tested.

119. **Mr Dunne**: What are the advantages? You have two months' storage. Does that enable you to purchase gas in advance? Is that part of where the savings are?

120. **Mr McIlroy**: There are a number of advantages to storage, one of which is the security of supply. All the gas that comes into Northern Ireland comes through our pipeline. It runs from the UK through the south-west of Scotland through our Scotland-Northern Ireland pipeline (SNIP) and supplies two thirds of our electricity on the gas network. Security of supply is more important than it was historically, because, as I said, we used to think that we were on the periphery, but we were not really because we were beside the North Sea and were first, if not second, in line to the gas. The gas now comes into the UK from Norway, through Russia and through Holland or through liquefied natural gas (LNG) terminals from Qatar or wherever. So, we are last in line now. The big difference with security of supply means that if there is a problem anywhere along that line, we have big lump of gas in Northern Ireland. It does not matter who owns it; the fact that it is physically in Northern Ireland means that, under the condition that they cannot use it anywhere else and only in Northern Ireland, the gas gets released into Northern Ireland. Sixty days' supply is 60 days of peak load with everything running.

121. **Mr Dunne**: For the Province?

122. **Mr McIlroy**: Yes. Look at average load: we use three or four million cubic metres a day, and this is 500 million cubic metres. We could last a long siege with that amount of gas. It is more important than it has been previously because, previously, the North Sea was not far away and we had the network. The other big impact for us, as a business, that is probably even more important is the network. Because the North Sea is falling off, the pressure on the gas that is coming to feed Northern Ireland is going down. There are contractual pressures, and you need pressure to pump the gas out to all your areas.

123. **Mr Dunne**: It is just a big underground receiver, then.

124. **Mr McIlroy**: It is, yes.

125. **Mr Dunne**: Will that gas actually move out or is it to be stored there?

126. **Mr Larkin**: The idea of salt cavity stores as opposed to depleted fields or a mine is that it is flexible. These caverns, although they are about the size of a cathedral, are quite small in comparison with, say, a depleted field. You can effectively turn them around in the same day, so, for example, you might have a day where the power stations thought that they were not going to be run because lots of wind was forecast but at 6.00 am they say that they will be

running and, not only that, it will be flat calm for another couple of days so they will all the gas that they can possibly be given. In such circumstances, there is no way that a tank that is basically running out in the North Sea can suddenly ramp all that up and get it through. So, the gas storage can switch around straight away like that, whereas a depleted field could not. Someone described a depleted field to me as being like a pin cushion with one pin in it. You are filling the whole depleted field through that, whereas the salt cavity storage is like an inverted pin, where the size of the store is not a lot bigger than what you drive in it. So, you have lots of small tightly packed things that you can turn round, so it provides flexibility.

127. **The Chairperson**: Mr McIlroy, I want to pick up on what you said about the study carried out into the effects of brine on crustaceans and fish. Were there any material conclusions from that? Perhaps you could share the study with us at some stage.

128. **Mr McIlroy**: I am not an expert in that, but I will give you an outline of what they were trying to do. The water that comes out of the diffuser has a high concentration of salt. In the studies, they model what happens when that water comes out of the diffuser and goes out into the sea. They have analysis to say that, at a certain density of salt, within the first 50 metres, any creature that moves goes way and any that cannot move dies. So, within an area of 50 metres, any fish that does not swim out of the way will die. They do the analysis for the area out as far as 250 metres away. What they are saying is that the water that is too salty for things to survive should be within 50 metres. The studies say that, if you go any further, fish can survive the brine etc. Studies are done on flow projections and everything else. The reason that they did this monitoring was to prove that the flow projections were correct. When they looked at the crustaceans, what they found was exactly as they had thought. The immediate area was too salty for life, and there was nothing there. When they went to 100 metres, they could see fish again and the stuff in their lobster pots was alive.

129. **Mr Larkin**: Effectively, they said that nothing will be affected beyond 20 metres. They said, "OK. You are getting permission based on that, but you will not just go off to do it and see what happens. We want you to prove it. Put a lobster in there. If that lobster dies, you are shutting down." In fact, the findings were better than what they had put into their applications. We look at Aldbrough, because it has just happened in the last three years. We expect the exact same controls to be applied to the Islandmagee storage facility.

130. **The Chairperson**: Yes. I know that another Committee and Department are looking at a marine Bill at present. Clearly, your environmental consultants would do everything that they could in the context and framework of what could, potentially, arise from the marine Bill.

131. **Mr Larkin**: I think that this has changed the marine Bill. It will not come in until 2014. Perhaps, I am thinking about DETI. A DETI change is happening. I am not sure about that. Basically, as far as I understand it, the Department of the Environment and the Northern Ireland Environmental Agency will grant the consent on this. So, they will apply the appropriate legislation and tests.

132. **The Chairperson**: That is grand. Thanks for that.

133. **Mr Flanagan**: I did not think that there was as much interest in the Moyle interconnector. It is good to see that there is.

134. **Mr Larkin**: With hindsight, we would buy a different cable. However, we are where we are. This is what we have got. It is what we bought. We just have to deal with it.

135. **Mr Flanagan**: Have there been improvements in the technology since you bought it?

136. **Mr Larkin**: Not particularly, no. As I said, this is unique. Well, the Estonians are

putting in something very similar. That was the only one that had ever been put in anywhere in the world. It has not changed because there have not been any others. The point is that you would put two cables in. For example, the east/west interconnector is built. There are two cables; one is the plus and the other is the minus. They are separate cables. If they brought it in, there would be that cable and another cable. There would actually be a fibre optic cable as well. Everything is inside that cable. There is a wee tube in the middle of it which has six fibre optics in it as well. Everything is inside it. That is the unique bit. If we were to do it again, we would put more emphasis on doing something that is tried and trusted regardless of price, benefits or anything — a Mercedes diesel-type thing as opposed to the Ferrari, high-output injectors and everything else.

137. **Mr Flanagan**: Mercedes give problems, too.

138. **Mr Larkin**: Most of the electrics do.

139. **Mr Flanagan**: So I hear. I do not have one myself.

140. **The Chairperson**: You are looking for a Skoda.

141. **Mr Larkin**: A Skoda is, basically, a Volkswagen. We are getting off the topic.

142. **Mr Flanagan**: I hear that you are in line for one of them when there is a big reshuffle in the Executive. *[Laughter.]*

143. **The Chairperson**: Very good, Phil. That is why they use Skodas here; only the best.

144. **Mr Flanagan**: They are reliable. Paul also asked whether it would not be better to just replace the new cable. You kind of agreed with him. What is stopping you doing that?

145. **Mr Larkin**: There are other options. We need to ensure that it is actually the best option. There is no point in going out and replacing all the cables and, then, someone asking me in three years' time whether we had not thought about changing to a single 500 megawatt unit. We would say that we did, but we did not bother. Then, we would be asked why we did not do that and whether it would not have been more cost-effective, quicker and whatever else. We need to ensure that the long-term solutions, of which replacing the cables is the most obvious, are properly tested and challenged against any other possibilities that there are.

146. **Mr Flanagan**: You said that the interconnector saves customers £100 million a year. How was that figure calculated?

147. **Mr Larkin**: We commissioned a separate consultancy firm called Energy Links. It ran a model of the single electricity market. We kept in all of the data from the single electricity market. What has happened since 2008 is fact. You can look back and see what the prices were. Effectively, what it did was take the interconnector out of the model. It said, "What if the interconnector was not there and did not put its prices in?" Then, it ran the model again. It said that, in that circumstance, on a day when the interconnector was running, you would actually have run Ballylumford. On a particular day, you would have run the power station at Tarbert, Aghada or Poolbeg, and that would have made the price a particular amount. So, it came up with what the price would have been since April 2008 if the interconnector had not been there. That was the process. Obviously, the price varies from month to month.On average, it was over £100 million per annum.

148. **Mr McIlroy**: All the plants put in their price for each half hour. The market operator then puts them in what is called a stack. The cheapest will go on first, then the next, etc. The guy who is last sets the price for everybody. If you can do it for £30 a MW hour but the marginal plant is £50 a MW hour, everybody gets £50 a MW hour. That is how the market works. If someone brings that £50 down to £49 or £48, every single unit of electricity for that half hour is down by the £2 that that saves. Moyle goes in the stack and pushes everything else up. That is the

first effect that it has. It was quite good. We thought about modelling it forward, because the guys have a very good model on the system. Aghada power station uses it, and DESA used to use it. We decided to model backwards, because, when you do that, you have the prices and the bids. Paddy quoted the benefits. In part of that period, we were off. If you did it for a period for which we were fully available, the number is probably going to be higher. All we had was the data since the market started, and we could do it in a way that we could stand over. We could explain to somebody the methodology for doing it with every single half hour and every single stack redone with Moyle out.

149. **Mr Larkin**: It is not surprising. Eirgrid has carried out studies to justify building the interconnector that it has just finished. That cost €600 million, which is massive. Other studies published on its website basically say that it would be well worth building two more interconnectors: one to France and another one to Britain. It is fairly clear that there are major benefits. If you were to ask what the benefits will be in the next five years, they are really difficult to determine. You just know that there are going to be benefits and that they are going to be big. It is hard to know exactly mow much in the next five years. Looking back over the past few years, it is fairly simple because you had an interconnector, so you can see what would have happened if you took it away.

150. **Mr Flanagan**: I am not disputing that there are obvious benefits to interconnection. A company such as Eirgrid has a vested interest in saying that would be a good thing to build more capital across the Irish Sea.

151. **Mr McIlroy**: We had not done any of the studies because we knew in our hearts that it was and we knew that Eirgrid had just spent €600 million. For that very reason, you say that it has a vested interest in building more. We need something factual that we are comfortable with and which proves the point. Before, if anybody had asked us, we would have referred to the studies that Eirgrid did and the fact that it spent €600 million doing it. We felt that, in that case, it was worth putting it down, getting the work done and quantifying it exactly.

152. **Mr Flanagan**: The interconnector is primarily used for importing electricity, but there is considerable opportunity for exporting. Is it in Mutual Energy's interests to import energy as opposed to exporting it, or does it not matter to you which it is used for?

153. **Mr Larkin**: Mutual Energy does not buy or sell power. We do not own a scrap of power.

154. **Mr Flanagan**: Do you not receive a form of payment for the interconnector being used?

155. **Mr Larkin**: We supply the cables that connect Northern Ireland customers to GB power stations. The same as NIE supplies the cables that connect them to Northern Ireland power stations, we supply the cables that connect to GB.

156. **Mr Flanagan**: I presume that you receive a payment per unit of electricity across the interconnector.

157. **Mr Larkin**: The normal process is that customers pay a fee for having the cables. We are different from NIE because ours is congested; more people want to use our wires than what there is space. To resolve that — the EU lays out what you do — you have what are known as congestion auctions. All the people who want to use the interconnector bid for it, and the people who bid the most money get it. We do that in both directions; coming into Northern Ireland and going out of Northern Ireland. To give you an idea of the scale, coming into Northern Ireland, currently the bids are around £6 per megawatt hour, and going out of Northern Ireland the bids are less than 1p per megawatt hour. So that gives you an idea. There is huge interest from six or seven players. There are even traders like, for example, RWE npower which is not a supplier here, but trades power across the Moyle interconnector and buys capacity. Danske Commodities

is just a trading floor; it buys space on Moyle to trade power. There are also smaller, indigenous companies, such as ElectroRoute, which is a small company and a spin-off from Scottish and Southern Energy, that buys small amounts of power on the margins through Moyle. The price that firms pay at auctions is based on the difference in price between the two markets and, on coming this way, they buy cheap in Britain and can sell it dear over here. Firms want to do that; they do not really want to flow the other way. People buying the other way are taking a bit of a punt that the price might switch during the period. In fact, over the last while, the prices switch more and more. The price is set every half-hour, and every half-hour it changes. If, in the particular half-hour, it switches, they want to have the capacity so that they can sell it the other way. So they take a bit of a punt on it, but they are not prepared to pay very much. They offer 1p.

158. **Mr Flanagan**: What about those congestion auctions? How do they fit into what is essentially a price-regulated commodity?

159. **Mr Larkin**: Any revenue that we get through the auctions reduces anything customers have to pay. The Moyle interconnector costs, let us say for argument's sake, £20 million to run. If we get £20 million out of the auctions, there will be no charge on customers. If we get £5 million per year out of the auctions, £15 million will be charged to customers.

160. **Mr Flanagan**: What about those who are actually buying the power and trading in it?

161. **Mr Larkin**: If there was no congestion, there would be no auction revenue and traders would not pay anything for using the system. They would not pay anything directly but, obviously, the trader is taking it to a customer here, whom he has to charge for using it. The charge is for use of the system. If you move power in Northern Ireland, you pay a use-of-system fee, which includes paying for use of the Moyle interconnector. So, yes, the trader would pay for it ultimately.

162. **Mr Flanagan**: This is nothing really to do with Moyle, but I am hoping that you will be able to help me with it. You have an understanding of it. Say someone is paying £6 per megawatt hour to move energy across the interconnector. Do they then take the hit for that being an inflated price, compared with a different time of the day when it is ultimately sold on the customer, or will the customer end up paying more? Who makes up the difference? Ultimately, the power generators, the distributors and everyone else wants to get their share of the pie.

163. **Mr Larkin**: Take a wee example; an extreme example. Say you can buy power at £50 across the water and the price here is £100 at the moment. If you put an interconnector between the two, we know that there will be a fair bit of flow in there, but there will not be enough. There will be a bit of flow, and it will knock off the very expensive plant over here; but the price here will still be £75. So the guys coming in might buy at £50 now and sell at £75. It is not the £100, which was the price before the interconnector was there, because the interconnector pulls the price down a bit, but it is still £75. So there is £25 of profit to be made by buying there and selling it here. However, a load of people want to do that, so we are going to have to pay to get across the interconnector. So, we will have to bet against them. Maybe we will have to pay, say, £10 to get across the interconnector; the other £15 is in the trader's pocket. So the trader makes £15; the interconnector, £10; and the fact that the power has flowed in has brought down the market price from £100 to £75. So there are is a win across the board for everyone.

164. **The Deputy Chairperson**: That was very helpful.

165. **Mr McIlroy**: Mainland Europe would be in the 30 to 40-day category. Britain, for historical reasons because it has the North Sea, is down at about 10 days. Sixty days is too much. We referred at the start to the fact that this store is too big for Northern Ireland. It needs to do the Republic of Ireland and Great Britain

as well. Yes, it is 60 days for us and, from a security of supply perspective, that is absolutely outstanding for Northern Ireland. It just so happens that the geology is in Northern Ireland. This can output 22 million cubic metres a day (mcm/d). Northern Ireland normally takes four. It needs to get the rest of it either back to GB or, more likely, into the Republic of Ireland. It is way more. If you had only the Northern Ireland market, you could not build this facility.

166. **The Deputy Chairperson**: Are the continuing delays in the common arrangements for gas posing a problem for this project?

167. **Mr McIlroy**: The common arrangements for gas would have put the arrangements in place that this project could have used. If the common arrangements for gas were in place, that would have been what was needed, but you could put it outside the common arrangements for gas and that is what we have asked the regulators to do. We have told them that we know that there are problems with the common arrangements, but this specific project needs specific terms. We have told them to take out the bits that would have worked in CAG, prioritise them and get them done. The Ministers in both jurisdictions are keen to have storage and so on, the regulators are very keen to do it, but it is actually getting that movement, particularly in the Republic of Ireland. They now have judicial issues with Shannon LNG, which is suing them, and that is delaying their decisions. That is the type of thing that has a knock-on impact.

168. **Mr Larkin**: There needs to be cooperation between Belfast, Dublin and London. The track record shows that it is much more difficult to achieve something that needs people to work together across jurisdictions. While the regulators recognise the benefit and they are working together, it is very slow. Each jurisdiction also has its individual priorities, and it is difficult to keep a goal. The Ministers in both jurisdictions have given it their backing, but it will take encouragement and support from all sides. All areas where there is that interjurisdictional contact need to support this and say that this is something that we can do together. It is a win/win all round, but it involves a bit of effort. We need to commit to that effort and encourage our regulators to adopt it. This is just as important as all the other single-jurisdiction issues.

169. **The Deputy Chairperson**: Have you received all the permissions and assurances that you need from both Departments and both regulators?

170. **Mr Larkin**: The decisions have not been made yet. The work is ongoing, so, no, we have not got there yet. That is why I say it is slow, slow, slow. BP pretty much decided to come in to this project at the end of 2011, and it was pretty confident that the interjurisdictional arrangements aspect of the project was pretty much ticked off. When it came in, there were other things to achieve such as planning and various consents and all the rest. All of those things have been ticked off now, 18 months later. That regulatory issue is still not finished, so it makes sense and people understand what the arrangements need to be; it just takes a bit of effort. The problem is getting that sorted.

171. **Mr A Maginness**: Thank you, it has been fascinating, particularly your dialogue with Mr Frew. I want to ask about Islandmagee Storage Ltd. You are entering into an agreement with BP for the development of the storage project, which will cost around £400 million.

172. **Mr Larkin**: The £400 million is the cost of building the project. The project has not been given the green light by the developers yet. It is still in development; it is still going through the feasibility stage. BP has agreed to fund the development through to a point in time where a decision would be made as to whether to build it. The feasibility, the consents and everything else are in place but they will look at the market to determine whether the project will make money. Projects are developed all the time but decisions can be made not to go ahead with them. At this stage, it has been developed and has been built. BP

has committed to the development up to a point in time when it will decide on going forward. It has an option to take a majority share in the company and it is funding all the development costs through to that point.

173. **Mr A Maginness**: BP is doing that, but does giving it a majority share not take away, in a sense, from your ethos as a mutual company?

174. **Mr Larkin**: I am pretty sure that our interest is on the record. We want to see gas storage built for Northern Ireland. We do not really need to have a long-term position in that arrangement. We do not need to be a shareholder in it. In fact, if a company came in tomorrow and said, "Here is £400 million, we are building this now", we would say yes. All we want is gas storage for Northern Ireland. Our interest at this stage is to get the project developed and built.

175. **Mr McIlroy**: The big advantages are that, physically, the gas is here and our network has the pressure. Once it is built, whoever builds it, the gas is here and the pressure is there and Northern Ireland will get what it needs. That is our objective.

176. **Mr A Maginness**: We are lucky that we have a unique geology in the Larne area.

177. **Mr Larkin**: That is it. We are blessed with the geology. It is like finding oil or whatever. You need the geology, and it is there.

178. **Mr A Maginness**: Does the Republic need this?

179. **Mr Larkin**: Yes. In the longer term, or for as long as gas remains a primary part of the energy mix, Europe as a whole needs more gas storage. Westminster knows that they need gas storage and sees that it is not coming forward commercially. They are looking to see what sort of incentive schemes they should put in place to try to get it built.

180. **Mr McIlroy**: In the UK as a whole, there are four or five possible locations, and those projects are at planning stage etc. BP has just built one in Germany. It has looked at all those projects. One is 30 miles from the coast, and the brine outlet for the one in Cheshire — I think that it is the Cheshire one; my geography is not great — would have to go into the Mersey, which is 30 kilometres away. The other ones are the deepest or the shallowest in the world.

181. **Mr Larkin**: Gas pipes are not close by.

182. **Mr McIlroy**: The gas pipes are not near to an electricity supply, so they would have to build kilometres of overhead lines or kilometres of gas pipes. It then looked at the one in Northern Ireland, which is literally beside gas transportation and beside the strongest point of electricity generation probably on the whole island, with the perfect depth of salt. From its perspective, the only downside is —

183. **Mr Larkin**: There is no market.

184. **Mr McIlroy**: It is the market size. From an engineering perspective, BP's engineers love it. When you talk to them about it, you see the lights in their eyes. We need the arrangements because Northern Ireland as a market is too small. It is a three-market arrangement, and that is difficult. From talking to the guys further up in BP, we know that they see the Northern Ireland market as a risk. Part of our role is to try to convince those guys that Northern Ireland is the place to do this, that it is a great project and that it will help their European ambitions. BP balances its portfolio across Europe. It has places in Italy and Germany, and it is looking for one in the UK. It has picked us, and we want to try to deliver it.

185. **Mr A Maginness**: I have one last question. Is there any gas production in the South of Ireland? I know that Corrib is coming.

186. **Mr Larkin**: Kinsale obviously started in the early 1970s. It is running down and is nearly off. In fact, the last bit of production is being used as storage to pump it up a wee bit in the summertime and then let it come down. It is really on the run down. I think that they are talking about that happening in the next three years. It is petering out.

187. **Mr A Maginness**: What about Corrib?

188. **Mr Larkin**: Corrib is coming on. It covers, I think, a trillion cubic feet. It is a substantial reservoir. The only thing I would say is that it has a fast fall-off rate, so within five years, there will be very little profile coming out of it, and within eight years, it will be pretty much empty. The intention is to blast it out as quickly as they can. I guess that they have waited long enough to get it out of the ground, so they will take it out to market as fast as they can.

189. **Mr A Maginness**: OK. Thank you very much.

190. **Mr Newton**: Given what you said, there are obviously a lot of things going for the project in respect of the geology and so forth, as well as the 20 full-time and 200 temporary jobs that it would create. You have done all the financial modelling for this. In your submission, paragraph 4.2, on the issue of major investment, states:

"Under the terms of a Joint Appraisal Agreement, BPGM has agreed to fund the activities necessary to develop the project, including the … borehole".

191. **Mr McIlroy**: Yes; it very much comes to a decision point.

192. **Mr Newton**: You also state:

"Importantly, the project is currently being developed as a commercial venture, with little or no cost incurring to the energy consumers."

193. **Mr McIlroy**: Currently, "little" is £35. We did a whip-round around the board to collect our £35. We had an arrangement with the partners that we would have a 35% stake in a £100 company, so that is our £35.

194. **Mr Larkin**: In fairness, the "little" may also include some network costs. There are things that are incidental to the project. For example, if there is a lot of wind on the island and the storage wants to empty, the island will not be able to use it and it will have to flow back to Britain.

195. **Mr Newton**: Am I right that we are only at a very early stage with this project and that the true costs are not yet know?

196. **Mr Larkin**: Yes.

197. **The Chairperson**: Thanks for that, Robin. Mr Larkin and Mr McIlroy thanks very much for your time and for being with us today. We look forward to hearing from you again. That was very informative. My apologies for missing the first part of the meeting.

198. **Mr Larkin**: Thank you very much for asking such good intelligent questions about what we do.

6 June 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Gordon Dunne
Mr Paul Frew
Ms Maeve McLaughlin
Mrs Sandra Overend

Witnesses:

Mr Cecil McBurney	*Bombardier Shorts*
Mr Conleth O'Neill	*Harland and Wolff*
Mr Niall Irwin	*Irwin's Bakery*
Mr Bryan Gray	*Manufacturing Northern Ireland*
Mr Wilton Crawford	*Michelin Tyre plc*

Also in attendance:

Mr Shane Lynch	*Northern Ireland Authority for Utility Regulation*

199. **The Chairperson**: Briefing the Committee today are Bryan Gray, chief executive of Manufacturing NI; Wilton Crawford, managing director of Michelin Tyre plc; Conleth O'Neill, financial director of Harland and Wolff; Niall Irwin, joint managing director of Irwin's Bakery; and Cecil McBurney, director of plant engineering at Bombardier Aerospace. I have a note here that Mr O'Neill was to leave us at 11.40 pm, but we are well past that now.

200. **Mr Conleth O'Neill (Harland and Wolff)**: Twenty to one.

201. **The Chairperson**: It says here 11.40 pm. So, you have a wee while yet.

202. **Mr C O'Neill**: A wee while yet; another half an hour.

203. **The Chairperson**: You are all very welcome here today. You obviously heard a lot of the background stuff that the Utility Regulator presented to us today. The nature of the meeting is that you will make an opening statement to us and then there will be a Q&A session with members. I am sure that you have worked out who is dealing with this, Con.

204. **Mr C O'Neill**: I am. Chairman and members, I propose to make a short opening statement, and then each of my colleagues will make a short statement primarily about their own businesses. Bryan will then follow up on some of the overall issues.

205. **The Chairperson**: I am not pressing you too much, but it needs to be a relatively concise statement from each of you, because we have to be out of this room as there is another Committee on after this, and I am sure that this engagement will last a fair wee while as well.

206. **Mr C O'Neill**: I have a potential customer, so that is focusing my mind.

207. **The Chairperson**: Good.

208. **Mr C O'Neill**: Chairman, you have introduced all my colleagues here. We first came to the Committee on 7 May 2009 to raise the issue of energy. It was a concern then, and it remains a concern for all our members. Our members are small, medium and large companies, indigenously owned companies and multinational companies across all sectors, and energy is the one theme that is constantly raised when Brian and I are meeting our members.

209. **Mr Niall Irwin (Irwin's Bakery)**: Thank you very much, Chair, for affording us the opportunity to meet you today. Irwin's is a small Northern Ireland company. We started off in Northern Ireland, and we want to play our part in Northern Ireland. We want to be part of the food and drink strategy. It is all fantastic. However, we need affordable power — not just electricity but gas as well, in our case. The costs are close to forcing

us to move the part of our production that goes to the mainland. I confide in you that only 50% of our output goes to Northern Ireland, while 35% goes to GB and 15% to the Republic. The proportion that goes to GB is growing. What happens if we are tempted to move to GB, as we have been? We will save on our raw material purchases; on flour alone, we will save the guts of £100,000 a year. We will save the guts of £100,000 on electricity, and we will save the guts of £100,000 on the transport that we buy from Northern Ireland companies in Northern Ireland to get our products to the mainland. Here is the bad bit: 100 staff would go. That is how serious it is at this time if we do not get lower prices for power. The price of our power has moved in similar percentages to Con's.

210. **Mr Cecil McBurney (Bombardier Shorts)**: First, let me give you some of the good news. Bombardier is investing £520 million in its new CSeries wing production unit. I know that a number of people have been down to see it. That is the largest ever single inward investment in Northern Ireland. With that, we are also developing a lot of new skills and capabilities in our people and going to the high-skill end of the market. That will generate around 800 jobs during peak production years, and thousands more in the wider supply chain, which is key to the economy. The ongoing investment is also helping to maintain Bombardier's contribution to the local economy as the largest manufacturer, with some 5,000 employees. That is all good news.

211. **Mr Wilton Crawford (Michelin Tyre plc)**: Thank you for having me here. At Michelin Ballymena, we have roughly 1,000 jobs. We have been there since 1969 and we are very proud of the product we make. It goes around the world. We produce roughly 1 million Michelin truck and bus tyres that go around the world per year. We send about 40% of our products to North America; 10% to China; 5% to India; some to South America; and the balance, 42% or 43%, goes to Europe. Just to make you aware of it, only 10% of the tyres that we produce in Ballymena are sold in the UK and the Republic of Ireland, so over 90% is sold worldwide. We are part of a worldwide supply chain, just as Cecil talked about with Bombardier.

212. **Mr Bryan Gray (Manufacturing Northern Ireland)**: I have some general comments. We have provided the Committee with a great deal of detail in the background documents that we sent, so I do not intend to get into that. I will just say that, as Mr O'Neill said, it is four years since we first presented on this problem to the Committee. During those four years, the only policies that we have seen introduced by the Department are ones that will make the problem worse by compounding it and increasing costs. It is of huge concern that the Assembly has no policy whatsoever to address the high cost.

213. **Mr Flanagan**: What was that first percentage?

214. **Mr Gray**: I said that 29% use 90·3% of the electricity. In many ways, this issue is more important than corporation tax. A 20% premium on a company's electricity bill will amount to an awful lot more money than any reduction they will ever see in corporation tax. As a result, that has a major effect on foreign direct investment and on the competitiveness of Northern Ireland companies.

215. **The Chairperson**: Has that policy not changed?

216. **Mr Gray**: No; it continues.

217. **Mr Flanagan**: That explains the difference between North and South, but what about the rest of Europe?

218. **Mr Gray**: I do not know what government policy is in other European jurisdictions. The Chairman mentioned the case of Denmark where domestic costs are much higher than Northern Ireland but where commercial costs are much lower. It is my guess that other countries have adopted similar policies.

219. **Mr Crawford**: We have done our own benchmarking every year for many

years, and we have had a full-time energy manager based in Ballymena for the past seven years focusing on energy efficiency improvements. In fact, we have become the best of the 72 factories worldwide as far as megawatt hours per good ton of tyres produced. If we look at our sister factories, we have four in Germany, and they cost on a commercial basis about 35% to 36% less an hour per megawatt per ton. There is a difference. Naturally, the government and other bodies have made the decision based on large industries and manufacturing.

220. **Mr Gray**: Generator profits also badly need to be looked at. Mr Lynch referred to the recent report, which was published by the single electricity market (SEM) committee. Once again, that is a terribly technical and complex document. It was published only in the past 10 days or so, and we have not had an opportunity to examine it in detail. There was considerable discussion earlier about the cost of wind energy, and the tables in the report show that wind generators are making a gross profit margin of 79%. Hydro generators make 62%, conventional gas and coal stations and fire-powered stations make only 24% or 25%. Wind may be an effective solution down the road, but not while our market is structured in such a way that we continue to pay way over the odds for wind power. We need to be paying a more competitive price for it.

221. **Mr Flanagan**: Will we give him a round of applause?

222. **The Chairperson**: He is still in the room —

223. **Mr Flanagan**: He is getting red all right.

224. **The Chairperson**: — listening very astutely to everything that is being said.

225. **Mr Gray**: As you will see from the letter that we have received from the Department, it has very little information about the cost of its policies. It is very firmly stated in the strategic energy framework that those policies should be properly costed before they are introduced. The Department said that it intends to review the strategic energy framework in 2015. We all know that, given the timescale, it could be 2018 before that review takes place and we see any action as a result. That is five years away. We need to ask how many companies will close, how many jobs will we lose, and what damage will we do to our economy in those five years. We need urgent action now.

226. **The Chairperson**: You heard me pursuing the Utility Regulator earlier on whether, having identified the problem — they accepted that there was a problem — there was an action column. Mr Shiels said that there was and that the issue that you highlighted was one of those problems.

227. **Mr Shane Lynch (Northern Ireland Authority for Utility Regulation)**: Do you have a seat for me.

228. **The Chairperson**: Aye, there is one there.

229. **Mr Flanagan**: You can temporarily join Sinn Féin.

230. **The Chairperson**: Thanks very much for staying with us. Will you confirm that point? It is a key issue. We have heard what the problems and issues are with the industries, and it is important that we get it addressed.

231. **Mr Shane Lynch**: To clarify your proposal, when you talk about "industry" do you mean energy providers, energy users or both?

232. **The Chairperson**: We know what the problem is — we have heard it — and its implications for the business sector as it is represented before us. The issue that I raised earlier was that you have identified the problem and concur with at least some of the symptoms that we have heard about. What I am seeking clarity on is that the problems raised by the people who are represented here — not exclusively by any means, manner or fashion — and the consequentials of those problems will be factored into the deliberations that you will have in the dialogue and the studies that you will take further to try to rectify this problem.

233. **Mr Shane Lynch**: Yes. It is crucial that consumer representatives — industry and domestic — be part of that forum; it is also crucial that energy providers be part of it. As I said earlier, there is a collective responsibility. It is also important that the leadership of such a forum should rest with the likes of us and DETI, because, with respect to energy providers, they all have a vested interest. They have an interest in looking after consumers, but they also have an interest in looking after shareholders. They are an important contributor to that, as are large domestic energy users. If we were to have a forum, we have to figure out a way of making sure that we have participation.

234. **The Chairperson**: Are we at the early stages of the dialogue on its shape and form or the strategic way in which that might develop?

235. **Mr Shane Lynch**: Yes. We and DETI are at the early stages of thinking about how we might do that. It should dovetail into the ultimate review of the strategic energy framework that will happen anyway. I take Bryan's point: it probably needs to happen sooner rather than later.

236. **The Chairperson**: Yes, because we will be five years down the line before —

237. **Mr Shane Lynch**: That is right. It is urgent; it is imperative that we get going.

238. **The Chairperson**: Without labouring the point, I think that everybody in the room accepts the urgency. How can that urgency be injected into what could otherwise be a very tedious and long-winded process? In other words, are there mitigating measures that could be taken in the interim that do not require us to wait five years?

239. **Mr Shane Lynch**: It is up to the leadership of the forum; it should set itself objectives and a timeline from the outset.

240. **The Chairperson**: Thanks very much for clarifying that for us, Shane.

241. **Mr N Irwin**: What I meant by risks is the whole system agreement under which the generators and distribution companies work that guarantees the return of profits. We talk about a 20% return on gross profits for some of those guys. I wish that we had them. I think that my friends around the table wish that they had them, too, and they are a lot smarter than I am. That will take political will and bravery. However, in the past number of years, we have seen what Northern Ireland can do if it is minded to. It needs to be minded to do that. If the system needs to be disentangled, it needs to be disentangled. I know about security of supply; we can be ranted at about that. However, we have to take risks. There will be security of supply. If we reduce their margin slightly, they will still want to come in for more. None of them will run away; rest assured about that. That is what I meant about taking risks. Look at the system. If necessary, be brave enough to dismantle it. If it is wrong, let us fix it.

242. **The Chairperson**: The figures that Brian mentioned — gross profit of 79% — are absolutely astounding.

243. **Mr N Irwin**: Twenty-five per cent is astounding at the lower end of the scale.

244. **The Chairperson**: Oh yes, but 79% in this day and age?

245. **Mr Flanagan**: Any business would be happy with a 25% return. We are normally the first people to hammer the home heating oil industry, but if the boys driving around the back roads into housing estates with lorries were getting a 20% return they would be happy too. All those things need to be put into context. The fact that renewable generators are getting upwards of 80% for generating electricity is ridiculous.

246. **Mr McBurney**: We are looking at options. I think that everybody recognises that we are looking at waste to energy, and the planning is in the system. That is going through the system at present and hopefully later this year we should get planning if everything goes well. That is a

renewable source of electricity for our site. We are also looking at photovoltaic (PV), biomass and biogas, which are all at earlier stages because we have other sites in Northern Ireland.

247. **Mr Flanagan**: Have you any idea how much that might save you?

248. **Mr McBurney**: We are hoping to save some 30% of our electricity bill.

249. **Mr Flanagan**: Generating your own power and becoming self-sufficient is spoken about as if it were a bad thing. I understand why it may be a bad thing, but I think that one of our problems is that we are too reliant on centrally generated electricity and energy that then has to be transmitted. People, businesses and communities should look at generating their own sources of energy so that they can be self-sufficient; therefore I am keen to hear more about what you are doing. It is not something that would fill me with fear. It is definitely something that should be explored; however, there will be consequences, and they need to be factored into policy implications. You are looking to generate your own energy, and it is good that that is explored, but does each of your organisations pay the same price per unit for electricity, or is that negotiated with the supplier?

250. **Mr Crawford**: We negotiate directly through our purchasing.

251. **Mr Flanagan**: Without giving away any sensitive commercial interests, is there much of a difference in what you are paying? I presume that the four of you have spoken about what you are paying.

252. **Mr C O'Neill**: There will be differences because of the level of consumption. The volume drives the price, but in our previous work we tried to look at groups of manufacturers together. What we are seeing is that groups of people with a similar load profile or consumption profile are paying broadly the same rate. In fact, although we have competition in the supply, from our own perspective, we have probably not changed supplier in 15 years because the most competitive quote that we get is from that existing supplier. The new suppliers coming into the market have not brought us a cheaper alternative.

253. **Mr Flanagan**: Bryan, I am not sure whether you have released a press release about this today, but I see that Julian O'Neill has tweeted that Manufacturing NI wants to see a strategy from the Executive to deal with it. What would you like to see in that strategy?

254. **Mr Gray**: Phil, it is a hugely complex and technical area. Mr Lynch understands it, but we do not. We believe that it is our role to identify the problem; it is not our role to provide the solution.

255. **Mr Flanagan**: Have we identified the problem or have we identified a consequence of the problem — that you are paying more for your electricity than other places — and we do not know what the problem is or why you are doing it?

256. **Mr C O'Neill**: It is the consequence that we are dealing with here. As I said at the start, what we need is provision that is not just secure and sustainable but also competitive; we must have competitive provision. Wilton's examples were very well put across. In Michelin he is dealing with factories with significantly lower costs. He has done everything in his factory to be more efficient and to deal with its energy consumption and other productivity factors, but he is still —

257. **Mr Crawford**: Two times higher.

258. **Mr C O'Neill**: We have examples of members with businesses in the Republic of Ireland, in the North and on the GB mainland who can show us their bills. It is not a myth. In many ways, that is one of the benefits of the regulator's recent publication. For many years, we felt that people thought that we were crying wolf and that our figures did not stack up. The recent figures produced by the regulator have validated what we have said for many years. The issue now needs to be addressed. We think that the policy needs to have competitive provision, because it is only through competitive provision that we will sustain the jobs that we have and allow

for more jobs and wealth to be created. Without that, we will not; we will put investment off.

259. **Mr Flanagan**: We all know that you are paying more than most other member states. Is it your understanding that domestic customers are not paying enough for a unit compared to large users, or are suppliers and generators making too much profit on the back of large energy users?

260. **Mr Gray**: We do not believe that competition would have a major impact on prices. We fully accept that Northern Ireland is a small market. We are at the end of a very long gas pipeline so we will always pay more for gas, and, because we are a small market, we will always pay a bit more than larger markets. A minor reduction could be made through increased competition or increased regulation of supply companies, but the two main drivers for prices are network costs and public policy.

261. **Mr Flanagan**: Could you elaborate on public policy?

262. **Mr Gray**: For example, we have just had a consultation on the Energy Bill. The Department estimates that that will add 3% year on year to electricity prices for commercial users as we have to subsidise energy-efficiency measures for domestic users.

263. **Mr Flanagan**: Will the energy-efficiency measures not be available to all users?

264. **Mr Gray**: No; they apply only to domestic consumers. They are measures such as roof-space insulation and cavity-wall insulation. Industrial users get no benefit from energy-efficiency grants from the Department.

265. **Mr O'Neill**: We have all been investing for the past five or 10 years.

266. **Mr Flanagan**: One of the important points that you made, Bryan, and which needs to be heard, is that, in your opinion, this issue is bigger than the corporation tax issue. Reducing corporation tax is all well and good; it will reduce the tax that people pay on profits that they make and would ultimately make it more attractive for people to invest here. However, for people who are already here, reducing the profit that they make, although doing very little to reduce their cost base, would not be that attractive. It would be better to tackle the cost base.

267. **Mr Gray**: We need to remember that the Republic has been able to sell itself not just thorough low corporation tax; it is through a low cost base as well. They are equally important.

268. **Mr Flanagan**: This is my final question, Patsy. Has Invest NI's large energy user forum been effective? Is the subject on the agenda for those meetings?

269. **Mr Gray**: I do not think that it is Invest NI's large energy user forum; it is our large energy user forum that is held there. We run it jointly with the Confederation of British Industry (CBI). It is held in Invest NI.

270. **Mr Flanagan**: I will withdraw that comment. However, it is on the agenda regularly for those meetings.

271. **Mr Gray**: Constantly.

272. **The Chairperson**: I need clarification on the taxation issue. Where you have an infrastructure investment for the enhancement of your plants — I am looking at Conleth because he is the financial guy — is there not a tax offset that can be redeemed?

273. **Mr C O'Neill**: If you invest in your factory and get a standard capital allowance. However, the major benefit for us is to try to reduce consumption and make ourselves more efficient. There is that benefit, which is like investing in any asset in your business.

274. **Mr Agnew**: Thank you, gentlemen, for all your contributions so far. Conleth, you said that network costs and policy were the two key questions. I have sympathy for the frustration with how the system works, and we heard about that in detail. You bring your generators on to the market with a lower cost base and the price does not come down because

we set the prices at the highest cost. That certainly is a frustration. At the time, I commented that I was glad that we broke up the system to separate generators from suppliers. I am not sure that that was the best policy decision, but it would be a hard one to roll back.

275. **Mr N Irwin**: We are smaller than that.

276. **Mr Agnew**: I thought so. That is where the problem comes in, because, to some extent, we are talking about wanting to bring costs down for large energy users. Soon, we will talk to the Northern Ireland Independent Retail Trade Association (NIIRTA) and Pubs of Ulster, which represent some of the smaller energy users, and then we will talk about fuel poverty and domestic prices. We want to bring the price down for everybody. On network costs, it is really about choice and about how we distribute the costs. Ultimately, if we bring down Bombardier's costs, we might put up Mr Irwin's costs. Obviously, policymakers have to grapple with that. I am not saying that the current balance is right, but, ultimately, we have to consider the consequences. One of the consequences might be that, if we help one of you out, we disadvantage another. Either way, it could result in the sorts of job losses that Mr Frew referred to when Shane Lynch was here. I do not know whether anyone wants to comment on that.

277. **Mr N Irwin**: It goes deeper than that. Tampering around the edges of this problem is not the answer. You have to get back to the nitty-gritty of, for want of a better word, an agreement. We are all fond of agreements; this is a matter of agreement. Tamper around the edges, and all we will do is fool ourselves. We have to get stuck in, and, if necessary, dismantle the system and then fix it, because the problem will not go away.

278. **Mr Agnew**: To some extent, that slightly contradicts Mr Gray's point that network costs are one of the two key issues.

279. **Mr C O'Neill**: Bryan's point is that there are issues that we feel could be addressed almost immediately, recognising the reality of the world we deal with. Bryan is saying that, if there were a bigger will, we could take a bigger step. The question is whether the will is there to take that step to sustain the jobs that exist at the minute and create the context for more jobs growth. You have to balance practicality and reality. The reality for many of our businesses here, irrespective of whether their consumption is in the same category as that of Niall's, some of the small and medium-sized enterprises, or the larger guys who are here with us today, is that we all face and have to deal with those market pressures. Because of some of those market pressures, there is a big risk of people losing employment. Therefore, we have to do something different.

280. **Mr Agnew**: I am certainly not trying to pit people against each other, but I think that what we are getting to is, as Mr Irwin put it, tinkering on a short-term basis, which just shifts the problem. I do not see any merit in just shifting the problem around because, as soon as we shift it on to another energy user, they will come back to lobby us, and we will shift it again, and politicians will just play popular politics. My party is not that popular, so I do not have to do that.

281. **Mr N Irwin**: We accept that Northern Ireland will have problems achieving the lowest cost. We cannot achieve that in our businesses, and nor can Northern Ireland plc, but we have to do our best to get the best value for money in whatever we do.

282. **Mr Agnew**: The public policy point is a fair one, but, ultimately, there is something over and above that: the structure of the energy market. What has come out of today is that that is where we need to look. I see nodding heads, so I think that I understand you properly and that I have interpreted properly the information from Mr Lynch about addressing those issues.

283. **Mr McBurney**: The answer to that, as I said earlier, is that we compete in a global market, so we compete against our own sister sites and other

companies. We put in our bids for a product that goes out to tender and we are still winning the tenders that we are bringing to Belfast. However, it is getting tighter all the time.

284. **Mr Crawford**: Our manufacturing factors in Michelin are that we are one of many cost centres, not a profit-and-loss centre. Everything is done at the corporate level. Clermont-Ferrand, which is the worldwide group, manages all our 110,000 employees. We are a cost centre, one of the 72 factories in the group, and one of 18 tyre manufacturing factories in the world.

285. **The Chairperson**: How do energy costs in Ballymena compare with your sister plant in Germany?

286. **Mr Crawford**: The sister plant in Germany pays about 35% less than we do per megawatt of ton of produced tyres. In Nova Scotia or the US, where we run many factories, or in other parts of the world, such as France, our costs are roughly two times higher.

287. **The Chairperson**: We have two more members who want to ask questions. I am conscious of the clock; somebody will be throwing us out of this room shortly.

288. **Mr Dunne**: Apologies for coming in late. You are very welcome. As representatives of major employers from various companies, we recognise the excellent work that you are doing in Northern Ireland. Manufacturing is extremely important. The Committee fully recognises that. We have been endeavouring to do all that we can to support you. We will certainly be using our influence with the Minister and Department to try to bring about change. The work that you are doing is invaluable to the Northern Ireland economy. We recognise that. We will certainly be doing all that we can to try to support you.

289. **Mr Crawford**: INI has been a great supporter of Michelin Ballymena for very many years. We have worked closely with it on our energy efficiency programme since 2005. It has been very diligent. We pulled all the fruit off the low-hanging limbs. Everything has pretty well gone that we have been able to find with its support. We worked with the Carbon Trust for a number of years until it changed recently. As I said before, of our 72 factories across all zones and countries, Michelin Ballymena is the number one energy efficient factory. That happened with the support of INI and things that we have done, such as benchmarking against many other companies. It has been a great supporter. However, we have now exhausted that opportunity. The challenge that I have given to the INI team as well as Minister Foster is to consider what else can be done to support us. It could be cogeneration units, or something else. We are at a point where is not much left for Michelin Ballymena to gain.

290. **Mr Dunne**: How will the interconnector make a contribution towards security of supply?

291. **Mr C O'Neill**: As Bryan said, we do not have a really detailed understanding of those decisions. We see overcapacity in the South of Ireland. New plants were brought online recently, and there is an opportunity to hook into those. Perhaps that will make a difference to some of the issues that we heard about this morning, such as the restrictions on our supply. It makes sense. Mr Lynch talked about the opportunity that exists through the ability to tap into the wider European grid, be that in supply or generation from potential new renewable sources. Interconnectivity can offer us some opportunities.

292. **Mr Dunne**: I take it that you are all using gas as a form of energy. Has the introduction of gas over recent years saved money?

293. **Mr Crawford**: A great deal for Michelin Ballymena, Mr Dunne.

294. **Mr Dunne**: It has?

295. **Mr Crawford**: Yes, sir. We went from heavy oil to gas. That was a major step change for us.

296. **Mr Dunne**: That is good to hear.

297. **Mrs Overend**: I will be very brief. Thank you very much for your time this morning. We really appreciate it, and we have learned more about where you are coming from on this issue. We spoke previously about an expertise forum and getting that up and running sooner rather than later. You also mentioned the Energy Bill that has finished its consultation process. Maybe this is the opportunity to get the forum up and running and connect that with the drafting of the Energy Bill. You mentioned the insulation of domestic houses and how you were not happy about the larger companies subsidising that. Are there any other issues you want to raise in connection with the Energy Bill?

298. **Mr Gray**: I was just using the Energy Bill as an example. It is not the biggest driver in public policy. I think we would say that the 40% renewables target is the biggest cost driver in public policy. There is a whole raft of legislation out there that is being considered. For example, Minister Attwood recently held a pre-consultation on a specific climate change Bill for Northern Ireland. Once again, we are concerned that that is another element of public policy that will just add more costs. There are many different strands of public policy that are all adding to costs. We believe that somebody needs to look at the big picture, take an overview and decide where we are going with it in the future.

299. **Mr Frew**: I have one very quick question.

300. **The Chairperson**: Very briefly, Paul.

301. **Mr Frew**: I apologise for missing the start of your presentation. I had to go out to a couple of meetings that could not get moved. There is talk that, in the future, if we do not get our act together, there could well be interruptions in our supply, and security of supply is crucial. As manufacturers, what would it mean for you if you had to down tools for several hours?

302. **The Chairperson**: We will take one answer from whichever one of you wants to address that.

303. **Mr Crawford**: When the snowstorm happened in March, we were down for 38 hours. That cost us probably in the neighbourhood of £600,000 or £700,000 worth of product that we did not sell. It is a very serious issue. I use that example from just two months ago.

304. **Mr Gray**: I would just add that we believe that the interconnector is a key factor in security of supply.

305. **The Chairperson**: Thanks very much for that. One thing you mentioned earlier, Bryan, was the Energy Bill, which will be coming before us in autumn. We would welcome your input to our scrutiny of that Bill when it comes to the Committee. That will be advertised and, when it is, please pencil that into your diary. You do not miss much anyway.

6 June 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mrs Sandra Overend
Ms Sue Ramsey

Witnesses:

Mr Shane Lynch	*Northern Ireland*
Mr Kevin Shiels	*Authority for Utility Regulation*

306. **The Chairperson**: With us today are Mr Shane Lynch, the Utility Regulator; and Mr Kevin Shiels, director of the retail and social directorate. You are both very welcome. It is good to see you again. The usual format is that you make an opening statement. We have your papers, which we have read. Some of it is quite detailed and, I have to say, quite technical for someone like me who really is not a technical buff. Nevertheless, it is good to have you with us to shed some light on some of the issues. It is over to you, Shane. Please make your presentation.

307. **Mr Shane Lynch (Northern Ireland Authority for Utility Regulation)**: Thank you, Chairman. Good morning, ladies and gentlemen. We will try, as much as possible, to be non-technical. Chairman, how much time would you like us to take to do the presentation?

308. **The Chairperson**: If at all possible, I would prefer it if you do not go much over 15 minutes, because I reckon that a lot of the issues will be drawn out and teased out by members.

309. **Mr Shane Lynch**: OK. I have set my watch.

310. **Mr Kevin Shiels (Northern Ireland Authority for Utility Regulation)**: As Shane said, I will talk to you about two separate issues. The first is our recently released report on electricity prices, the consultation period for which has just finished. I will bring you up to date on that, and then I will talk to you about the recent 18% increase by Power NI in regulated domestic tariffs.

311. **Mr Shane Lynch**: Thank you, Kevin. At this stage, I will give you our perspective on what can be done about prices in Northern Ireland. As you can see from the slide, I have broken it up into what can be done on the regulatory front and what can be done on the energy-policy front. So, what I will take you through now is reasonably high level, and I will try to keep it in simple, non-technical language.

312. **The Chairperson**: Sorry. Someone in the room has a mobile phone switched on. Will that person ensure that it is switched off, please? It is very disconcerting to other members. I apologise to you in particular, Shane. It has interrupted your presentation. It also interferes with the recording for Hansard. Please switch off all mobiles phones. Sorry, Shane. Continue, please.

313. **Mr Shane Lynch**: We can pick up this point in more detail later. Network charges in Northern Ireland are, on average, across all consumers, 22% lower than they are in the Republic of Ireland. However, what is very interesting is that when you look at what large users are paying, you see that they are paying costs that are around 20% higher. Clearly, there is something going on in the distribution of charges. It has to be significantly different in Northern Ireland compared with what it is in the Republic. We can come back to that point. It is a key finding to date.

"it is imperative that any policy decisions made now are assessed for their impact on energy costs."

314. **The Chairperson**: Thanks very much for that, Shane. You took us through a fair bit of stuff. I am sure that members will have questions to ask you.

315. **Mr Shane Lynch**: Further increases?

316. **The Chairperson**: Yes.

317. **Mr Shane Lynch**: That is not our intention. Kevin did a review recently. Normally, the whole Power NI review kicks in from 1 October each year. We brought the review forward this year because it was already in deficit. Kevin, do you want to add to that?

318. **Mr Shiels**: Normally, we do the network tariff reviews, and then they feed into the final Power NI tariff review. The Power NI tariff review had to be brought forward, so we had to make forecasts of the network charge changes because they had not yet bottomed out. We think that we have made good forecasts of those in our Power NI tariff review calculation. During July and August, the normal review of network tariffs will unfold. I do not foresee that impacting on where we are now with the regulated tariffs.

319. **The Chairperson**: As you will appreciate, it is a huge issue for small and large businesses and, indeed, for ordinary consumers in their homes. It is a 17·8% hike. In a lot of cases that we see through our constituency offices, people are living on the breadline already. If we have a bad winter, I do not know how some people will be able to manage through that. So, there is a lot riding on it.

320. **Mr Shane Lynch**: OK. There are a couple of points. The 40% target is a sustainability objective. It is there to reduce carbon; it is not there to reduce prices. That is an important distinction. All the indications are that it will put prices up. The strategic energy framework makes that fairly clear. Let me try to explain in very simple terms why it will put prices up.

321. **The Chairperson**: Yes, please do.

322. **Mr Shane Lynch**: For example, let us say that you own a wind turbine and I own a gas turbine, and we are both competing to supply the same consumer. I have to buy gas, and your wind is free. Let us say that I have to charge the consumer 10p for my gas. We have both had to buy our turbines, but we will park that for a second. I need 10p back for my gas. What are you going to charge for your wind if we are both competing for the same consumer? I guess that you are going to charge something short of 10p. I do not think that you are going to charge them zero. That is what is called the market price. So, the first point that you have to realise is that the fact that we have wind in the mix does not necessarily reduce the price because they are commercial players, and they will charge the market price.

323. **The Chairperson**: I will go back to market price. You are saying that it is a free market, and away it goes from there, but there is some form of regulation. I have met NIE to discuss investment in the significant reinforcement of the grid, and I hear what it says. However, let us not forget that the people putting up the turbines are also making a substantial investment. I have met some of those companies, and they argue that they are making an over-the-top investment in a grid that should be invested in by the likes of the power company itself. It is a cost issue. I will have to have a separate meeting with you on that because they say that they are paying for the upgrade through the costs charged to them for connection to the grid. You are saying that, in a free market, there is no input from the likes of you into the regulation of those costs to ensure that people do not incur over-the-top charges. I find that hard to understand.

324. **Mr Shane Lynch**: I will take the second question first. The single electricity market is a regulated market, and we regulate it because we have market dominance in the Electricity Supply Board (ESB). We regulate it based on the economic theory — I will spare you that — of perfect competition. What happens in a market place? I gave you an example of a wind turbine and a gas turbine and the price of gas being

10p. If there is no wind, it has to be gas because it is the only alternative. The same is true of any commodity market. You have to get your head around the fact that, on top of that, we also have subsidies, which are there for good reason. So the policy question involves weighing up whether, ultimately, the subsidies are still needed, or are they needed to this extent, going forward.

325. **Mr Frew**: Thank you very much for your presence today and presentation, Shane and Kevin. This is, without doubt, one of the biggest issues that governments all around the world will grapple with in the next 25 years, and Northern Ireland must grapple with it now for the sake of the future. We will hit thresholds, boundaries and barriers in the coming years, such as 2015, that will have a major impact on business. We already have a grid that is not fit for purpose and generation that will be wound down in the coming years. Our interconnector does not work to its full capacity and is stuck in a planning system that simply does not work. That paints a stark picture. Ultimately, business will suffer, and, if business suffers, the population will suffer. If we lose a large employer, which could well be a global company, we will place 1,000 families in fuel poverty overnight. Before we can really grapple with the problem, we must acknowledge that it is the biggest issue for a generation to come. I am sorry for making a statement rather than asking a question, but I wanted to set the context of how important this really is.

326. **Mr Shane Lynch**: I did not take you through a couple of slides on the security of supply. If you do not mind, I will take 30 seconds to do that because they feed into your question, Paul. There are three issues coming together that may give us a capacity problem in 2016: the North/South interconnector is delayed; Moyle is at half capacity; and generation capacity at Ballylumford power station, which has signalled that it will exit the market because it cannot comply with environmental requirements. Added together, they mean that supply is very tight. We have only a couple of hundred megawatts of surplus capacity. We have been working closely with DETI on that. We are about to publish a joint paper that sets out the problem, remedies and our options. The long-term solution is getting Moyle to full capacity and getting the second North/South interconnector built. There is a surplus of capacity in the South, but we cannot access that until we get the second interconnector. Those are no-brainers — you get both done. There may be further necessary interim measures. It seems probable that there will be no long-term fix to the Moyle interconnector until 2017. However, my understanding is that there is an interim solution that can be effected by as early as 2014.

327. **Mr Frew**: Large companies here pay a massive amount for energy compared with those in the rest of Europe and, indeed, the world, which puts them at a competitive disadvantage. However, we know that our householders pay slightly less than those in GB. We also know the scenario in the Republic of Ireland. How does the Republic of Ireland keep its costs down for large companies?

328. **Mr Shane Lynch**: We are in the same wholesale market, so our wholesale prices are the same. The difference is in the network charges and their allocation. As I said earlier, the fascinating point is that, overall, network charges for all consumers are 20% lower in Northern Ireland than in the Republic. We have a lower cost system here, but large users pay 20% more — the opposite of what happens in the Republic. That seems strange, and the only possible reason is that costs are allocated differently across consumer groups. Clearly, fewer costs are allocated to large users in the Republic than in Northern Ireland.

329. **Mr Shiels**: Countries across Europe appear to allocate their network-related costs in very different ways across consumer groups, and yet, in theory, all should allocate them in a non-discriminatory way. Shane hinted that the allocation of costs on a non-discriminatory basis is part science and part art. We want to follow up

on our work looking at the allocation of network costs in Northern Ireland relative to those in other jurisdictions to get a better handle on whether there is — I am loath to say a right or wrong way because, in a sense, it is a bit of an art, but we need to at least expose what is going on with cost allocations in different jurisdictions. Our cost allocation in Northern Ireland looks very similar to that in GB but very different from the ROI cost allocation. There must be a reason for that, but none of us know that yet, so work needs to be done.

330. **Mr Shane Lynch**: I will give you one very interesting fact: Germany took this to the extreme and allocated no network cost to large users, but that practice was overturned by the European Court of Justice for being discriminatory. That is an extreme case, but it is interesting.

331. **Mr Frew**: This is my final long-winded question.

332. **The Chairperson**: Do not make it long-winded, Paul, because other members want in.

333. **Mr Frew**: People talk about wind and tidal energy being free. It is not; it is extremely expensive. I think that you have been quoted as saying that wind and tidal energy would increase costs by 113%, which would translate into a 25% rise in bills. The tidal project on the north coast has to connect to Kells, which is miles away, and thus it straddles the entire North Antrim constituency. You have differentiated between lower carbon policies and lower cost policies. However, how do we get a fit and balance so that we do not lose business and competitiveness when trying to hit a renewables target of 40%? Should we be looking at increasing the old-style generation of electricity to see how that helps us to meet the target? If businesses decide to go it alone and generate their own electricity, what impact will that have? If a global company, which is a large employer, decides to generate electricity to get away from the problem, how does that affect the rest of the companies on the grid?

334. **Mr Shane Lynch**: In my view, all those are policy questions, Paul. We have made policy decisions, and we can change them. You have to be aware of the interdependence of policy objectives. The 40% renewables target is a very laudable objective and does a lot for carbon reduction, but it does not come free. Another key objective in the strategic energy framework is industrial and international competitiveness, as you said, and the 40% renewables target will adversely impact on international competitiveness because of the price. So there are trade-offs and balances. The big advantage of the regulator working hand in hand with the policymaker, DETI, is that we have the experience of implementing policy. We can provide the feedback loop, as I describe it. The key thing is to carefully examine every policy decision and its future impact. The answer lies in more of the same: lots of scrutiny.

335. **Mr Frew**: What about the companies generating their own electricity?

336. **Mr Lynch**: That is not a good outcome because they leave —

337. **Mr Frew**: Are you fearful of that?

338. **The Chairperson**: Paul, I need to move things on a wee bit. There are a couple of points that I need you to clarify, Shane. I am sorry, Paul, but I must bring in other members.

339. **Mr Frew**: That is OK.

340. **The Chairperson**: You mentioned a joint paper on the security of supply. When will that be available? I am sure that the gentlemen at the back of the room were listening very closely to you, Kevin, when you spoke about the further work required on costing. I do not know whether you meant that further work would be done or simply that further work was required. Is there an action column? Briefly, just for the record, please tell us when the report is likely to be published and whether you have

committed to working further on the costing issue.

341. **Mr Shane Lynch**: Do you mean cost allocations?

342. **The Chairperson**: Yes, cost allocations, in light of what has just been said about business.

343. **Mr Shane Lynch**: Of networks?

344. **The Chairperson**: Will we hear more on that?

345. **Mr Shane Lynch**: Yes. That is one of the areas that we have identified and need to delve into.

346. **The Chairperson**: So you will deal with it. OK.

347. **Mr Shane Lynch**: The answer to your first question is that the report will come out in mid-June.

348. **Mr Shiels**: May I speak for just 30 seconds? The purpose of consulting on the original paper was to generate debate, which happened, and ideas about areas that require further follow-up. Three or four areas were identified and will be followed up, though we have not yet decided on the order of priority. Network cost allocations is definitely one area that will be followed up.

349. **The Chairperson**: Can you give me an insight into what the other two or three areas are?

350. **Mr Shiels**: Yes.

351. **The Chairperson**: I do not need elaborate detail. Just give us bullet points to inform the rest of the meeting.

352. **Mr Shiels**: One of the other areas is as follows: when you look at the dispersion of prices, it seems that renewables and taxation policy can affect the final price across different customer groups, so we want to look at that. Sorry, Chair, I cannot remember the other one.

353. **The Chairperson**: Just send us an e-mail or something.

354. **Mr Shiels**: We will write a paper on the next steps, which I hope to take to Shane and the board by the end of June. That will clarify what we received in feedback and what the next steps will be.

355. **The Chairperson**: A number of members have indicated that they have questions. I am allowing a fair bit of latitude today, but please get to the point and ask your question, members.

356. **Mr Flanagan**: Thanks for the presentation. We started talking about prices for large-scale energy users, but then world events led to Power NI putting its prices up, so we had to move slightly.

357. **Mr Shane Lynch**: Zero.

358. **Mr Flanagan**: If he bids in the single electricity market to generate wind when you are burning gas at 10p, how much does he get for his wind?

359. **Mr Shane Lynch**: If I am the price-setter, 10p.

360. **Mr Flanagan**: In a free market, is the price-setter the person with the highest cost or the lowest cost?

361. **Mr Shane Lynch**: Highest.

362. **Mr Flanagan**: In a free market? If you are selling a bag of spuds for £3 and Patsy is selling a bag of the same spuds at £2, who do you buy the spuds from?

363. **Mr Shane Lynch**: If both bags are needed to feed families —

364. **Mr Flanagan**: We are on about, say, a hotel, not a family.

365. **Mr Shane Lynch**: If you need only one bag, the cost is £2. If you need both bags, it is £3.

366. **Mr Flanagan**: Your bag costs £3 and his costs £2, so do you get £3 and he gets £2, or do you both get £3?

367. **Mr Shane Lynch**: If both bags are needed, we both get £3.

368. **Mr Flanagan**: Patsy, if your bag of spuds was £2, would you get £2 or £3?

369. **The Chairperson**: I think that I will stick to electricity.

370. **Mr Flanagan**: No, go back to spuds. They are simpler.

371. **The Chairperson**: It is a good analogy and takes us back, Shane, to the point that we raised earlier about the form of regulation of the overall costs associated with the generation of electricity. We have heard how cost fluctuations occurred as a direct consequence of the gas market. To my simple mind, the point that Phil is pressing again is that, if the cost of a source of energy, whether it is photovoltaic, wind, or water, is lower, what is the form of regulation that can be determined, subject to subsidy, ROCs and even taxation policy? Basically, what I hear from you is that there is no control over the amount of profit that can be made on foot of this as long as somebody else is charging that wee bit more.

372. **Mr Shane Lynch**: There are two markets: wholesale and retail. In the wholesale market, every generator — wind generators, gas generators, coal generators — bid their price half-hourly. They are obliged to bid what it actually costs them — their variable cost. So you have to bid zero for your wind turbine, and I have to bid 10p for my gas turbine. All bids are stacked up one on top of the other, from the lowest, at zero, to the highest, at, let us say, 10p. We put demand alongside the bids. Let us say that, in supply, all the generation adds up to 100 units, and demand is 90 units. We need only 90 units of supply, so we do not use 10. However, the price set is what economists call the system marginal price. The last and most expensive generator sets the system marginal price, and everybody gets that price, including the guy whose bid is zero.

373. **Mr Flanagan**: Why?

374. **Mr Shane Lynch**: I will ask Kevin to think about that for a second because he is the economist.

375. **Mr Flanagan**: Are you going to bluff here for a lock of minutes to give him time to answer? *[Laughter.]*

376. **Mr Shiels**: That was a hospital pass.

377. **Mr Shane Lynch**: In any market, you pay what is called the marginal cost, whatever that is. Put it like this: if demand was 90 units and supply was only 80 — so 10 customers are not supplied — what would they pay to get supply? What would they pay for their bag of spuds? If the £2 spuds were already taken, would they pay £3? If they wanted them and needed to eat, I think that they would

378. **Mr Flanagan**: So the last 10 would pay £3, but the first 80 would pay only £2. However, in the single electricity market, everybody pays £3.

379. **Mr Shane Lynch**: In the market, what happens is that once the guy whose bid is £2 realises that somebody down the road is prepared to pay £3, he will put his price up.

380. **The Chairperson**: Or lose his customers. That is the difficulty.

381. **Mr Shane Lynch**: Yes, but if he can —

382. **The Chairperson**: The guy whose price is higher loses customers.

383. **Mr Shane Lynch**: Yes, but the fact that people are prepared to pay £3 sets the market price for everybody.

384. **Mr Flanagan**: We will go back to the difference between the wholesale and retail markets. Airtricity generates an awful lot of its electricity from renewable sources. It is paid the same price as the most expensive generators in any half-hour period. I cannot see any justification for Airtricity increasing its retail prices to the same extent as Power NI, given that its generation costs may not have gone up but its wholesale take-in has. I know that it is not regulated, but will you explain the justification for Airtricity's 17·8% price increase?

385. **Mr Shane Lynch**: Airtricity is what is called a supply company. It bought all its power from the wholesale market. Its generation company, which owns the wind farms, has sold power into the wholesale market. As I explained in my wee example, the wholesale market sets

a price every half hour, which is called the system marginal price. Most of the time, that price is set by gas plants, and the price of gas has gone up on the wholesale markets. So the system marginal price has gone up. Therefore, the wholesale price has gone up to all suppliers, including Airtricity, which, as a retailer, has simply passed on that wholesale price increase.

386. **Mr Flanagan**: So is the electricity sold by Airtricity generated by Scottish and Southern Energy (SSE)? Does SSE sell to a different subsidiary company that then sells to Airtricity, another subsidiary company, which then charges customers through the nose for it?

387. **Mr Shane Lynch**: By the way, not all Airtricity's power comes from renewables. I do not have the percentages here. However, the price that the Airtricity supply company pays for generation is the price that comes out of the wholesale market. Everything is settled in the wholesale market at the one price.

388. **Mr Flanagan**: Is it fair to say that Airtricity is making disproportionately more than some other providers for the generation and supply of electricity?

389. **Mr Shane Lynch**: It is fair to say that a renewable generator makes a lot more money when the price of gas goes up.

390. **Mr Flanagan**: So why would it need to increase its retail price?

391. **Mr Lynch**: That is because —

392. **Mr Flanagan**: The quote from Airtricity is that it:

"regrets the need to increase energy prices."

393. **Mr Shane Lynch**: That is because it is buying from the wholesale market and not from its generating company. The generating company, SSE, has made a lot more money because it owns the wind farms. It makes a lot more when gas prices are high.

394. **Mr Flanagan**: So is it all about balancing the books within one parent company?

395. **Mr Shane Lynch**: Yes. The key point here is that, in a market, everybody has the market price. However, renewable companies make a lot of money when fossil fuel prices are high because they get the market price, and they still get their subsidies. They are still getting their direct and indirect subsidies.

396. **Mr Flanagan**: When are you going to sort that out?

397. **Mr Shane Lynch**: Subsidies are an issue for —

398. **Mr Flanagan**: Not the subsidies, but the fact that everybody is paid the same.

399. **Mr Shane Lynch**: That is common in most markets.

400. **Mr Flanagan**: It is not common when you are selling bags of spuds, and the price of spuds is going up.

401. **The Chairperson**: There is a very important point, which is starting to distil through the line of questioning, and it is this: would you support increased regulation to make sure that the costs are not going up disproportionately. Businesses have to get a profit. That is the way that they are, but if they are disproportionately increasing prices owing to fluctuations that are way beyond their control but are working very much to their advantage, is there a case to be made for increased regulation of price controls?

402. **Mr Shane Lynch**: Regulation happens in two places. The Utility Regulator regulates Power NI at the retail end. At the wholesale end, the Single Electricity Market (SEM) Committee, which is the joint regulatory body between us and the Commission for Energy Regulation (CER) in Dublin, regulates the wholesale market. That committee recently published a report on generator profits, and you will see that generator profits go up, particularly for renewables, when gas prices go up. A couple of things are happening. The design of that market has to change quite significantly anyway to comply with a western European market design by 2016. That project is

happening at the minute, and we are working towards that.

403. **Mr Flanagan**: In your opinion, are renewable generators getting a fair rate of return at the minute?

404. **Mr Shane Lynch**: From looking at that report, I would say that renewable generators are doing well.

405. **Mr Flanagan**: Is it a fair rate of return, or are they getting far too much?

406. **Mr Shane Lynch**: The question is this: will they need the subsidies?

407. **Mr Flanagan**: Are the subsidies the problem, or is the rate of direct payment that they are getting from the single electricity market the problem?

408. **Mr Shane Lynch**: In any market, if you have a product that is of a low cost compared with the alternative, you will do well.

409. **Mr Flanagan**: Why not, through the single electricity market, set a fixed cost for the generation of electricity from wind, instead of letting those generators be paid the same price as the more carbon-intensive ones?

410. **Mr Shane Lynch**: Where wind farms can make good money, there is a huge incentive for them to keep building. Think about our 40% carbon target. If you can create the market signal for more and more wind farms to be built, there is a good chance that you will achieve your carbon objective. The question is this: how strong does that signal have to be? I think that the signal already in the market is strong because the price has been set by the price of gas, and I question whether we also need the level of direct and indirect subsidies that we have.

411. **Mr Flanagan**: I missed you saying this, but Paul mentioned the 113% that you referred to. Was that a price increase?

412. **Mr Shane Lynch**: Yes.

413. **Mr Flanagan**: And a direct increase of 25%. The Irish Wind Energy Association (IWEA) commissioned a report from Redpoint. The report outlines that there is an 11·5% reduction in wholesale electricity prices by reaching 45% wind in the overall generation mix in the single electricity market. A report by EirGrid and the Systems Operator for Northern Ireland (SONI) identified an annual benefit of €295 million in lower total energy costs across the single electricity market. How do those two reports correlate with what you are saying?

414. **Mr Shane Lynch**: I have not studied those reports in any detail. Let me just check some of your figures. Did you say that it will reduce the system marginal price (SMP) by 11%?

415. **Mr Flanagan**: The report stated that there that will be a 11·5% reduction in wholesale electric prices by reaching 45% wind generation.

416. **Mr Shane Lynch**: It would have some impact on reducing the SMP if it were not there, but it would not take it down to zero. It would drop it a bit at the margins. From what you have read out, the report does not appear to have told you the cost of subsidies, including direct subsidies through renewables obligation certificates (ROCs) and indirect subsidies through backup generation when the wind does not blow, and network reinforcement. The figure of 113% comes from the £1 billion. The strategic energy framework talks about the Northern Ireland Electricity (NIE) forecast of £1 billion of investment on the network to get to 40%, and we approved an investment of £44 million just before Christmas that will take us to 27%. That was a very good investment in our view, but it increased network tariffs for large users by 5%. Pro rata, £44 million puts network tariffs up by 5%, and £1 billion would put them up by 113%. It is a very simple calculation.

417. **Mr Flanagan**: Kevin said that the price increase by Power NI is based on some forecasts. Do those forecasts take into account what you think will come out of the Competition Commission (CC) determination on RP5? Does it take into consideration the price increase that will have to be brought in to cover increased

distribution costs for gas as a result of the extension of the gas network?

418. **Mr Shiels**: Not the latter, for sure.

419. **Mr Shane Lynch**: No impact.

420. **Mr Flanagan**: Is that too far away?

421. **Mr Shane Lynch**: Gas to the west?

422. **Mr Flanagan**: Yes.

423. **Mr Shane Lynch**: It will have no impact on electricity network tariffs.

424. **Mr Flanagan**: It will have an impact on electricity generation.

425. **Mr Shane Lynch**: If people switch from using electricity to gas?

426. **Mr Flanagan**: No. Companies that generate electricity from gas will have to pay higher transmission and distribution (T&D) costs to subsidise the expansion of the gas network.

427. **Mr Shane Lynch**: Companies that currently use electricity in their production facilities?

428. **Mr Flanagan**: No, Kilroot and Ballylumford will be faced with a 7% increase in T&D costs to cover the extension of the gas network.

429. **Mr Shane Lynch**: Why do you think that?

430. **Mr Flanagan**: Because transmission and distribution charges are postalised.

431. **Mr Shane Lynch**: For gas?

432. **Mr Flanagan**: Yes.

433. **Mr Shane Lynch**: Their transmission gas costs will have gone up. It is marginal, but that will not kick in this year.

434. **Mr Flanagan**: Has it been factored in?

435. **Mr Shane Lynch**: Not for this year.

436. **Mr Flanagan**: What about RP4?

437. **Mr Shiels**: The outcome of the CC reference is unknown. There is a technical part of a licence, called annex 2, that assesses how NIE's required revenue is determined, and we have retained the RP4 arrangements in the calculation. It is impossible to do anything else, because we do not know what the outcome of the CC reference will be.

438. **Mr Agnew**: Thank you for the information so far. This has been a very informative meeting. I will not use Phil's spuds analogy, but I will come to the issue of the price setter. Gas is essentially the price setter at the minute because it is the most expensive generator. I am not quoting you directly, as I would need the Hansard report for that, but you said earlier, "Be careful of short-term price-related knee-jerk reactions." If we were on 100% renewables, what would be the price setter? It would not be gas.

439. **Mr Shane Lynch**: Correct.

440. **Mr Agnew**: With renewables, the cost of the fuel, which is the wind —

441. **Mr Shane Lynch**: Would be zero.

442. **Mr Agnew**: You would probably think about that in the long term.

443. **Mr Shane Lynch**: There is a big "if" there.

444. **Mr Agnew**: Absolutely, but it had to be said. The problem has almost been presented in your projection as renewables putting up prices, but what you have highlighted is that the reason that we have such high prices is the price of wholesale gas.

445. **Mr Shane Lynch**: The only caveat I would add is that, technically, you could not run a system on 100% wind. You would always need gas or some form of fossil fuel.

446. **Mr Agnew**: Not 100% wind, but I would not say that to use 100% renewables is impossible.

447. **Mr Shane Lynch**: The cost of some of the other renewables is not zero. Biomass, for example, is quite expensive.

448. **Mr Agnew**: I accept that. On the £1 billion investment in the grid that you mentioned, I think that I have spoken to you before and you mentioned that that is the price of the strategic energy framework. Do you agree with that?

449. **Mr Shane Lynch**: It probably looks a bit on the high side.

450. **Mr Agnew**: Yes.

451. **Mr Agnew**: I think that £800 million was the figure that you gave me the last time that I spoke to you, but I could be wrong.

452. **Mr Shane Lynch**: We have not had an updated figure from NIE. I think if you were to ask it for an updated figure, it would probably be less than £1 billion.

453. **Mr Agnew**: Say that we scrapped the 40% target, my understanding is that there is significant investment needed in the grid regardless. What type of figure would we be talking about? What I am trying to get at is this: is the £1 billion or £800 million just because of renewables, or would we need to spend a percentage of that on our grid infrastructure anyway because of maintenance, upgrade and whatever else? Tied into that, one thing that we have not talked about is the amount of energy lost in our grid owing to the efficiency of our grid. If we are upgrading our grid, do we improve the efficiency, and is that taken into consideration when you talk about passing on costs to consumers? If we are losing energy in the grid system, surely we have to take into account improving efficiency.

454. **Mr Shane Lynch**: The £1 billion is exclusive from the other investment that we need in the grid to maintain its reliability and safety. That is over and above. For the next price control period, from 2012-17 — RP5 — we proposed capital expenditure of £390 million just to keep the network safe and reliable and to deal with a little bit of demand growth. That is up from the £360 million in the current period. Are we trying to make the grid more efficient overall in how it transports energy from A to B? The answer is yes. NIE has an obligation to run the grid efficiently, as does SONI. The biggest way of reducing losses is to bring demand and supply as close together as possible so that the electrons do not have as far to travel.

455. **Mr Agnew**: Which the renewable upgrades will achieve. At the moment, we have a system whereby we feed everything from east to west.

456. **Mr Shane Lynch**: That is true.

457. **Mr Agnew**: By having more renewable energy closer to the point of use, you are increasing efficiency.

458. **Mr Shane Lynch**: You are reducing losses from the network. That is definitely true and is an advantage.

459. **Mr Agnew**: Is that being considered in the figures that you are quoting?

460. **Mr Shane Lynch**: It would be considered. The way in which we have tried to deal with this, Steven, and we think that it is a sensible way of dealing with it, is by approving investment by investment. We took the £44 million before Christmas, did a full cost-benefit analysis and consulted. For all of the investments that make up the £1 billion, or whatever the number is, we propose to do something similar — take them investment by investment and figure in all the benefits, including the reduction in losses that you highlighted.

461. **Mr Agnew**: The Committee will hear from Manufacturing NI next. In the future, we will hear, perhaps informally, from the Northern Ireland Independent Retail Trade Association (NIIRTA) and Pubs of Ulster about energy costs for small businesses. As you mentioned before, everything has a knock-on effect. If we seek to bring down costs for high energy users, does that mean putting up costs for domestic consumers and small and medium-sized businesses? Paul highlighted some of the costs if we were to lose a large business. If we lose lots of small businesses or drive lots of domestic consumers into fuel poverty, there is a cost there. You are not here to set policy, but is there another policy option for reducing costs for high energy users that does not involve simply passing costs on to lower energy users, whether domestic or commercial, or is it just about how we distribute those costs among those three groups of consumers?

462. **Mr Shane Lynch**: Unfortunately, there are no free lunches. There is a bill

that has to be paid. The number one objective should be to try to get the bill as low as is reasonably possible, bearing in mind our other objectives, such as security of supply and sustainability. We have tried our best to get the bill as low as is reasonably possible. Energy has to be distributed, so somebody has to pay it. If you decide that large users will pay less, domestics and small users will have to pay more. As Kevin said earlier, it is not an exact science. It is one of the projects that we are going to look at to see whether you can change the policy around that distribution. We are somewhat bounded by European policy and legislation on the issue. I mentioned the German example.

463. **Mr Agnew**: How are we bounded? You also mentioned the Irish example. It seems that it distributes its network costs significantly differently from how we distribute ours.

464. **Mr Shane Lynch**: That is the discussion that we have to have. We have to do a further piece of work to determine how much discretion there is and the extent to which you should exercise it.

465. **Mr Shiels**: The key point is that it is a zero-sum game. If some groups pay less, others will pay more. That is a fact.

466. **Mr Agnew**: We cannot talk too much about what the Republic of Ireland is doing, but if we were to copy what it is doing, would you say that that would be compatible with EU policy?

467. **Mr Shane Lynch**: It is too early to say. We need to look at the issue a fair bit more carefully.

468. **The Chairperson**: I am sure that you have had dialogue with your counterpart in Dublin on these matters.

469. **Mr Shane Lynch**: Not to any great extent. We clearly recognise that there is a very big difference in how the costs are allocated.

470. **The Chairperson**: Is that down to your bit of work now?

471. **Mr Shane Lynch**: Yes.

472. **Mrs Overend**: Thanks very much. It has been a very good discussion this morning. I am glad that I am not new to the Committee, because it takes a while to get your head around all the issues.

473. **Mr Shane Lynch**: There are quite a few points there, Sandra. Capital costs are associated with the North/South and Moyle interconnectors. Those have to be paid for. The benefits will outstrip the costs by a long shot. Therefore, as I said earlier, to get both of them done is a no-brainer. In particular, it is imperative that we get the North/South interconnector done. I am told that undergrounding will increase the capital cost by at least a factor of three. Clearly, the Planning Appeals Commission (PAC) will have to look at that from a planning perspective, or whatever. However, from our perspective as an economic regulator, we have to highlight that undergrounding will impact on costs for consumers. That is just a fact.

474. **Mr Shiels**: I think that the coming review of the strategic energy framework is an opportunity to take an evidence-based look at energy policy and the options for going forward. That is something that we can work on with DETI. Given the fundamentals that we have, that high-level strategic view is needed on which way to go forward from here.

475. **Mr A Maginness**: I think that all the questions have been asked. Do we definitely need both the North/South and Moyle interconnectors? Is what you are saying is that there is no other option, so we have to have them? I take that as a yes. The cost of the Moyle interconnector shocked me. We are talking around £60 million. I think that the original investment was around £30 million. No? Perhaps I am incorrect.

476. **Mr Shane Lynch**: I do not have the exact figure.

477. **Mr A Maginness**: It is a shocking cost. It will have a major impact, I would have thought, on prices ultimately.

478. **Mr Shane Lynch**: We estimate around 2% for three years.

479. **Mr A Maginness**: That is very significant —

480. **Mr Shane Lynch**: It is.

481. **Mr A Maginness**: — if you add that to other pressures on prices. The North/ South interconnector is still stuck in the planning process. Have you any indication of when that might be resolved?

482. **Mr Shane Lynch**: NIE has resubmitted its application. It is incentivised under its price control to get that done as soon as possible. However, that is not 100% within its control.

483. **Mr A Maginness**: RP5 is with the Competition Commission. Will that ruling be final and binding on all parties?

484. **Mr Shane Lynch**: Yes.

485. **Mr A Maginness**: There is no appeal from that or anything?

486. **Mr Shane Lynch**: No. Technically, the ruling can always be appealed by either party in the courts through a judicial review.

487. **Mr A Maginness**: Yes, leaving aside some sort of judicial review or something like that.

488. **Mr Shane Lynch**: That is correct. I have not studied Germany and Denmark in detail. Kevin probably knows —

489. **Mr A Maginness**: Well, according to the graph here and the figures that you supplied —

490. **Mr Shane Lynch**: I think that in at least one of those countries taxation is quite high as well.

491. **Mr A Maginness**: It says VAT, but VAT is included in all those prices. I would have thought that it was fairly uniform throughout Europe.

492. **Mr Shiels**: It is fairly uniform. Denmark and Germany are known to be countries with high energy taxes. That is probably driving them to the left-hand side of the graph. I will pass on whether it is renewable energy that is driving them to the left-hand side of that graph. I cannot comment on that.

493. **Mr A Maginness**: Finally, I wish you well, Mr Lynch. I know that you are leaving your position. Thank you very much.

494. **The Chairperson**: You just stole my thunder. *[Laughter.]* It does no harm to repeat it. I have always found you to be very approachable and helpful in informing the Committee and me personally. As we have heard today, energy is a very complex issue. It is always helpful to have someone who is fit to explain it to us in understandable terms. I wish you well in whatever path you chose from October onwards.

495. **Mr Flanagan**: I am sure that he will be back before October. *[Laughter.]*

496. **The Chairperson**: We just never know.

497. **Ms Maeve McLaughlin**: As Alban said, many issues have been raised. The key message is the difference in distribution charges and the examination of that, both North and South, in the piece of work that will be done.

498. **Mr Shane Lynch**: That is a perennial question. Where are we currently at? You look at profitability of the generating companies. At present, it is pretty healthy and has been for a number of years. Their margins have come down quite a bit compared with 2007-08. Wholesale costs are 70% to 80% of the bill, so that is the biggest place to look. There is a big opportunity, as we redesign the market into this western European market, to look at any imbalance.

499. **Ms Maeve McLaughlin**: The European consumer directive has been processed, and it seems to be more of a principle about rights, responsibilities and empowering consumers in a lot of these issues. The same goes for some of the legislation going through Westminster. Is there an examination of how that would assist or protect? Are you looking for opportunities that may exist there to focus on energy prices as well as empower consumers in relation to the challenges?

500. **Mr Shane Lynch**: Another big answer to this is to use less electricity or gas;

consume less, and it will cost you less. That is empowerment and education. Again, that is an objective that is always there. Ultimately, we will get to smart meters, which are a few years away, when people can buy their power on a half-hourly basis, and the price varies on a half-hourly basis. That is for the long term and is a bit away yet.

501. **Mr Shiels**: A lot of work is being done in Europe about customer engagement in markets and customer protection. Key bits of that are already implemented in Northern Ireland, and we will make sure that they continue to be implemented.

502. **The Chairperson**: That is a valid point, all that customer empowerment engagement and stuff — very valid and very useful, how we educate people to lower their costs and stuff. But when people are really down to the wire, and the 17·8% hike means the difference between feeding their families more or less, and people cannot afford to insulate their homes, that is when you see it exposed for what it is worth. That is why we are trying to deal with these issues and make sure there is some control over the likes of renewables bumping up and increasing their profits on the back of the market hikes in gas or whatever other fossil fuel that might be out there. How that is done is probably a chat for another day.

503. **Mr Shane Lynch**: Thank you.

13 June 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Mr Stephen Moutray
Mrs Sandra Overend
Ms Sue Ramsey

Witnesses:

Mr Tom Gillen *Energia*
Mr John Mawhinney
Mr John Newman

504. **The Chairperson**: Hansard will be present during this briefing. I remind Committee members and members of the public that mobile devices should be turned off, as they interfere with Hansard's recording.

505. **Mr Tom Gillen (Energia)**: Yes, but I will be relying on my two colleagues. I will speak about the company first and then talk quickly about the paper. We will then take you through our presentation.

506. **The Chairperson**: We will allow you to make your presentation, and the questions will come from members after that.

507. **Mr Gillen**: OK. John will take us through the slides.

508. **Mr John Mawhinney (Energia)**: Chair and members, I propose to go through the slides quickly. No doubt you will have heard a lot of the stuff from the regulator last week.

509. **The Chairperson**: Will you clarify one thing? I am a wee bit unclear about what you mean when you talk about competition for consultancy. I am a wee bit unclear about the difference between a highly competitive market competing for consultancy or competing for supply.

510. **Mr Mawhinney**: What I am saying is that customers can go out to get competitive prices in a number of ways. They can do that themselves — just go out and make contact — or employ consultancies to tender for business of their behalf.

511. **The Chairperson**: Yes, and in that market you have been highly competitive or been able to consolidate the market yourselves. Realistically, how many would you compete with?

512. **Mr Mawhinney**: Suppliers?

513. **The Chairperson**: Yes.

514. **Mr Mawhinney**: There are five active suppliers in the market.

515. **The Chairperson**: For the type of market that you have consolidated?

516. **Mr Mawhinney**: For the market that we are in, yes.

517. **The Chairperson**: Thank you for that. Please continue.

518. **Mr Mawhinney**: We have a highly competitive market, with consultants looking at all the suppliers and all the products. Margins are not high. Therefore, the price divergence indicated in the paper — typically in the order of £20 per megawatt hour (MWh) or 2p per kilowatt hour (kWh), which is a very high differential — cannot be down to a lack of competition. Even were suppliers to provide power free to the market, you would not narrow that gap by very much. Therefore, it cannot be competition.

519. **The Chairperson**: Can you explain to me — I am not a technical person — what you mean by them not being directly connected?

520. **Mr Mawhinney**: Imagine the journey of power out of a power station. It will come out and will come on to the transmission system. That will be at a certain voltage level. As you get nearer

to customers, you will drop down voltage levels into what is called the distribution system. In the 2012 slide, you will see a TUoS charge and a DUoS charge. Twenty-six of the largest customers in the Southern Ireland market directly connect to the transmission system and therefore do not incur any costs on the distribution network.

521. **The Chairperson**: Does that mean that they have their own cabling?

522. **Mr Mawhinney**: They connect directly to the transmission system and then maintain the cables in their own site.

523. **The Chairperson**: That is grand. Thanks for that.

524. **Mr Mawhinney**: I was trying to highlight the scale. When you compare customers, unless you are comparing like with like, the economies of scale for the North and the South are dramatically different. The largest customer in Northern Ireland is less than 10 MW. None of the top 30 customers in the South is below 30 MW. You are not comparing like with like in any shape or form. The analysis that we have presented takes a very representative sample.

525. **Mr Gillen**: Thank you, John. That is the introductory presentation finished.

526. **The Chairperson**: Thanks very much for that. Some of the big users on the rest of the island are reducing the network charge, the connection charge, the cabling charge and all of that by having their own stuff. Is there not a possibility that that can be done here to reduce charges?

527. **Mr Mawhinney**: Northern Ireland has a slightly different network structure. The highest voltage that customers can connect to the network in Northern Ireland is 33,000 V, which is still on the distribution system. It is quite far up the distribution system, but it is still part of the distribution network. Customers such as Michelin, which spoke to you last week, will be connected to the 33,000 V network, but it cannot go any higher owing to the Northern Ireland infrastructure.

528. **The Chairperson**: Is there a legal obstacle, or is it just a technical or electrical reason why it cannot be done?

529. **Mr Mawhinney**: I suggest that it is more for technical and electrical reasons. I do not believe that it is for a legal reason.

530. **The Chairperson**: In other words, if a firm were to invest in an upgrade itself, it could be done subject to the figures working out.

531. **Mr Mawhinney**: Yes. The only cautionary word that I would sound is that there is a scale to all of this.

532. **The Chairperson**: I appreciate that.

533. **Mr Mawhinney**: If a smaller customer takes on its own network, and so on, it becomes costly. You need to be up the scale, so we are back to the scale thing again. As I said, the largest customer in Northern Ireland is less than 10 MW. The vast majority of customers in the South are above that.

534. **The Chairperson**: Yes, that is the point. Your business case would have to work out before you would attempt it. The customers in the South are able to do it because they are big enough to do it.

535. **Mr Mawhinney**: Correct. It comes back to scale again.

536. **The Chairperson**: You refer in your submission to a point that has come up before. Under the heading "Conclusion & Next Steps", you state:

"reducing our dependence on fossil fuels."

537. **Mr Gillen**: John will have a go at answering that, but I will try to explain the theory behind it first.

538. **The Chairperson**: That is exactly it.

539. **Mr Gillen**: There are a lot of papers on what the numbers mean. It is not our job to go around and quantify what those numbers are, but it will certainly have the effect of reducing prices.

540. **The Chairperson**: We heard last week that one of the companies that broadcasts itself as being heavily reliant on the renewables sector for its energy bumped

its price up by the same scale as Power NI. Many of us found that a wee bit hard to understand, given that that company says that a good part of its energy comes from wind. It seems that the company was piggybacking on an opportunity to bump up its costs and keep its margin a wee bit lower than that of Power NI, which it says is heavily reliant on gas and is subject to fluctuations in the price of gas. The big question is how you prevent that piggybacking exercise? Is further regulation required to prevent it? Companies all have to make profits: that is why you are there, and we understand that. However, those profits should not be exorbitant or excessive, to the point at which the consumer is shafted once again.

541. **Mr Gillen**: It is Airtricity that you are talking about, so you will have to ask its representatives that question when they appear front of you. We speak only for our company. We have not increased prices for consumers, because we handle our pricing in a very different way from the regulator and Power NI. As John says, we have customers who want complete flexibility. All that a lot of the large users want is to be at the market price. That means that if the cost of gas goes up or down, they are willing to pay the price, because that is what their competitors are paying. We ask our smaller businesses whether they want to fix the price. If they want to fix the price, that is locked into their contract for a year, two years, three years. For us, prices did not move at all. They did not go up by 78% and they did not fall. You have to direct the question of why Airtricity put its price up to representatives of the company.

542. **The Chairperson**: I appreciate that.

543. **Mr Gillen**: It is a market. Power NI's prices are managed by the regulator, who, I am sure, pushes them down as low as he can, when he can. It could be that Airtricity has been losing money on its customers for some time so the prices had to go up eventually.

544. **The Chairperson**: You said that, when you looked at the regulator's research paper, it was "incomplete". Is what you have submitted to us today your completion of that?

545. **Mr Mawhinney**: This is a piece of analysis that should have been done before the paper was issued. When you read the regulator's paper, it is sort of inconclusive, yet it had conclusions about what the next steps should be. Our query, and that of our customers, was why we are spending time looking at this when network charges are the main issue. If you look at the slide for 2012 as an example, you will see that we have looked through all the elements that make up a customer's cost. I will take you through those, if you feel that it will help you.

546. **The Chairperson**: We have the statistics in front of us, and members can absorb them. That is the bit that you say was incomplete.

547. **Mr Mawhinney**: Yes, it was incomplete. We have done this work for a specific group of customers, who are very representative. Somebody might turn around and say, "Why did you use them instead of another group of people?" We believe in our knowledge of the market, and this was a very representative group. The findings are easily transportable from North to South because there are very similar tariff structures in place.

548. **The Chairperson**: All the customers in your research are higher-end business users?

549. **Mr Mawhinney**: Correct.

550. **Mr Flanagan**: Gentlemen, it is good to hear from you. It is great to hear from you, because I had never heard of Energia before.

551. **Mr Gillen**: Few people have.

552. **Mr Flanagan**: One of the big differences between you and Power NI is that you do not spend a huge amount of money on advertising, because, at the end of the day, it is the consumers who are the ones who pay for advertising. In your paper, you describe yourselves as, "a

vertically integrated energy business". What does that mean?

553. **Mr Gillen**: We have generation and supply.

554. **Mr Flanagan**: Is that all under the one company?

555. **Mr Gillen**: It is all under the Energia group, yes.

556. **Mr Flanagan**: Therefore, you do not do the same as SSE, which has a generation company and a supply outfit.

557. **Mr Gillen**: No. You also said that one in four wind farms has a long-term contract. Do you own those or do you have some sort of arrangement —

558. **Mr Gillen**: We have a very small share — around 15% — in seven or eight wind farms, but we do not have anything to do with the vast majority. Effectively, those are wind farm producers who are not part of the Electricity Supply Board (ESB), Bord Gáis Éireann or SSE. They are independent. They bring their projects to us, and we help them through the banking and project finance process. We also act as their interaction with the market. They do not have to set up their own systems. That is what the power purchase agreement does.

559. **Mr Flanagan**: What do you get for that? Do you get a financial return out of the profit or a guarantee of electricity supply?

560. **Mr Gillen**: In the SEM, there is no guarantee of an electricity supply because it all goes into a pool, so it does not work like that. It depends what the contracts are, but we do get paid for it; yes.

561. **Mr Flanagan**: Is it really of any benefit to you as a supply company or is it just another revenue stream for you?

562. **Mr Gillen**: It is a revenue stream. I will give you an example, although I cannot name the customer because they will not let us, but we have integrated the product of five wind farms that we have agreements with, and we have sold that on to a very large customer that has been based in Northern Ireland for five years because he wanted access to renewable power at a price that did not fluctuate when he was doing his forward planning. We treat it as a source of power for ourselves as well, but it is a matter of what you do with that once you have it. For example, a lot of large customers in Northern Ireland want to be badged as using renewable energy. That allows them to pass that renewable energy on because part of the deal that we have with customers is the greenness element of that: we can transfer that to our customers if we want to.

563. **Mr Flanagan**: One of the things that we touched on last week with the Utility Regulator was the fact that all generators are paid the price of the highest generator in the market, which I find quite strange, particularly for wind farm operators. Would it not make more financial sense for wind farm generators to be paid a fixed price over a 20- or 25-year period? They will know what return they are going to get if the wind blows, instead of giving them either nothing, or £50 or £60 per megawatt hour.

564. **Mr Gillen**: OK. I will have a go at that first, and then John can jump in. The problem with that is that you are transferring the risk on to the consumer. You do not know when you set that price whether it is going to be good for the consumer or not. The way that it is done at the moment is that the renewables obligation certificate pays a proportion of it, and the rest is left at the risk of the generator. The problem with setting a price and guaranteeing return over 15 or 20 years is that we are asking the consumer to take that risk, but when you set that price, you have no idea what is going to happen in the future, therefore, you cannot quantify that risk. That is why policymakers step out of that and put the risk on the generator.

565. **Mr John Newman (Energia)**: I heard your questions last week regarding system marginal price and the fact that all generators get the same price.

566. **Mr Flanagan**: Patsy talked about bidding £2 or £3 for a bag of spuds.

567. **Mr Newman**: If he can sell them at £3, he will sell them at £3. If you can grow them for £2, you will still try to sell them at £3. That is the way that the market works. You will try to maximise your profit. In the electricity market —

568. **The Chairperson**: Therein lies the issue for the consumer.

569. **Mr Gillen**: Yes, but that is what competition is about. It is to make sure that those costs are kept as low as possible for any commodity.

570. **The Chairperson**: That is if you use the free market as a method of control.

571. **Mr Newman**: It is.

572. **Mr Flanagan**: We do not. We use the most expensive people to set the price.

573. **Mr Gillen**: In electricity generation? Do you want to run through marginal cost?

574. **Mr Newman**: It is a commonly accepted economic model that that is how markets work, whether they are explicitly regulated to result in the marginal price, or whether they do it through competition. Electricity industries across the globe often use system marginal pricing in a similar way that we do in Ireland. A lot of markets in the United States do it. There is a successful Nord pool in Norway and Sweden, and they use a single, clear pricing mechanism. It is also done in Spain and Australia.

575. **Mr Flanagan**: For somebody who owns a wind farm or engages in another form renewable energy generation, the price that they are paid is not reflective of the cost at all. It is the price that they bid at; that is not what they are paid.

576. **Mr Newman**: It is reflective of the value. Let us say that you are a farmer who puts a wind turbine up on his land, which many farmers do. When you sell that electricity, although it might cost you nothing to generate, you are not selling it for nothing: you are getting a figure related to the system marginal price.

577. **Mr Gillen**: It is the value of the product. There is a reason why the system marginal price works. I talked at the start about putting 1,000 MW on the market, displacing the top 1,000 MW. If you let everyone bid what they want, effectively that wind farm could bid as high a price as it wanted: it could bid above the marginal cost and bid to the plant that is knocking out the top end, so you would be paying much more for energy. The marginal cost is there to ensure that everyone bids at cost. If you have an efficiency, which wind does over gas generation, it bids in at zero and gets that efficiency payment. Why does it need that payment? If the generator does not get paid the marginal cost, it could not afford to build a wind farm. The scheme in the UK means that you need some market income for the investment to work. In Ireland, that is derived through what is known as infra-marginal rent, which is the difference in the money the generator makes between the marginal unit and their wind farm.

578. **Mr Flanagan**: You say that if the wind farm operators were not paid the value of the commodity or did not get the price that gas and oil generators get, they could not afford to develop wind farms. However, we have wind farm generators posting profit margins of 79%.

579. **Mr Gillen**: That was in the Utility Regulator's report. That was operating profit. The figure below that is their margin, and we cannot work out what that means, although it is lower than 20%. I could not just go out, build a wind farm and access returns like that. There is a 10-year development from starting to talk to someone to getting the thing constructed and joining the market. While you are building that one wind farm, you have may three or four other projects on the go that never make it.

580. **Mr Flanagan**: Are you making an actual loss, or a loss based on the investment you made at the start?

581. **Mr Gillen**: An actual loss.

582. **Mr Flanagan**: You have provided us with the views of the SEM committee and the Utility Regulator. The SEM committee states:

"The SEM model of setting prices in a transparent and cost reflective manner is not only assisting to promote competition and attract new investment, it has also resulted in improvements in the availability of generation plants".

"After over four years, the SEM continues to delivers benefits to consumers. The SEM ensures that the price of electricity charged to consumers is reflective of the costs incurred by the generators to actually produce the electricity".

583. **Mr Gillen**: You would have to ask SSE. All marginal cost does is recover the short-run marginal cost: the price to generate the next unit. There are significant costs on top of that in building the thing, financing it, etc. Those costs have to be recovered. I do not know what the regulator had in his mind, but I assume that that is what he is talking about. This market fairly compensates generators for their investment and the fuel that they burn. It is not our argument; it is Airtricity's argument. The suggestion is that, because the thing generates at zero, whatever prices or gas prices do, it should still charge zero. However, if that were the case, nothing would be built.

584. **Mr Flanagan**: I am not saying that it should charge zero, but there needs to be some sort of fixed payment for a period of 20 or 25 years, regardless of where prices for fossil fuels continue to go. Renewable energy generators should have a much greater downward impact on prices. If the price that they were paid per unit was fixed and agreed before they started to develop something, it would have a better impact on consumers, instead of delivering an excessive profit margin for generators.

585. **Mr Gillen**: I am sure you are aware that, in 2017, they are changing the Northern Ireland schemes for how renewable generators are paid. There is going to be a refit programme.

586. **Mr Flanagan**: That is incentivisation —

587. **Mr Gillen**: You have to be careful, especially given the history that this country has had of long-term fixed-price contracts. Over the long term, they tend not to work, because you only ever sign those contracts when you really need something. It is kind of an act of desperation. Therefore, the people who build those things extract as much out of it as possible. You then find in a few years that economic situations or political circumstances change, and you find those contracts very much out of the money. The experience we have had of that in this country has been pretty disastrous.

588. **The Chairperson**: I appreciate you taking the time to move into areas that are not directly your responsibility. It is good to hear your take on them.

589. **Mr Dunne**: Thanks, gentlemen, for coming today. I have found it interesting. Looking at the analysis of the end-user prices for 2012, is it fair to say that domestic customers in the Republic are heavily subsidising the business users?

590. **Mr Gillen**: They are indeed.

591. **Mr Mawhinney**: As I said in the paper, there was a very clear indication that they were going to move circa €50 million out of the use of system tariffs for large industrial customers into the domestic sector. To be honest, that is why we did the analysis looking at 2012, to see whether, as time has moved on, that has changed. Really, when you compare 2011 and 2012, you can see that it is not really changing, specifically when you take into account that the large user rebates, which are a separate issue, are being done away with. Therefore, they have a lesser influence in 2012 than they would have had in 2011. So, as they have gradually been coming out, the DUoS and TUoS tariffs appear to have been structured to maintain the differential.

592. **Mr Dunne**: The DUoS variable is very high in the Republic in relation to domestic customers.

593. **Mr Mawhinney**: Correct.

594. **Mr Dunne**: Effectively, they are subsidising it.

595. **Mr Mawhinney**: Correct. As I said, you can see that Manufacturing NI also used the same quote. It was a clear question in the Oireachtas. In summary, they said that they had two choices: we can have people working and have a manufacturing base that allows people to work and earn, even if that means high prices at home; or we can have no jobs. That seems to be the approach that they have taken.

596. **Mr Dunne**: The domestic consumer is paying. What about the interconnector, which has been debated and talked about? What are the long-term benefits of that for yourselves?

597. **Mr Gillen**: Is that the North/South interconnector?

598. **Mr Dunne**: The proposed one.

599. **Mr Gillen**: It is treated as part of the transmission network. To take a step into the theoretical, the way the market works is on an all-island basis, or what is called an unconstrained market. Unconstrained just means that there are no wire constraints around it. Where the North/South interconnector comes into play is when you talk about constraints. Effectively, on the island of Ireland, we have a surplus of generation. That is all in the South of Ireland at the moment. The North of Ireland has a deficit of generation. The only new generation to be built in Northern Ireland is wind. The Systems Operator for Northern Ireland (SONI) has told us that there are no plans in the next 10 years to build any thermal generation in Northern Ireland. Therefore, the North/South interconnector becomes critical for security of supply and to reduce costs. That is why it is important.

600. **Mr Dunne**: Will you benefit, or hope to benefit, from it?

601. **Mr Gillen**: In money terms, we would not benefit. It would make no difference financially to us.

602. **Mr Dunne**: Would it give you any opportunities —

603. **Mr Gillen**: No, because it is part of the transmission network. It is going to be owned by asset owners; by SONI and EirGrid. It is not going to be a competitive interconnector. It differs from the interconnector between Scotland and Northern Ireland or the one between Dublin and Wales. This interconnector is needed for security of supply and to reduce imperfections charges. The reason those get built up is that, if you have a surplus in the South, the market will say that more plants in the South should be generating. However, because it cannot get the power to Northern Ireland, it effectively means that Northern Ireland plants have to generate, and that costs consumers.

604. **Mr Dunne**: Is there a shortage of energy on the mainland?

605. **Mr Gillen**: In England?

606. **Mr Dunne**: Yes.

607. **Mr Gillen**: The expectation is that there will be a deficit in generation. That is being planned for.

608. **Mr Dunne**: What about the cost of connection for renewables? For people who are setting up plants and wind farms, the cost of connection to the grid is a big issue. Is that still a deterrent for people?

609. **Mr Gillen**: There is a new structure for connection costs for wind farms in Northern Ireland that groups sites together, which seems to make a lot of sense. The regulator and NIE have come up with that. The one that we are dealing with at the moment, for example, is at Magherakeel. That substation has been built for wind farms. The wind farms will directly finance that and build it. The issue about connections and wind farms is to do with the risk of actually getting the connection. So, when I was talking earlier about having three or four wind farms on the go, you might get one or two that actually get built. You may find that they cannot get connections to the grid. If they are offered a connection, it might be expensive. On the whole, grid connections are what grid connections

costs. That is kind of the business that we are in. For some wind farms, the grid connection costs might be too high and it just does not get built.

610. **Mr A Maginness**: Thank you, gentlemen, for a very interesting presentation. I am not certain that you and the Utility Regulator's paper are really in conflict. You have said that the Utility Regulator implies that the differential between Northern Ireland and the Republic, in terms of industrial commercial prices, results largely from lack of competition. I am not so certain that he was saying that last week.

611. **Mr Gillen**: He was not saying that last week.

612. **Mr Mawhinney**: It is an interesting one.

613. **Mr A Maginness**: But you are saying that the paper said or implied that. Do you think that he has changed his tune?

614. **Mr Gillen**: To be fair to the regulator, he has put the paper out there, he has taken evidence in and he has changed his mind. I have no problem with that at all.

615. **Mr A Maginness**: So, really, you are at one in relation to —

616. **Mr Gillen**: I think we are now.

617. **Mr A Maginness**: You are now. Right. I was just wondering where the conflict was. That has been resolved. What do you think competition is like on the island of Ireland?

618. **Mr Gillen**: In our sector?

619. **Mr A Maginness**: Yes.

620. **Mr Gillen**: It is very competitive. For example, Northern Ireland is a very small market, by any stretch of the imagination. There are five companies like ourselves competing in it at commercial sector level. Under public sector quotes, we supply all the schools in Northern Ireland. When that quote process went through, there was a huge amount of competition and two tenders. They got a very keen price out of it.

621. **Mr A Maginness**: What about the South?

622. **Mr Gillen**: There is greater competition in the South. It is a slightly bigger scale. It depends what market you are looking at, but there are similar companies, with some smaller companies that compete in the South as well.

623. **Mr Mawhinney**: You would certainly see a lot of the multinationals doing all-island deals, for example. That is very common now. Five or six years ago, that was less so.

624. **Mr A Maginness**: Are they doing that in the North, the South or both?

625. **Mr Mawhinney**: Both.

626. **Mr A Maginness**: That should mean that commercial prices should be lower.

627. **Mr Mawhinney**: From our side, that is where the competition is. Those guys are doing huge tenders. Everybody is in those tenders, which could take two or three rounds to conclude. Competition has got the market to where it is at. Indeed, I watched last week's meeting. You asked some of the guys from Manufacturing NI whether they had been out, and they had. We know that because we deal with some of them. The market is very competitive and the margins are down at very competitive levels.

628. **Mr A Maginness**: As far as I can see, there are two differences between the South and the North. One is the scale of business or manufacturing in the South. It tends to be larger and they can do their own thing, as it were. Therefore, that acts to ensure that prices are a bit lower.

629. **Mr Mawhinney**: Because they are bigger?

630. **Mr Gillen**: Well, no. That is not correct.

631. **Mr A Maginness**: Tell me where I am wrong.

632. **Mr Gillen**: We are talking about supply competition and a very small percentage on top of that. Most of the bill is made up of generating costs. The reason why the SEM was put in place is because it was decided that Northern Ireland and Southern Ireland were too small to make any difference and that way to get lower prices was to combine the two

markets so that there is competition in the sector. That is derived through what we have just talked about: short-run marginal cost. There is no doubt that prices are much lower than they would be otherwise because that market is put in place. That drives competition on the wholesale sector. At the supply end, that is done through us competing with each other.

633. **Mr A Maginness**: But scale must have an effect.

634. **Mr Mawhinney**: Scale has an effect, simply because the bigger you are, most likely what you will find is that your usage is more level. Therefore, the more level your consumption pattern is, the better price you will have. You will generally find that, for example, large pharmaceutical companies and people like that take a large and fairly steady load, half-hour by half-hour in the day. That will always get you a better price.

635. **Mr Gillen**: Probably another aspect that scale affects — John, correct me if I am wrong — if you are Hewlett-Packard or the big pharmaceutical plants, you will have a number of people who concentrate solely on energy cost. That is not just the bit that we work on; we also deal with energy efficiency and renewables. They spent a lot of time on that. When it comes to competition, they are happy enough with the price. They are looking at what they can do themselves get that cost down. That involves hedging and taking bits out. However, when you get down to smaller users, they just do not have that expertise and they cannot do that.

636. **Mr A Maginness**: The other difference arising from your presentation is government policy. We have the statement by Minister Ryan who said that the Irish Government wanted:

"to mitigate the cost of energy for industry."

637. **Mr Mawhinney**: Very much so. As Tom said at the outset, it is not something that we have any control over.

638. **Mr A Maginness**: I am just wondering how that policy choice could be considered by the Northern Ireland Executive, and what the reaction in the Assembly and among the public might be.

639. **Mr Newman**: I think that, probably, from our perspective, the important thing is to give the policymakers the right information to make those decisions. That is what we have tried to do in response to the original paper by the Utility Regulator. We have tried to set out how the differences have come about, which are not in the competitive part of the market but in the uncompetitive part, namely government policy and the cost of actually using the wires.

640. **Mr Gillen**: I have some experience of how that decision came about. The operation in the South is slightly different. They are more prone to get everyone together into a room and try to work out what can be done. They give priority to jobs, and huge priority to multinationals.

641. **Mr A Maginness**: Do you mean as social partners?

642. **Mr Gillen**: At that time, the social partnership was starting to fall away. This happened after the recession started. There was a real fear in the South of Ireland that large users were going to flee the country. There was acceptance at the highest levels of the Government that something had to be done very quickly. That is how that came about. To be honest, it surprised us when it happened, but it was quite public and there was no anger. We all worked in the South of Ireland and there was no backlash of any sort at all about it. Everyone seemed to accept that that was what needed to be done. That has continued, it will continue and it will not change now.

643. **Mr Agnew**: Thank you, gentlemen, for the information so far. The energy market is complex, whether the regulated or the competitive market, so all the information you can give us on all the various aspects are appreciated. You will have seen that from our meetings last week. We will be hearing from Power NI after you. We are trying to

hear as many voices as possible and get perspectives from across the industry to help us understand it better. Ultimately, our priority is the needs of the consumer. Often, that is perceived just as the lowest price, but sustainability and security of supply are other aspects of that. We have to look at the long-term picture, not just the short term or the next price that is set. This is a complex area. Let me check that I have picked up correctly: did you say that, if you reduce your margins, it will have little impact on price?

644. **Mr Gillen**: With respect to Energia's margins, we would go nowhere near curing the issues here. What suppliers do for large customers is all the hedging requirements, energy efficiency advice, billing, etc. If you took all that stuff away, it would not make a dent in this thing.

645. **Mr Agnew**: OK. I suppose that that is the case across your competitors as well; not just Energia.

646. **Mr Gillen**: It will be the same across all of them.

647. **Mr Mawhinney**: If you take the gap that was highlighted in the regulator's report, as I said at the beginning, it is around £20 per megawatt hour. To you and me, that is 2p per kilowatt hour. The supplier margins in this market are decimal points of a penny, so it is not going to cure a 2p per kilowatt hour differential. That is why I said that, even if we were to sell for nothing, it will only make a decimal point of a penny differential. It will not sort out the problem. The problem lies, fairly and squarely, in both the regulated charges and in government taxation policy. That is what is going to have the big impact. If we were to transition the wholesale market into something else because we thought it was a good idea to change it, that same wholesale market would be common to both North and South. So, if you happened to be able to drop the price — for talk's sake — by £10 per megawatt hour, it will drop by £10 per megawatt hour in both markets, but the gap will still be there.

648. **Mr Agnew**: It will not have an impact on the gap, but it will have an impact on overall price.

649. **Mr Mawhinney**: Yes, but the gap differential —

650. **Mr Agnew**: OK. That is where I was a bit confused. I could not work out why it would not affect prices. I appreciate how it would not affect the gap. I accept that.

651. **Mr Gillen**: We are talking about the business consumers. Prices are cheaper with competition than they would be without it. Security of supply is stronger with competition than it would be without it. After I have answered your question, I will give you an example about a wind farm and about what competition means in practice and what it forces us to do.

652. **Mr Mawhinney**: We even take that to the customer end, which was part of your question. We had a meeting yesterday where we looked across our contracts. I mentioned the use of consultancies; we are into the third round of a tender. There are three final rounds, and every time it is the final round, it goes back out again so you can sharpen your pencil a bit more. All the suppliers are there, but we only have control over a small part. Certainly, at the consumer end, yes, competition has driven down prices.

653. **Mr Gillen**: What competition cannot cure, and I think this is what you are thinking, is the fact that Ireland is on the edge of Europe and imports everything. We cannot do anything about that. We cannot cure the fact that we are small electricity-wise. To give you an example, you could not build a power plant in Ireland bigger than 450 megawatts, whereas in the UK, they would be building plants at 1,450 megawatts. That is because if a big plant failed, you would be in real trouble. There are a lot of things that make this. Everything around the market structure is to drive what we have in the cheapest way that we can, and it works. Not only do we say it works, the regulators say it works

and the EU says it works. Everyone who looks at this market says it works.

654. **Mr Agnew**: I didn't shake my head exactly, but I think there is a query about stability of prices. I said that low prices will always seem attractive, but stability of price is also important for forward planning. As was outlined before, every time the gas price changes, the price to the consumer changes. At least fairly frequently, you see significant annual changes and between-year changes. I know the prices fluctuate even more in the commercial market, and I just wonder whether the consumer is prepared to pay a bit extra to have stability. I do not know the answer to that; I put it as a question.

655. **Mr Newman**: Our customers, have the option of fixing their prices.

656. **Mr Agnew**: That is interesting.

657. **Mr Newman**: That is what we bring to the table. Customers can have what they want; they can have exposure to volatile prices because they may think that prices are going up or down, probably because they are going down of course, or they can fix the price through us and get that stability.

658. **Mr Agnew**: Would you have a rough idea of what proportion of your customers go for the variable tariff?

659. **Mr Gillen**: At the larger end, most of them go for variable, and at the smaller end, most go for fixed. Every public light in the Republic of Ireland is supplied by our company. Taking into account that we have 100,000 business customers, we would be bigger than Power NI in terms of kilowatt-hours sold in the North and South. I have not heard of one complaint, certainly in the past couple of months, about prices being increased, because we have not done it. That is because we work to a competitive model. You talk about customers paying more; our customers do not expect to pay any more for the right to fix prices. They see it as a given because everyone else offers it in the market, therefore we offer it as part of our overall service. Price volatility — the prices going up or down, and the scale of the rise or fall — is a function of regulation. That would not happen in a deregulated market. You would not see things like that happening to that scale.

660. **Mr Agnew**: If I may ask one more question —

661. **The Chairperson**: Quickly, please, Stephen.

662. **Mr Agnew**: It is around renewables. You mentioned that more wind power will knock off future gas generation. As regards the end price, in the overall scheme of things, do you see the extra investment in renewables that is required — grid investment, etc — being good for consumers?

663. **Mr Gillen**: We have not done the sums. Certainly, having renewables there is cheaper than not having them, in the market sense. If you add in all the network charges, I have not done all the calculations to work out the answer. However, you must remember that renewable energy is not just around price but is about not being held to ransom over imported fossil fuels. Governments got a big fright, for example, when Russia cut of the gas supply. There is a security angle to that.

664. **Mr Agnew**: Thank you. I appreciate that answer.

665. **The Chairperson**: Thanks very much for that. I have one or two brief questions. Can you tell me, if you can quantify it, what percentage of the energy your company uses comes from renewable sources?

666. **Mr Newman**: It would be roughly 20% or 25%.

667. **The Chairperson**: Something like 25%. Right. I notice that you have a turnover of £1 billion. What sort of profit margin do you have?

668. **Mr Gillen**: It depends what level you take it at, but I think that group profitability, after tax and taking into account everything else, is pretty marginal. It is just about breaking even, if not slightly below.

669. **The Chairperson**: Thanks. If you were sitting in our place —

670. **Mr Gillen**: Thankfully, I do not. *[Laughter.]*

671. **Mr A Maginness**: You are a wise man.

672. **The Chairperson**: And you had three bullet points on the way to reduce energy costs, what would they be? We touched on some of them; for example, regulation and caps on costs. What would you do?

673. **Mr Gillen**: There are three things that people need to focus on. First, energy efficiency is an easy way for customers to reduce costs. Things need to be available to allow the customer to do that. We often do a lot of energy efficiency work. We are spending £0·5 million in Northern Ireland this year to get energy efficiency. That reduces costs and creates jobs, but those schemes are liable to be cut because it costs government money to put those things in place. A lot of businesses could make good energy efficiency savings but would not have the £10,000 to invest, and it would not have a payback for a couple of months, but it is a very easy way to achieve savings.

674. **The Chairperson**: Is that about reduction of costs or security of supply?

675. **Mr Gillen**: Both.

676. **The Chairperson**: OK.

677. **Mr Gillen**: It does not matter to us whether it is built overland or underground. That is not our issue. However, it needs to be built. I cannot stress that more. You will be sitting here in three or four years' time having a very different conversation about why lights are going out. What customers will pay for that is hugely different from what they will pay when they have got it.

678. **Mr Flanagan**: You say it works well; who does it work well for?

679. **Mr Gillen**: It works well for consumers. It works well for everyone involved in it. The difficulty with talking about this is that it has been around since 2007, and you have nothing to compare it against. You see Power NI prices going up, but, as a competitive entry in the market, we do not come across customers complaining about it that much at all, to be honest with you.

680. **The Chairperson**: OK.

681. **Mr A Maginness**: I have one last point in relation to the North/South interconnector. How significant would the reduction in cost be?

682. **Mr Gillen**: It is tens of millions at the moment in terms of imperfections. It will increase. The ultimate cost will be if it is not built and the lights go out.

683. **Mr A Maginness**: So you get rid of the —

684. **Mr Gillen**: We get rid of a good portion of them.

685. **Mr A Maginness**: And in that way you reduce the cost.

686. **The Chairperson**: Gentlemen, thanks very much for your time. This has been very useful. As you can appreciate more than we can, it is complex.

687. **Mr Gillen**: If you want to talk to any of us again please feel free to contact us.

13 June 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Paul Frew
Mr Alban Maginness
Mr Stephen Moutray
Mrs Sandra Overend

Witnesses:

Ms Kerstie Forsyth *Power NI*
Mr Stephen McCully

688. **The Deputy Chairperson**: Briefing the Committee today are Mr Stephen McCully, the managing director of Power NI, and Ms Kerstie Forsyth, the head of home marketing and communications with Power NI. You are very welcome to the meeting. Do you want to make a short opening statement, and then we will follow that with some questions from members?

689. **Mr Stephen McCully (Power NI)**: Thank you, Chairman and ladies and gentlemen. We are very grateful for the opportunity to give you a little bit more insight and background to the recent price increase that will take effect for Power NI customers on 1 July. We circulated some slides, and I am not sure what time constraints you have, but we may spend just a few moments to go through them.

690. **The Deputy Chairperson**: We have between five and 10 minutes for your opening remarks.

691. **Mr McCully**: That is very much appreciated. To give you a bit of background to Power NI, we are a regulated electricity retailer. We retail to 580,000 domestic customers and 35,000 businesses. The majority of the customers that we serve are regulated or price-controlled; a little over a thousand are in the deregulated sector. We are price-controlled to a margin of 1·7%, and we operate within an increasingly competitive market. Competition entered the domestic market three years ago, and the business sector competition has been in play for the best part of 12 or 13 years. We employ 180 staff in offices in Belfast, Antrim and Omagh, and we focus heavily on offering good customer service. We only had one official Consumer Council Northern Ireland (CCNI) complaint in the 2012 financial year, and we are recognised by the regulator as an efficient business.

692. **Ms Kerstie Forsyth (Power NI)**: As Stephen said, we understand how difficult it is for our customers. A lot is outside our control, but we can offer practical money saving and energy saving help and advice. I will highlight our track record. We were the first electricity supply company in the UK and Ireland to remove standing charges. That means that it is fairer for consumers such as older people who live in a small apartments and use fewer units. The charge is spread across that smaller number of units so that they do not pay as much for their electricity.

(The Chairperson [Mr McGlone] in the Chair)

693. **The Chairperson**: Thanks very much for that. Do you have anything further to add?

694. **Mr McCully**: No, we had an opportunity to go through the slides. We are happy to take questions.

695. **The Chairperson**: I put this question to the previous people who were in: can you give me some indication of the percentage of your energy that comes from renewables?

696. **Mr McCully**: It is a growing percentage, but it is still quite small. In an overall market perspective, it is roughly 12% or 13%. We are purchasing more of our energy from a full range of renewables.

We have a couple of thousand contracts in place with individuals who spill their electricity onto the network. There are some small-scale wind and larger wind and anaerobic digestion schemes as well. It is small at the minute, but it is growing.

697. **The Chairperson**: It is a theme that we have tried to explore with others as well. I read your press release and stuff. You said that the increase of almost 18% was down to fluctuations in the gas market. We will take that as read. How do you see renewables lending some sort of stability to the cost of energy supply and, consequently, to consumers?

698. **Mr McCully**: Renewables tick two of the three boxes from an energy strategy perspective. From the point of view of generation security, they reduce our dependence on imported fuels. They are also very strong from a sustainability perspective. In the long term, reducing the requirement for fossil fuels to generate reduces the requirement on the supply side. Over time, that should reduce the cost of fossil fuels relative to what they might have been if there had been no renewables.

699. **The Chairperson**: Yes. That is exactly the point. You see fluctuations in the market due to exactly that. The market can be quite volatile and subject to other international things. A lot of us do not rate it as particularly fair that a firm that predominantly, or exclusively even, if it comes to that stage, sources its fuel from the renewables sector should then piggyback on crises elsewhere just to hike their prices. How can that be controlled, capped or regulated to make sure that that does not happen? Ultimately, just because some firm sees the main chance, many people who fight with that and are the victims of that are having to choose between heating or eating.

700. **Mr McCully**: It is a complex situation. Volatility in end-user prices is not a good outcome for customers. We have seen quite a lot of volatility in recent times. There are ways in which suppliers can minimise that risk, such as by buying more of their energy when they believe that the price of that energy is at a lower level. The market for hedges is quite limited at the minute. Fossil fuel generation is still required, particularly when the major source of renewables is wind. When the wind does not blow, you still require fossil fuel generation to provide continuity of supply for customers. There ways to dampen and reduce the risks of volatility, and suppliers have been engaged with them for quite some time.

701. **The Chairperson**: You mentioned ways of reducing the volatility of the markets, such as, of course, buying ahead and the like. Will you expand a wee bit further on — you referred to the plural there — the other methods that companies have at their fingertips to reduce the volatility of those markets and, consequently, prices?

702. **Mr McCully**: I think that diversity in the market is important. Having a good diversity of sources from different fuels helps to minimise the effect of having all the eggs in the one basket. Natural gas and coal-fired generation are the predominant sources on the island, but you have access to other forms of generation from the GB market as well. That gives good diversity of price. Renewables also provide another source of generation. The structure of the single electricity market sets the price for the last plant on to meet demand, and that is what sets the price for the entire market. That is the reality of that market at present.

703. **Mr Flanagan**: Thanks for the presentation. To your knowledge, is there any difference in the percentage of electricity that you use from renewable sources compared with that which the likes of Airtricity uses, or is that standard across all suppliers?

704. **Mr McCully**: I cannot comment explicitly on Airtricity. I know that it was established on the basis of investing in renewable wind farms initially and then building a supply business on the back of that. I have no real insight into

the various percentages of the various suppliers. We would maybe be slightly lower than the average, so I suspect that others source a higher level of generation from renewable sources.

705. **Mr Flanagan**: When you take electricity out of the SEM, can you state whether you would prefer renewables? Does it work like that?

706. **Mr McCully**: It is a homogenous product when it comes out of the pool. You pay a spot price. What suppliers do is enter into contracts directly with generators to buy ahead. We enter into contracts with coal-fired and gas-fired power stations. It is more difficult; renewables cannot offer that hedge because they do not know when the wind will blow. There could be situations when the wind does not blow, and so they do not have that certainty of production. That is a problem in the market.

707. **Mr Flanagan**: What impact has the manner in which Power NI hedges the buy-in of energy had on prices for consumers?

708. **Mr McCully**: A good example of where customers benefited was in October 2012, when we actually reduced our prices while the rest of the market pushed theirs up. We moved opportunistically to hedge prices to the level that hedges were available. That benefited customers by an estimated £40 million through this winter. We had not bought any further ahead than this summer, and we were, therefore, exposed to that slightly higher underlying price of generation, which we expect to see into the future. We continue to purchase, and that dampens the impact on customers. Gas prices shot up by 70% in March. If that had worked its way right through to customers, there would have been a very serious impact on electricity prices.

709. **Mr Flanagan**: Are there any examples of where your hedging strategy has failed in recent times?

710. **Mr McCully**: It is very hard to assess after the event. You have to create rules around how you place hedges. You cannot speculate in the future. We have a model that a lot of suppliers use. You tend to buy more energy for the near quarters. We are buying quite a bit of our energy for the October to December quarter of this year. In about a month's time or six weeks' time, we will buy forward into quarter 1 of the next calendar year. That is a regime that we stick to. We do, perhaps, buy a little bit more if we think that the market, relative to history, is slightly lower. We would tend to push a little harder in what we would buy ahead because the forward market moves in sympathy with the spot market.

711. **Mr Flanagan**: You did very well to evade answering there, so I will try again. Hindsight is a great thing when you are hedging, and no one is really going to criticise Power NI if what you had done, thinking that it was going to be right for consumers, turned out to be wrong. However, if you bought a whole pile of energy in advance and it turned out that wholesale prices went down, would that be Power NI's risk or would any loss ultimately have to be borne by consumers?

712. **Mr McCully**: There is clearly a competitive risk if you hedge 100% of your energy at a high level and the market falls, because competitors could come in and undercut business significantly. Any loss of market share has a material impact on the business.

713. **Mr Flanagan**: I am not talking about market share. If you buy your electricity and then the price goes down and, effectively, you are selling it at a loss, would the regulator allow you to claw that money back from consumers?

714. **Mr McCully**: The price control model theoretically allows you to recover any losses. In the first three months of this year, we ran at a loss of £23 million, which was the burden of the increase in wholesale prices.

715. **Mr Flanagan**: Was that in the first financial quarter from April or was it from January?

716. **Mr McCully**: It was from January.

717. **Mr Flanagan**: So, you put your prices down last October, and by January you were losing £23 million?

718. **Mr McCully**: Yes.

719. **Mr Flanagan**: So, was it a mistake to put the prices down so significantly last year?

720. **Mr McCully**: No, because customers have benefited significantly —

721. **Mr Flanagan**: Customers benefited in the short term, but over the next price control period, they will have to reimburse you for the money that you lost. Consumers may well have benefited, but now they have to pay it back.

722. **Mr McCully**: Yes, those who are still with Power NI will see a rise in prices, but they have freedom of choice.

723. **Mr Flanagan**: Consumers who remain with Power NI will have to pay for those who have left as well.

724. **Mr McCully**: In effect, yes.

725. **Mr Flanagan**: Did you lose £23 million in the month of January or in every month?

726. **Mr McCully**: It was January, February and March.

727. **Mr Flanagan**: What was the story for the second quarter until prices go up in July? How much more are you talking about?

728. **Mr McCully**: Prices have settled back, but they are still higher. We had a proportion of our energy hedged; we had pre-bought about 50% of our energy. That exposure was just to the level of generation where we did not have our hedges in place. That is the way of it; suppliers are unlikely to be 100% hedged. It does not make sense because you can lock your customers into a very bad outcome.

729. **Mr Flanagan**: Do you have a rough figure for what you need to claw back from consumers from 1 July onwards for the first half of this year?

730. **Mr McCully**: It is slightly over £20 million for the nine months of this tariff year since we last changed our prices.

731. **Mr Flanagan**: Are you entitled to claw that all back from consumers?

732. **Mr McCully**: We are entitled to attempt to claw it back.

733. **Mr Flanagan**: I want to ask you about customers who owe you money. I think that I am right in saying that there is a European directive that your debt payback cannot be any higher than a maximum of 40%.

734. **Mr McCully**: That is correct.

735. **Mr Flanagan**: Is yours set at 40%?

736. **Mr McCully**: Yes.

737. **Mr Flanagan**: Why have you set it at the maximum possible limit? That means that of the £10 that someone owes you, £4 is taken to pay back the historical debt. Do you not think that 40% is very high for people —

738. **Mr McCully**: We have a very good track record in that regard. The keypad system, which was introduced by Power NI initially, is totally flexible. If certain customers are going through harder times, we will reduce that percentage. We do not set the maximum for every customer; we will negotiate, and where a customer is in difficulties, we would set the recovery rate at a lower level. We have total flexibility, on an individual customer basis, to negotiate that outcome.

739. **Mr Flanagan**: Personally speaking, I moved house and had a debt with Power NI, and the rate was set at 40%. There was no room for negotiation; it was set at 40%. I do not think that we should be allowing you to set the rate at 40% because that is the maximum level. There has to be greater flexibility; it should not be the case that it is set at 40% and then, if someone comes crying and begging, you may well reduce it to something else.

740. **The Chairperson**: Phil, without getting too much into the detail of your circumstances, that conversation could be had.

741. **Mr McCully**: I am happy to provide statistics on the ranges of different recovery rates.

742. **Mr Flanagan**: Could you provide the number of people on each band?

743. **Mr McCully**: Yes.

744. **The Chairperson**: From my constituency office, I know that you have been flexible where there are exceptional circumstances when it comes to the payment of arrears.

745. **Mr McCully**: We do not disconnect customers. We were the first supplier not to do so on a voluntary basis. We have a right to disconnect, but we introduced the keypad metre to avoid disconnecting the customer, which is a much more difficult situation. There is a fine line to be drawn, and I accept the point that you are making. We try to have an open mind and negotiate.

746. **Mr Flanagan**: Have you considered setting the starting rate not at 40% but at a reduced rate?

747. **Mr McCully**: We have to be fair to other customers. That rate has been defined in Europe as a fair one.

748. **Mr Flanagan**: Is 40% not the maximum rate allowed? It is not a fair level; it is the maximum allowed.

749. **Mr McCully**: Yes.

750. **The Chairperson**: That rate does not include any interest payment: it is just payment of the existing debt.

751. **Ms Forsyth**: Sometimes, a customer changes from being a billed customer to a pay-as-you-go customer. If that customer has an outstanding balance, for example £80, they may not want it hanging around for a long time and would prefer to pay the 40% and just to have the extra few months to pay it. Each case is treated on an individual basis if customers tell us that they are having difficulties.

752. **The Chairperson**: There are a couple of wee things that you mentioned that you could maybe give us some reassurance on. Obviously, there were difficulties with the 17·8% hike. Could you give me some sort of indication of the drivers from the gas markets that have pushed the price up and how that has affected or been balanced out by other factors in the company, such as the renewables that you receive? In other words, how did other markets bounce it up? How were the worst aspects of the market mitigated by renewables or other factors in the company?

753. **Mr McCully**: I will take those questions in turn. The driver behind the increase in gas prices was a combination of two factors. There was a supply problem in the European gas network. There was a pipeline issue with a major gas field in Norway, which unsettled the market. Then, we had very cold weather, as you will remember, in March. Indeed, that weather did not just occur in Northern Ireland; it occurred throughout western Europe. That created a supply problem with gas, and those two factors combined to push the price of gas up very swiftly to record-breaking levels.

754. **The Chairperson**: And that outcome being?

755. **Mr McCully**: Holding prices through to 1 October 2014.

756. **The Chairperson**: OK. Thanks very much for that.

757. **Mr Moutray**: You are very welcome. Power NI markets itself as Northern Ireland's number one energy supplier. That is certainly not in relation to price because you are more expensive overall than any of your competitors. You are the largest supplier in Northern Ireland and historically have been. Why are you more expensive than the other companies?

758. **Mr McCully**: We are regulated. Our price to the majority of our customers is the regulated price. We are price-controlled. One of the slides indicated the regulated net margin of 1·7%. All our input costs are scrutinised by the regulator. We supply a fairly high percentage of customers in the domestic sector. Being the regulated supplier, we have a licence condition that we are not allowed to

discriminate on price. Notwithstanding discounts for various payment schemes, we have to set a price for all customers. Our competitors can cherry-pick and target particular customers. Their business model is an introductory discount but they then tend to lapse back to the reference price, which is the regulated price that we offer.

759. **Ms Forsyth**: People looking to shop around may be able to make a saving in an introductory period, but our keypad prices are cheaper on an ongoing day-to-day basis in comparison with our biggest competitor.

760. **Mr Moutray**: I accept that you may be cheaper in one or two areas. However, in the Consumer Council's price comparison table for across the range, you are cheaper on only one or two of the many options. Generally, you are more expensive. I go back to the question that I asked you. Is it not the case that there is too much fat in your system? You changed your name about 18 months ago. What did that exercise cost? Generally, the amount of advertising that your company does —

761. **Mr McCully**: That re-branding exercise cost customers nothing. Our shareholder picked up the cost of that.

762. **Mr Moutray**: So, there was no cost to the consumer whatsoever.

763. **Mr McCully**: Of the re-branding exercise, no.

764. **Mr Moutray**: Of the re-branding exercise. Your customer base —

765. **Mr McCully**: We were mandated by Europe to change our name, but we did not pass any of the cost of the re-branding exercise on to the customer.

766. **Mr Moutray**: Generally, the customer picks up the cost of PR and advertising. Is that the case?

767. **Mr McCully**: Every cost in our business is scrutinised by the regulator. We are recognised in the recent consultation paper by the Utility Regulator as an efficient business, as benchmarked against our peers.

768. **Mr Moutray**: Yet, you are the most expensive provider in Northern Ireland.

769. **Mr McCully**: Because we supply the full range of customers. Our competitors can cherry-pick customers who they view as a slightly lower risk on a particular product or load shape that suits their requirements.

770. **Ms Forsyth**: We are cheaper on an ongoing basis after introductory offers, depending on what way you pay.

771. **Mr Moutray**: Is your customer base increasing or eroding?

772. **Mr McCully**: It is eroding.

773. **Mr Agnew**: Thank you for the information so far. I will follow up where Stephen left off. You say that other suppliers can cherry-pick customers. Are you suggesting that there is a vetting, almost, of customers? Are we talking about domestic customers or more about those in the commercial market?

774. **Mr McCully**: It tends to be volume. A supplier will target customers who will consume more, because the fixed cost of supply is spread over a larger number of units and they can offer a better deal on that basis. That is something that we are not allowed to discriminate against.

775. **Mr Agnew**: OK. So, it is not a case of them saying, "You're a risky customer; we don't want you, thanks very much". It is about —

776. **Mr McCully**: No, it tends to be volume, really.

777. **Mr Agnew**: OK.

778. **Ms Forsyth**: And we do not differentiate between attracting new customers and our existing customers. All of our customers get the same level of discount. Earlier, I mentioned £60 for energy online. We do not offer that to entice people; every single customer gets that.

779. **Mr Agnew**: To go back to the Chair's question about your renewable take-up: why are you lower? Are you locked into contracts with generation companies?

You have been around longer than any other suppliers. Are you locked into contracts with fossil fuel suppliers or do you have business reasons for not going for renewables to such an extent?

780. **Mr McCully**: Historically, we would have been locked into the old regime, prior to SEM, where we very much relied on long-term contracts, which are slowly disappearing. As a business, we had a historical ban on investing in generation. When the industry was first privatised, generation was separated from networks and supply, and we were prohibited from investing in generation. That legacy stayed with us until recently, but it has now been removed. Within the wider Viridian Group, we are investing quite heavily in renewables, and we are contracting with many other developers. The level of what we source by way of renewables is increasing steadily.

781. **Ms Forsyth**: We also do a lot of work with individuals. About 2,000 of our customers are on what is called a microgeneration tariff. We are the only supplier in Northern Ireland to offer that. So, we will buy back electricity from them and encourage them to put photovoltaics (PV) on their house.

782. **Mr Agnew**: I asked why you had not invested in renewables to the same extent as some of your rivals. I will reverse the question to this: why would you invest in renewables?

783. **Mr McCully**: Renewables are an important part of the overall generation mix. We, as a group, invested not only in renewables. We have invested in gas-fired power stations as well. It is important for a group to have diversity and a good portfolio of options. That is also good for the sector. Renewables, particularly wind, require the safety net of fossil fuel generation, and gas is one of the more sustainable forms of fossil-fuelled generation. That is particularly true of the highly efficient power stations that have come onto the system relatively recently.

784. **Ms Forsyth**: It also supports our customers' choice. They are keen to go for renewables, and we want to facilitate them.

785. **Mr Agnew**: I think that you said that volatility in end-user price is not a good outcome.

786. **Mr McCully**: Yes.

787. **Mr Agnew**: I appreciate that you largely work in the domestic market, but we have just heard from Energia, which offers a fixed price.

788. **Mr McCully**: Yes.

789. **Mr Agnew**: Have you considered doing that? I am particularly interested because Energia seems to think that its high energy users are willing to take on the higher risk of volatility, but its low energy users largely seem to think that fixed price works for them. I do not know what the domestic consumer would conclude, were they given that option.

790. **Mr McCully**: It is an interesting question. Some suppliers in GB offer a two- or three-year deal at a fixed price. One of the downsides of our licence condition is that not being allowed to discriminate would prevent us from promoting a product that only a certain number of customers could benefit from. Technically, it is possible. You would go into the wholesale market, book that capacity and buy it ahead. There would be some risk if the volume that customers consume and what you take out as a hedge do not match, but that would be built into the overall price. It is possible.

791. **Mrs Overend**: Thank you very much for that information today. It has been a very interesting morning. I have a couple of small questions. Do you really feel that you can cover the cost of administering the various schemes that you have? Would it not be better to keep things simple?

792. **Ms Forsyth**: I am not sure that I follow.

793. **Mrs Overend**: You talk about the different schemes, such as keypads, online, etc, to help the consumer.

794. **Mr McCully**: We develop our different payment methods by listening to our customers. We do research. For instance, we surprised ourselves with the keypad system, but that was after quite a lot of research with customers. We sourced the system in South Africa, and it was completely new to the northern hemisphere. Customers really like it: it is an incredibly popular system. More than 40% of households in Northern Ireland pay for electricity using the keypad.

795. **Mrs Overend**: Do you feel that some consumers are actually paying for the cost of administering schemes for other consumers?

796. **Mr McCully**: No. We have many license conditions, and one is that we must be cost-reflective, and be seen to be cost-reflective. That is something that the regulator will scrutinise in all the products we offer and, in particular, the discounts that go along with them.

797. **Ms Forsyth**: It is self-funding. In keypad reward, for example, we give free electricity. For a £50 top-up, customers get £1 of electricity free, and the amount of free electricity increases the more customers top-up. We can do that because every time customers top-up we have to pay a transaction fee. If we can reduce the number of fees that we pay, we can pass that benefit back.

798. **Mrs Overend**: Similarly, if you had been listening to the meeting last week, you would have heard large businesses saying that they felt it was unfair that they are paying for the energy saving grants that only domestic customers can avail of. What would you say to them?

799. **Mr McCully**: It is a fact that there are fixed costs for the network and levies that are passed on to customers in a non-discriminatory way. Those make up about 25% of the bill. The regulator decides how those costs are allocated across the various customer sectors. As a supplier, we have to take those costs in the way that they are presented to us. We have to be cost-reflective. We have no discretion, as a supplier, to allocate such costs in a different way. It would be, in effect, a cross-subsidy.

800. **Mr A Maginness**: Your presentation was very interesting. Are you developing new keypad models, or is there just a standard model in existence? I am thinking about smarter uses of energy in the home. Is that facility being afforded through the keypad, or perhaps is it too basic for that?

801. **Mr McCully**: There is a drive to move to smart metering. It is part of a European directive.

802. **Mr A Maginness**: Can you do that through the keypad?

803. **Mr McCully**: The keypad meter is 90% smart. It ticks a lot of the boxes that are required under the European directive. The Utility Regulator is looking at a further roll-out of smart metering, and the keypad will come into that review as well. The technology is 11 or 12 years old, so it probably needs to be updated. There will be new functionality.

804. **Mr A Maginness**: Is the cost of the keypad borne by the customer?

805. **Mr McCully**: It is borne by the generality of customers.

806. **Ms Forsyth**: It is free for the individual.

807. **Mr A Maginness**: If you wanted a keypad, there is no cost.

808. **Mr McCully**: There is no extra charge.

809. **Mr A Maginness**: Would there be a cost to the individual customer for the smarter keypads?

810. **Mr McCully**: There certainly would be a cost to change all metering to a smart format. During the review process, the regulator will have to determine how that cost will be recovered: whether it is individually from a customer and linked to the particular meter that the customer chooses or whether it is spread across all customers.

811. **Mr A Maginness**: Are gas prices related in any way to the price of oil?

812. **Mr McCully**: Historically, there was quite a close connection, but they have drifted apart. There is not as solid a link, but there are periods when they can move in sympathy.

813. **Mr Frew**: Thank you for your information. The first thing that strikes me is the massive hike downwards and the massive hike upwards. I am sure that hindsight could apply, but do you feel that this is the right way to go on pricing; that you reduce very dramatically and, several months later, increase very dramatically? Is it better for the consumer to have a more regulated bill so that it helps with their planning?

814. **Mr McCully**: That is a good question. We hear different messages from our customers. Some pay by direct debit, and they really do not like to see their direct debit payment bouncing around. However, we consult with the regulator on that and it is all part of our price control process. There is an annual review of tariffs on 1 October every year. Some of our energy was pre-purchased, but not it all. With the agreement of the regulator, we could have continued on with the 2012 tariff right through into this period, but we decided that the opportunity was there to reduce them and that we should reduce them to reflect the underlying costs of the generation that we had secured for the winter period. However, we knew there was the risk that, beyond the winter, prices might have to go up again.

815. **Mr Frew**: You break down the cost of a typical domestic bill, and we know that generation, networks, levies and all the other regulation costs are in that and the actual cost of the energy itself that is purchased and used is a very minimal part of that bill. You go on to talk about the different cost factors and price drivers. One of them is the generation cost, which is easy to understand. I also understand and have some knowledge of the Moyle interconnector. How are you connecting the Moyle interconnector and its problems with the direct pricing of your bills? Surely, it will affect everyone purchasing energy.

816. **Mr McCully**: It does. All suppliers will have seen the increase in the cost of the Moyle interconnector. It was not factored into the price change in October 2012. We made the announcement in mid-August, I think, and, subsequently, we learned that there was going to be that under-recovery for the Moyle interconnector. We carried that additional cost through this winter. All other suppliers would have had to carry that cost —

817. **Mr Frew**: I am sorry; will you explain how you get costs? My understanding of the Moyle interconnector at the moment is that it is running at half capacity. So, it is more about security of supply and bringing in energy, rather than being a burden or a cost on the consumer at the moment. Surely the burden and the cost could well happen when the owners go to fix it.

818. **Mr McCully**: That is another cost. The cost that customers are seeing at the moment is actually the cost of financing the Moyle interconnector — the mutual funding arrangement that was put in place. There will be interest payments at a certain level, which should be covered by the proceeds of selling capacity for the interconnector. Because the interconnector is running at only half capacity, the sales are only at half the level that was otherwise expected. Therefore, there is a shortfall in the cash flow.

819. **Mr Frew**: OK; so that is how it is directly affecting the bills. What impact is the North/South interconnector having at the present time, and what will it do for the benefit of consumers when we eventually get it?

820. **Mr McCully**: I think it is estimated that the cost to customers throughout the island is around £20 million per annum. That is due to the various constraints that the lack of capacity in the North/South interconnection creates in the market. It forces less efficient generation to be used, whereas, if we had a free flow of generation North and South, that would support the most efficient outcome for customers on the

island. Having that bottleneck creates an inefficiency in the overall coast of generation that has been estimated at around £20 million per annum.

821. **Mr Frew**: The final question is around the comparisons with the other EU states. The starting figure in your presentation is the difference between domestic bills here and in the Republic of Ireland. That, as we have been learning over the past number of weeks, is more to do with a policy decision by the Government there, rather than any difference in price with regards to competition or otherwise. What is your view on that?

822. **Mr McCully**: If you take the markets in their entirety and come up with an average price per year that customers overall in all sectors are paying, the price in Northern Ireland is very slightly lower than it would be in the ROI. There is certainly not a 17% difference. The price in Northern Ireland is 7% or 8% higher than the average price in GB. That is the unfortunate consequence of the transportation costs and smaller scale in Northern Ireland. This is a policy decision. We understand that the pricing structure across the various sectors is done to a recognised methodology and it is that methodology that would have to be reviewed again by the regular, so I do not have a strong view on that.

823. **Mr Frew**: You would agree, then, that it is not a like-for-like comparison between our bills and those in the Republic.

824. **Mr McCully**: No, it is not.

825. **Mr Frew**: Do you know whether Denmark, Germany and Belgium are cost-reflective, or is there more of a policy change there also? If there is, how can they get away with it when Europe seems to want everyone to go cost-reflective?

826. **Mr McCully**: I do not have insight into every country, but I do have some insight generally into the Danish prices. There is a higher level of carbon tax applied to domestic customers, which is something that they have freedom to do. Germany is slightly different. With the difficulties in Japan with the nuclear power station, they made a decision very quickly on the back of that to stop producing any of their generation from nuclear sources. They switched back and had to rely on previously mothballed, and perhaps less efficient, plants. That pushed up the price in Germany quite a bit. That is the background to those prices. There are local issues that are factored into prices and that really need to be taken into account in every case.

827. **The Chairperson**: I will ask you the same question that I asked the witnesses in the previous session. Given that some people are choosing between heating and eating, if you were in our position, what are the two or three things that you would do to try to bring down energy costs?

828. **Mr McCully**: With costs generally, minimisation of waste in consumption is a very important starting point. A lot of the schemes and initiatives that we focus on help customers, particularly vulnerable customers, to minimise their energy consumption. Competition in not just supply — we have six suppliers competing in the Northern Ireland market — but generation is good for the customer. Competition from not just different organisations but different sources of generation also leads to a good outcome for customers. Regulation bears down on the costs of running the industry and has always acted in the best interests of customers. A lot of good is happening in the market. The creation of the single electricity market made what drives cost a lot more transparent for everyone so that the market, collectively, can try to reduce prices. Competition leads to better outcomes for customers.

829. **The Chairperson**: OK. Thanks very much for that and for being with us today. It has been very useful.

27 June 2013

Members present for all or part of the proceedings:

Mr Phil Flanagan (Deputy Chairperson)
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mr Stephen Moutray
Mrs Sandra Overend

Witnesses:

Mr Dick Lewis *SONI*
Mr Robin McCormick

830. **The Deputy Chairperson**: The Committee will be briefed today by Robin McCormick, the general manager of SONI; and Dick Lewis, the manager of grid planning for SONI. Gentlemen, you are very welcome. The Committee is in the process of agreeing to carry out a review of electricity policy, and we are hopeful that your review will help to inform that. You can make an opening statement, and we will come back with a couple of questions.

831. **Mr Robin McCormick (SONI)**: Thank you for the opportunity to present to you. By way of introduction, we are the system operator and the market operator in Northern Ireland. So, independent of generators and supply companies, we operate the grid system and dispatch generators to meet the demand at every second of every day. We are a 24/7 operation. As market operators, we are responsible for impartially dealing with all generators on the island. They bid into the wholesale market, we set the wholesale price of electricity across the island and all suppliers buy energy at that wholesale price. All generators on the island contribute to the price that the suppliers pay for.

832. **Mr Dick Lewis (SONI)**: Good morning, everyone. My first slide shows a historical demand growth pattern. The turbulence from 2008 onwards is largely driven by economic events, and you can see the dramatic impact that that had on demand consumption in Northern Ireland. Suffice to say that, with that amount of turbulence over the past three or four years, it has become increasingly difficult to predict what demand is going to be going forward.

833. **The Deputy Chairperson**: Do you have anything to add, Robin?

834. **Mr McCormick**: No. I think that gives you a sense of what the issues are.

835. **The Deputy Chairperson**: At the bottom of slide 8, you say that the North/South interconnector is the only solution under consideration. What other options could be considered and what should be looked at?

836. **Mr McCormick**: We are aware that the Department and the regulator have taken this on board. They recently published a statement, but that really just sets out what the issues are; it does not necessarily point to a solution. We would like to see as much activity as possible on this because we believe that a solution needs to be found in a timely manner. The guys who sit at the desk in the control room have to be able to deliver minute by minute, and, therefore, a solution has to be in place prior to the end of 2015.

837. **The Deputy Chairperson**: What is that going to take?

838. **Mr McCormick**: I think that it will take a huge political effort to get a derogation. I know that Northern Ireland has a bit of a track record of looking for derogations, and this is another one. This is a short-term fix for a problem that we are aware of in advance. That is one possibility. It is possible to go out to the market to look for other generator solutions. There is a cost to what needs to be done at Ballylumford to make it compliant. So if we do not get a derogation and we

were to make the Ballylumford plant compliant, a business case could be looked at and there may be other commercial opportunities that other generating companies could bring to the table if that was afforded to them.

839. **The Deputy Chairperson**: Has anybody looked at how much that work to Ballylumford would cost?

840. **Mr McCormick**: I think that there have been discussions between the Department, the regulator and AES on that. That would be part of the —

841. **The Deputy Chairperson**: Do you have that figure?

842. **Mr Lewis**: We are not party to those discussions.

843. **Mr McCormick**: It is probably half the number they quoted.

844. **The Deputy Chairperson**: Half the number they quoted, and it will cost twice as much.

845. **Mr McCormick**: I think that needs to be seriously looked at. The generation is in place. If a derogation is not forthcoming, we have to look at what the most economic option is to resolve this security-of-supply issue.

846. **The Deputy Chairperson**: Are you confident that the problem will be resolved?

847. **Mr McCormick**: There are a number of strands to this, and I suppose that each has a number of associated risks. For the North/South interconnector, we have date of 2017, but we cannot stand over that. The planning application has been made by NIE, but we have not got a date for the Planning Appeals Commission hearing yet. That has to go through due process and you have to come out the other end. You also have to build the line, which has to done in conjunction with a project in the South of Ireland. So there are a number of risks with the delivery of that project by 2017.

848. **The Deputy Chairperson**: Are you confident that the problem will be resolved before we get to a situation in which there is not enough electricity?

849. **Mr McCormick**: I cannot be confident of that, because there is no evidence in front of me of things that are tangibly happening that are delivering solutions. One of the reasons for making ourselves available to the Committee is to explain what our role is. We wave the flag to say that there is an issue and we will do our best to try to make sure that that message is understood by the various parties that have responsibility. The Department and the regulator obviously have a key role to play in marshalling all the commercial organisations who can contribute to a solution.

850. **Mr Frew**: Regarding demand, historically, we have always grown steadily and then had a bump. We have bumped about a wee bit since 2008. What is the rationale or reason for that?

851. **Mr Lewis**: In our forecasting techniques, we always take it that there is an economic factor in demand. Economic success normally leads to increased demand. The more that people, industries and businesses consume, the greater the demand is. So, there is a direct correlation between economic factors and demand consumption — more houses, more business, more units. The downturn in 2008 obviously had a big impact on demand. The building sector, as you know, slowed down and almost stopped completely. That stopped the churn.

852. **Mr Frew**: You talk about Northern Ireland having a low industrial base. How similar are we to the Republic of Ireland in that regard?

853. **Mr Lewis**: The Republic of Ireland has picked up a number of high-end users, particularly in the IT sector. We have limited data warehousing. There is industry in Northern Ireland — do not get me wrong — but we are talking about big users. In Ireland, they have the likes of Intel and Google coming along and starting to look at data warehousing. So you are talking about, potentially, a 40 megawatt or 50

megawatt load. The highest load we would have is in the 12 to 15 megawatt range.

854. **Mr Frew**: The reason I ask is to compare the two jurisdictions because of the difference in policy between them. The Republic seems to load the cost onto the householder in order to benefit big industry. How do you view that?

855. **Mr McCormick**: All we can do is observe the economic activity and the resultant consumption and demand. We do not set tariffs. We set the wholesale electricity price. The retail price paid when someone buys from a supply company is set either by the supply company itself because it is unregulated, or by the regulator, who takes into account all the various elements of the normal tariff and sets the price. Whether the costs are distributed equally across all customer types is really a policy decision.

856. **Mr Frew**: You used the phrase "deficit position". I understand that phrase, but what does it mean for Northern Ireland with regard to shortages and security of supply?

857. **Mr McCormick**: Dick outlined how we do that. This graph is a statistical analysis, so it makes assumptions about demand and how often a generator will be forced out. It uses that against a standard of supply, so the deficit is below that standard.

858. **Mr Frew**: What will it mean in practical terms? What will it mean for a local industry that employs 1,000 people, or the householder who struggles to pay bills?

859. **Mr McCormick**: There are two things. This graph gives an indication as to how much generation capacity you should reasonably expect to have in order to secure supplies. The physical reality of day-by-day security of supply is dependent on the performance of those generators and the demand on that day. So what we are saying is that, as we move towards that line, the risk of loss of supply increases. You are then asking what happens if an area of Northern Ireland is off supply for four hours because there is not sufficient generation capacity. Well, they simply do not do business. The lights are out; they cannot do business; it is disruptive; and it is not what a modern economy expects of its electricity supply.

860. **Mr Frew**: Look at your graph — you described it as busy. If we fall below that threshold between surplus and deficit, what is the risk? You say that the risk of power shortages and outages increases greatly. Have you a percentage of risk? Are you saying it is highly likely that there will be outages and shortages in some areas? Is it 100% certain that we are going to have periodic shortages?

861. **Mr McCormick**: It is difficult to be as specific as that. The analysis, which is statistical in nature, is based on a forecast demand, and a lot of those things can move around. One issue that we have in Northern Ireland — and Dick set it out — is that we have quite a small number of generators. Therefore, the statistic analysis will say that you will lose a certain amount of capacity because little things fail and generators are repaired after a short period of time. If we were to lose one of the large generators in the middle of November and it turned out to be a particularly difficult failure and we maybe had to send the turbine back to the turbine manufacturer plant to be repaired and it was out for three or four months, that would have a huge impact because the mathematics of it simply would not work anymore. We simply would not have enough megawatts available to meet a peak demand.

862. **Mr Frew**: How vital is the North/South interconnector?

863. **Mr McCormick**: It is fundamental to the operation of the wholesale electricity market and the balance between the demand and the generation capacity on the island. If we are saying that we have adequate generation across the island but do not have enough capacity to transport that energy around the island, it is fundamental, and the lack of it at the moment is translated into what are

called constraint costs. You have to run more expensive generators because you cannot transport the energy in sufficient quantities through the North/South interconnector.

864. **Mr Frew**: So, at the minute, it is costing us money because we do not have it?

865. **Mr McCormick**: It is costing every customer on the island money.

866. **Mr Frew**: Will there come a point when we drop below the threshold and that will cost power?

867. **Mr McCormick**: It will cost an increasing amount and, ultimately, will result in shortage of supply if circumstances arise.

868. **Mr Frew**: Have you forecast when that critical year will be? If we keep stumbling on with no North/South interconnector here, will there be a year when it becomes a problem? We know the year that we fall into deficit, but is there another year —

869. **Mr McCormick**: There is an inherent risk now that you could lose supply. If a number of generators failed or transmission lines tripped out, it is possible that you could lose supply. We lost supply a number of months ago because of a combination of weather and how that impacted on the transmission system. It was not a generation issue; it was a transmission issue. However, similar sets of circumstances can arise on the generation side. The risk increases the closer you get to the line. Measured against the standard, the closer you get to the line, the greater the risk that a set of circumstances will arise where you are not able to supply energy to customers in Northern Ireland.

870. **Mr Frew**: This is my last question. Your forecast is that we do rise with regards to large tidal and offshore wind projects that are earmarked. However, they are still a long way off with regard to planning, and the connection to the grid is a different application altogether. In the example of the large tidal scheme up on the north coast, they have to travel through all of north Antrim to Kells to get connected to the grid. How confident are we that we can get those large tidal and offshore wind projects up and going in the time forecast, which, I think, is by 2020? What state is our grid in to cope with that capacity and the change in generation from traditional generation to offshore, wind and tidal?

871. **Mr McCormick**: I will answer that in a number of ways. First, the planning of the transmission network and the investment in the network is the responsibility of NIE. European legislation means that it has been decided that, from next year, SONI will take responsibility for making those planning decisions. That will be an additional workload on us. Not only will people come along and request a connection to the system, as they do at the moment, but we will physically make the plans for that. I hope that that will increase the efficiency of that element. The process of delivering those projects is fraught. The North/South interconnector project is a very good example of how difficult it is. That would suggest that, in investment decisions, we need to find a clean way of making efficient and timely infrastructure decisions on the basis of a strategic view of where we are going. It is not good practice to have delays, such as the recent delay of the Northern Ireland electricity price control, built into a timely strategic investment decision-making process. We need to get better at that because it takes time to consult the public and give them the opportunity to have their say in major infrastructure projects. That needs to be built into the timeliness of the initial decisions.

872. **Mrs Overend**: Thanks very much for coming in today. This is as serious an issue as you can get for Northern Ireland in that the lights could, potentially, go out, affecting not only businesses but everyday life for consumers. The concern is that security of supply is not assured in the future. How effective are renewables as a supply feature? Can we really depend on them in the future? Will we depend on them much more? The wind does not always blow.

873. **Mr McCormick**: As a system operator, we know that only too well. Sometimes, very few megawatts are generated by wind. At other times, we are almost at maximum capacity from the wind farms that we have. One of our major challenges as a system operator is operationally maximising the amount of wind that we can carry on the system. It is not as straightforward as just letting the wind blow and letting the energy from wind farms flow onto the system. There are some limits. So, at the moment, for example, we believe that we can cope with about 50% of demand being met by wind generation.

874. **Mrs Overend**: Sorry, what percentage?

875. **Mr McCormick**: Fifty per cent. So, if the demand on a day is 1,000 megawatts, we believe that we can cope with 500 megawatts, 50% of that being generated from wind. If there is more wind available, we have to curtail it. We have to turn the blades of the wind turbines, so that there is less output. Increasingly, we are looking at options to trade that energy across into GB if it is economically efficient to do so. So we are looking at ways to maximise wind. We believe that we understand from a technical perspective how to move from 50% to 75%. In the next number of years, we will be working across the island to make that a reality.

876. **Mrs Overend**: OK. Thanks. Do you think that we should look at other options for renewable energy that might be more secure, not just wind?

877. **Mr McCormick**: We are looking at a number of other options. One that is being looked at is tidal energy. Another is biomass. All those technologies and support mechanisms are there. So it is really a market decision as to which technology is pushed through. Our job is to respond to a connection request from a commercial entity that says it wants to generate either wind or biomass or whatever its preference is. We have to make sure that we respond to that and, in the normal course of events, we would expect to be able to provide it with an infrastructure behind that connection that would allow it to do its business in full.

878. **Mrs Overend**: Do you think that we are right in trying to increase our renewables targets? Do you think that is the best source of energy supply to make sure that we have a secure supply of electricity?

879. **Mr McCormick**: There is the strategic energy framework, which the Executive have approved, which calls for a 40% renewables target.

880. **Mrs Overend**: I know that they have; I am just asking for your opinion on it.

881. **Mr McCormick**: Well, the benefits are clear and are well articulated in that document for reductions in emissions, reductions in our dependency on fossil fuels and the volatility of prices of fossil fuels that we are importing. So, from that perspective, that all makes sense, and we are working to try to facilitate the delivery of that policy.

882. **Mrs Overend**: Do you think it could end up costing us more money? Our concern for businesses and consumers is that electricity is so expensive. Do you think the increase in renewables will impact on that price and that the price of energy will continue to increase as a result?

883. **Mr McCormick**: We look after the wholesale electricity market, so we can see the impact that wind generation has on that element of it. I am conscious that wind developers and renewables developers have additional out-of-market support mechanisms. It is hard for me to put together a complete picture of the economics of it all, but the general consensus is that fossil fuel prices will increase, and if they increase at the rate at which the World Energy Council believes they will, going for a renewables option is the right thing to do. That involves making investments in the grid to facilitate it, providing the support mechanisms to get them into the market in advance of when they otherwise would have been there. The increase in fossil fuel prices is likely not to give you time to react to the price. We have seen the

increases and the volatility in fossil fuel prices over a number of years.

884. **Mrs Overend**: I appreciate what you are saying, but I am remembering the conversation we had when the Utility Regulator was in about the price of a bag of spuds and how the cost of the fossil fuels sets the price and affects what the renewables are setting their price at. If we are saying that fossil fuels will be more expensive, as you say, those renewables providers will then say that they will set their price marginally lower, so they are going to make a huge profit. In an ideal world, it would cost much less, but if they are going to use the market to set their price, energy prices are just set to steamroll, are they not?

885. **Mr McCormick**: I think the price of electricity inevitably will rise if fossil fuel prices are increasing. This is a hedge against that. Yes, I imagine that the new entries — the wind farms — will make a profit based on the risks they are taking in their business. I cannot comment on the individual profitability because I do not see their full business cases. I think the market that is run on the island is probably as transparent as any other market. All the information is there to see what the price is, how it was set, how the various components and categories of generators have fared in it. That is important from my perspective, to make that information available, so that some of those discussions can be had with the correct facts. If it was a bilateral market, no one would see what those deals were below the level of the balancing market. We have a very transparent market that allows some of those discussions to happen.

886. **Mrs Overend**: Just to go back, you said that there needed to be some investments to help the renewables to get into the grid. What did you say those investments needed to be?

887. **Mr McCormick**: I said that the support mechanisms are there to bring those technologies to market quicker than the other ways would have done. The 40% target for 2020 is a signpost; it is not a dead end. There will be something beyond that. The decision has been taken to introduce support mechanisms to get the wind and the renewables into the market early so that when the fossil fuel prices increase, as they are forecast to do, there is access to that cheaper energy.

888. **Mrs Overend**: The incentive for them to get in is the huge profits.

889. **Mr McCormick**: It is at the moment, but those support mechanisms are not forever. The electricity market reform proposals in the UK are starting to roll out, with a move away from renewable obligation certificates to a feed-in tariff and a contract for differences, where a price will be set each year that will reflect the different technologies and where they are in their maturity.

890. **Mrs Overend**: Thanks very much for that. It is something else that we need to look at further.

891. **The Deputy Chairperson**: What else could be done to incentivise small-scale generation, particularly to make it more attractive for businesses and communities to generate their own power?

892. **Mr McCormick**: That is probably outside my remit. The impact of small-scale microgeneration from a system perspective is unlikely to impact the discussion that we have had today. There will not be sufficient investment in very small microgeneration to have any material impact on what we are seeing here. We will be seeing small individual wind farms or wind turbines. We have done some work to try to assess what the system would look like if that went to its fullest extent. We reckon between 50 megawatts and 70 megawatts of individual wind turbines out there as a possibility. That has an impact on what we are looking at. Although the micro one has an impact on the individual — there is potential for support mechanisms for them — it does not address that type of issue.

893. **The Deputy Chairperson**: I think that that is all the questions, Robin. Thanks

very much for coming. The Committee has agreed to carry out a review of electricity pricing, and I hope that we will agree terms of reference later. Will you be willing to come back at some stage during the autumn as part of your role as a single electricity market operator to brief us on pricing policy in the single electricity market?

894. **Mr McCormick**: Certainly. If we know in advance what we need to analyse, we are happy to come as a market operator to give you a view of how the market has been operating.

895. **The Deputy Chairperson**: Thanks for that. A number of members are not here, so there may be a number of questions that have not been asked. If we forward them to you in writing, will you come back to us with a written response?

896. **Mr McCormick**: Yes. I am happy to respond.

897. **The Deputy Chairperson**: Thanks very much.

4 July 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mr Stephen Moutray
Mrs Sandra Overend
Ms Sue Ramsey

Witnesses:

Mr Andrew Greer *Airtricity*
Ms Fiona Hannon
Mr David Manning

898. **The Chairperson**: Before the Committee today, we have David Manning, the director of corporate affairs, Fiona Hannon, the supply regulation manager, and Andrew Greer, the commercial sales manager. You are all very welcome, and thanks for being here. You are probably aware of how the Committee system works, and you have some time to present your case and make your opening remarks, after which members will ask questions. It is over to you. Are you fronting, Mr Manning?

899. **Mr David Manning (Airtricity)**: Yes, Chairman. Thank you very much for having us along today. I will try to keep the opening remarks as brief as possible to maximise the opportunity for questions, which we are happy to answer.

900. **The Chairperson**: Thanks very much indeed. I have a number of questions, and then I will open it up to other members. I want to pick up on your comment that the October 2012 price decrease of 14% was unsustainable. We have a research briefing note from the Assembly Research and Information Service. It refers to SSE Generation Ireland Ltd returning a net profit margin of 36% in 2011-12 on a turnover of just over £90 million. Have you any indication yet of your company's profit margin on this year's returns?

901. **Mr Manning**: Those numbers seem remarkably high. I am not quite sure about that. I would be happy to take that away and have a look at it. If the question is about the profitability of the business, the most obvious answer is that our company makes a profit of around 2p per customer per day.

902. **The Chairperson**: We want the end-of-year profits filed officially on behalf of the company. Are you saying that the figures that I have just presented are wrong?

903. **Mr Manning**: I cannot say whether they are wrong. I would need to look at them. I am unfamiliar with them.

904. **The Chairperson**: It would be a cause for concern if you were to say that they are wrong. Obviously, if you cannot clarify those figures, you will not be able to clarify what the profit might be this year. Could you please confirm in writing that those profit figures for last year are right and clarify what your profit might be this year?

905. **Mr Manning**: Yes; absolutely.

906. **The Chairperson**: That brings us to the 17·8% price increase. Many of us could not understand that. Your company piggybacked what happened with Power NI. The price jumped up to being a little bit beneath that of Power NI. One of the main components of Airtricity's advertising and promotion is that it uses renewable sources. I see that the actual figures are 18% from renewable sources and 31% from gas. Given that you were piggybacking Power NI, we could not understand why your leap should be the exact same at 17·8%. Power NI told us that it had 11% and that the reason for the leap was irregularity of prices in the

gas market. However, you source 31% from gas and 18% from renewables. Will you explain why you should have jumped the same amount as Power NI when it sources less from renewables and you source less from gas?

907. **Mr Manning**: Let us deal with the renewables question first. I mentioned it in my presentation. The renewables portfolio is sold directly into the single electricity market (SEM). As wind blows on the system, it displaces more expensive conventional generation sets and reduces the wholesale price for the entire market. The whole market buys its power out of the SEM pool. There is not a direct correlation between the renewables part of the business and the supply side. All renewable power into the pool reduces the cost of the overall pool. All suppliers buy out of that pool, so all suppliers benefit from that.

908. **The Chairperson**: Why do you bill Airtricity as having the advantages of a renewables company?

909. **Mr Manning**: We do that because we are the largest generator of renewables in Northern Ireland and on an all-island basis. The impact of our renewables business is to reduce the wholesale price on the market to the benefit of all.

910. **The Chairperson**: So, you are saying that it is of no direct benefit to Airtricity whatsoever that it takes a roundabout route.

911. **Mr Manning**: Yes.

912. **The Chairperson**: That brings me on to my next question. What do you feel about the additional regulation of costs and the capping of costs? The way that it has been portrayed to us is that companies such as, in this instance, Power NI jump by 17·8%, and the average consumer sees all the other companies piggybacking on that and then showing considerable profits. What would you say to the slightly jaded or cynical person who states that all that is happening is that those companies are taking full advantage of another company raising its prices by keeping its prices a tad lower? We are looking at renewable sourcing here, which is supposed to keep prices down. However, that is leading to excessive profit margins for companies. We all expect companies to make a profit because that is what you are in the business for, and we support all companies in that, but if excessive profits are being shown as a result of that piggybacking, is there a need for additional regulation to control those price hikes in the interests of all consumers? That is our concern. It is good that you are a successful company, but our concern is essentially for the businesspeople who complain to us. That has happened in Committee, and, last Friday, I visited a pretty big business that complained about energy costs. People who visit our constituency offices are complaining about energy costs and difficulties and the position that it places them in in having to make choices between, in some cases, heating or eating. How do you look at the question of the introduction of additional regulation?

913. **Mr Manning**: There is a differentiation between commercial and domestic, in the sense that the 17·8% increase refers to domestic. That increase comes following a 14% price decrease in the market at a time when it was unsustainable. From a customer perspective, that nets off. Where they are today is where they were in October. That is a very important point that we have to recognise.

914. **The Chairperson**: What point are you making?

915. **Mr Manning**: Customers have experienced volatility in the tariffs. They saw a 14% price decrease last October and a 17·8% increase because the regulated entity was losing money. When the regulated entity loses money, the reconciliation for the following year has to recapture that loss.

916. **The Chairperson**: Could you explain how you see that as unsustainable? Clarify that for us. I understand the basics.

917. **Mr Manning**: When you drop the price by 14% in an upward-turning market, it

means that the costs of energy and the costs of supplying the customer go up quite considerably. The price that you charge the customer is very low, and you do not recover the cost of supplying that customer. I understand that, when Power NI was before the Committee, it outlined a loss of £23 million in the first quarter.

918. **The Chairperson**: That is a bit of a leap of faith, is it not?

919. **Mr Manning**: Why?

920. **The Chairperson**: It is your conclusion that Airtricity's intervention has led to that.

921. **Mr Manning**: I said that Airtricity being a competitor in the market has helped.

922. **The Chairperson**: I have one more question, and we will then move to other members. I put a question to you about additional regulation, and I did not hear any clarity on that.

923. **Mr Manning**: There are two answers to that. First, at the moment, Northern Ireland will face a capacity shortfall in 2016 as plants close onto the system. If would-be investors felt that the market was hugely profitable, they would be lining up to invest in the Northern Ireland market, but they are not. That is why Northern Ireland is facing a capacity crunch in 2016. No would-be investors are looking to invest in the market, and that is a concern. Secondly, the Economic and Social Research Institute (ESRI), which is one of the main economic think tanks, looked at the single electricity market in 2009 and republished a second report in May this year. Both those reports found the returns earned by generators in the market to be fair. That was an independent analysis undertaken by the Economic and Social Research Institute.

924. **Mr Flanagan**: When was that done?

925. **Mr Manning**: The first report was in 2009, and the second report was in May 2013. It updated the original report.

926. **The Chairperson**: Did it look at all companies?

927. **Mr Manning**: It looked at the whole market.

928. **The Chairperson**: I ask because of the variation in profit margins, with some companies losing out substantially to the likes of Airtricity, which is up there on a 36% profitability return.

929. **Mr Manning**: Another important aspect to that is the cost of wind in the system versus the cost of other conventional plant in the system. With wind, the upfront capital cost to get into the market is very high, but the running costs are low because there is no fuel cost, whereas conventional generation has a very low capital cost per megawatt but a very high running cost. So when you look at the market and say that conventional generation is being remunerated, that is because the market is structured to remunerate conventional fossil-fuel generation. So there are, to some extent, swings and roundabouts in the two remunerations.

930. **The Chairperson**: Let us return to the question of regulation. I did not hear you say yes, no or maybe.

931. **Mr Manning**: At present, the market is well scrutinised and well regulated. It is very useful to have reports from ESRI, the SEM committee, which produces the generator profitability report, or NIAUR. Although we have queries about some of the information in the NIAUR report and what it chose to compare, it is, at the same time, very useful, in that it generates debate and conversation. That type of scrutiny and monitoring of the market is very useful, and the single electricity market is extremely transparent. Anyone who wants to know what someone else is doing in any half hour can go on to the SEM operator website. It is a highly transparent and highly monitored market. So, in answer to your question on whether it requires more regulation, I think that, as it stands, it is a well-regulated and well-monitored market.

932. **The Chairperson**: That is a no from you, anyway.

933. **Mr Manning**: Well, if it is well done —

934. **The Chairperson**: Right, OK. I hear you

935. **Mr Flanagan**: Thank you for the presentation. First, may I take you back to your comment about the 2012 price decrease being unsustainable? You state, both in your written brief and here today, that it was unsustainable, but you had follow it to be competitive. Will you elaborate on that? How much cheaper than Power NI does Airtricity claim to be for domestic customers? Why did you think that you had to follow with such a large price decrease to remain competitive?

936. **Mr Manning**: Phil, would you mind repeating the question?

937. **Mr Flanagan**: You said that Power NI's decision to reduce its prices by 14% in 2012 was unsustainable but that Airtricity felt that it had to follow to remain competitive. Will you elaborate on that?

938. **Mr Manning**: Airtricity entered the Northern Ireland domestic market in 2010. We have had a very successful period in the market and had quite a significant number of customers switching to us. It is a very low margin business. The regulated margin is 1·7%, so we have to compete against that. So when Power NI dropped its price, or had its regulated price reduced by 14%, for us to continue to be successful and grow in the market, we needed to reduce our price commensurately.

939. **Mr Flanagan**: Did it have to be by 14%?

940. **Ms Fiona Hannon (Airtricity)**: We do not think that we would have retained our customers had we not matched the 14% decrease. Realistically, had we dropped by 4%, and customers felt that they could get a lower price from Power NI, they would have switched.

941. **Mr Flanagan**: Had you dropped by 4%, who would have had the cheaper electricity?

942. **Mr Manning**: Power NI would have had the cheaper electricity.

943. **Mr Flanagan**: By how much?

944. **Mr Andrew Greer (Airtricity)**: By 10%, because 14% minus 4% is 10%.

945. **Mr Flanagan**: I thought that Airtricity was cheaper than Power NI, is it not?

946. **Ms Hannon**: Customers would still have been getting discounts. We would have dropped the price by 4%, but they would probably have been paying a similar price.

947. **Mr Flanagan**: So dropping the price by 4% would have left Airtricity and Power NI customers on a level playing field? Could you not have picked a number between 4% and 14%? You would still have been making money and making it attractive for customers to switch from Power NI to Airtricity, but the price that you were charging would not have been unsustainable.

948. **Ms Hannon**: It could have been, but we wanted to maintain that level of discount.

949. **Mr Flanagan**: You said that it was unsustainable.

950. **Mr Manning**: It was.

951. **Mr Flanagan**: So why did you do it?

952. **Mr Manning**: We wanted to be able to continue to build market share and attract customers to our business. If your business is not growing, Phil, it is declining.

953. **Mr Flanagan**: When we received a briefing from Power NI, Mr McCully said:

"The price control model theoretically allows you to recover any losses. In the first three months of this year, we ran at a loss of £23 million, which was the burden of the increase in wholesale prices."

954. **Mr Manning**: Sorry, Phil, I do not have that number off the top of my head. I can go back and have a look at it.

955. **Mr Flanagan**: You will find out, then.

956. **The Chairperson**: We can get that in written form, in the same way as the other information.

957. **Mr Flanagan**: You outlined that one of the biggest problems with electricity is the continuing significant price increases and decreases. In 2012, when Power NI outlined its 14% decrease, could

you not have stated that you would not follow suit? I do not mean to tell you what your marketing strategy should be, but would it not have been a good opportunity for Airtricity to come out and say, "We will not follow this 14% price decrease because it is unsustainable". I read your press statement from 2012, and nowhere did it say that 14% was unsustainable and should not be done.

958. **Mr Manning**: The submission to the regulator said that.

959. **Mr Flanagan**: The point is that you did not make that known to the public. Would it not have been an opportune time for an organisation such as yours to come out and say, "We will not do that because it would lead to a price increase in the future, and we want to avoid that"? If you want prices to be more stable, instead of always following what Power NI does, why do you not introduce that as a model for your customers? You are not regulated, and you do not need anyone's permission to do it.

960. **Mr Manning**: Alternatively, the regulated market could be less volatile.

961. **Mr Flanagan**: You are the ones who follow the volatility.

962. **Mr Manning**: That is why I would like less volatility in the market.

963. **Mr Flanagan**: Why can you not bring in less volatility for your customers instead of worrying about what Power NI and the regulator do? If you say to me that what is best for customers and what they want is less volatility and fewer big shifts in pricing, why do you not do that instead of waiting for others to introduce it? If it is that big an attraction for customers and you can sell it to them, you will get more customers than by increasing prices by 17·8% just because Power NI does.

964. **Mr Manning**: What I said was that the volatility created a lot of uncertainty for customers. If customers see a 14% decrease in other suppliers' prices in the month of October and we do not move our price down in line with that, they will say that we are 14% more expensive than the market. What choice do we have? If we hold firm and customers move away from us because they see Power NI drop its price by 14%, we are not offering the most competitive tariff in the market, which is where we need to be.

965. **Mr Flanagan**: Can you change your price at any time, or is there a certain window in which you have to do it?

966. **Mr Manning**: When can we change our tariffs? We are a competitor in the market, and we can do it at any time.

967. **Mr Flanagan**: Why did you leave it so long after Power NI announced its price increase to announce yours?

968. **Mr Manning**: I think that it was a week.

969. **Mr Flanagan**: How many additional customers did you get in that week?

970. **Mr Manning**: If you wish, we can come back to you with that information.

971. **Ms Hannon**: Any customers who switched to us in that week were still within their cooling-off period and could have switched back or cancelled their switch.

972. **Mr Flanagan**: I was talking to a man not too far from here — he may be standing outside the door — who made the switch and is now very disappointed that you simply followed Power NI by putting your prices up by 17·8%. I presume that many have similar frustrations. Why did you wait for a week? People were very frustrated. It was a big story that Power NI's prices were going up by 17·8%. Why did you wait for a week to announce that you were doing the same thing?

973. **Ms Hannon**: First, the move by Power NI was unexpected, so we were not prepared for a decision like that to be published at such short notice. We then had to try to put together our corresponding announcement in that short period. Ordinarily, price increases would happen on 1 October, and we would have a schedule for that and expect it to happen, but this came out of the blue.

974. **Mr Flanagan**: So you did not know that Power NI was going to put up its prices?

975. **Mr Manning**: No. Most price reviews take place within a fixed period. October is when those price changes happen, so this was out of sequence and exceptional. This goes back to the point that the 14% decrease was unsustainable in the long term. However, I will turn the question around, Phil: if your constituents were to become customers of Airtricity on our introductory discount, how much money do you think that they would save over a two-year period?

976. **Mr Flanagan**: I have no idea.

977. **Mr Manning**: The answer is £2·6 million, and, if all customers in the Northern Ireland market were to change over to Airtricity on its introductory discount, the home market would save about £50 million over a two-year period. Those are very sizeable, favourable savings for the customer.

978. **Mr Flanagan**: If every customer switched to Airtricity and saved money, I would still contend that you could do much more to make your electricity affordable. We have seen reports that show that. I have here your annual report from 2011-12, which says that the network side of your business made a 44% profit, the retail side a 19% profit and the wholesale side a 37% profit. None of those have the 1·7% margin that you claim Power NI has. It is very clear to us that you are making huge sums of money. Much of that is driven by the fact that, for your wind farms, you are paid the full price based on what people burning gas or oil to generate electricity are paid. How is it fair that an organisation that generates electricity from a wind farm — this applies to anybody who owns a wind farm; it is not personal — can charge the full price to sell that into the single electricity market and then double-charge the full price again to sell to a consumer? How is that fair for consumers?

979. **Mr Manning**: First, it is not the case that we are making a large amount of money. In effect, what we are doing is making investments in very large capital infrastructure projects. The cost of that capital has to be remunerated. When you build one of these projects, it takes 10 to 15 years before you even start to make any money because you have to pay back the cost of the capital and the interest. The depreciation on that is a very sizeable amount.

980. **Mr Flanagan**: The wholesale price is cheaper, but the price that consumers pay is not. The fact that it costs less to generate electricity has not had the same downward effect on domestic prices that it should have. The reason for that is that the boys in the middle are getting too much profit.

981. **Mr Manning**: No, it is because the cost of the input fuels going into the market has also gone up at the same time.

982. **Mr Flanagan**: The price of your wind or anybody else's wind has not gone up, David.

983. **Mr Manning**: The majority of the market is made up of conventional fuels — how much wind and how many renewables are installed in the market? The other point is that the question is always posed in this context: why does wind get the same price as gas? Coal gets the same price as gas in the same period. It is the marginal plant in the system. All plant in the system generating power at a particular point in time get the marginal cost. That is a basic principle of marginal cost pricing — in any market.

984. **Mr Flanagan**: The point is that it is not delivering for customers; it is delivering for some generators.

985. **Mr Manning**: How can it not be delivering for customers, Phil, when the customer in Northern Ireland pays the EU average? Look at the amount of fossil fuels currently in the system. It is a majority fossil fuel market and very small in scale. Still, the Northern Ireland customer pays the EU average. I think that that is fairly favourable, given the disadvantages that the market has.

986. **Mr Flanagan**: The reason for it not delivering is that SSE made profit margins of 44% on the networks, 19% on retail and 37% on wholesale. That is why the single electricity market does not deliver for domestic customers.

987. **Mr Manning**: I do not think that that is a fair representation, Phil. As I explained —

988. **Mr Flanagan**: I took that information from your operating —

989. **Mr Manning**: I do not think that that is a fair representation. You are saying that we are making all this money, but, as I explained, there are very large capital infrastructure projects that have to be remunerated, and they do not wash their face for 10 years or more. As I said at the opening of my presentation, we make, on average, about 2p per customer per day. A cup of coffee costs quite a lot more than that. Given the amount of utility that electricity provides, do you not agree that that is value for money?

990. **Mr Flanagan**: You are telling me that you are making money but that, really, you are not because you are spending it all on capital. If that is the case, why was —

991. **Mr Manning**: I just told you that we are making a profit.

992. **Mr Flanagan**: Yes, but you qualify that by saying that you have to invest —

993. **Mr Manning**: You said that we were making a substantial profit; I was just clarifying that for you.

994. **Mr Flanagan**: So you do not think that 44%, 37% and 19% are substantial profits.

995. **Mr Manning**: You are talking about percentages; I am talking in real terms. The business that we operate is in a volume business across a large number of customers. When you put out a very large number, that sounds great. However, when you split that across a customer base of x number of hundreds of thousands of customers, it equates to a much smaller number.

996. **Mr Flanagan**: I do not think that 44% is a small number, David.

997. **Mr Manning**: I am talking in real-term prices.

998. **Mr Flanagan**: How much profit did you make last year?

999. **Mr Flanagan**: You say that you have the report in front of you.

1000. **Mr Flanagan**: If you divide that between all your customers, what would it give you? According to your accounts published in March 2011, there were profits after tax of €32 million. I think that that is only in the South. That is a net profit margin of 36%. According to your 2012 report, gross profit was £1,356,000,000.

1001. **Mr Manning**: Are you looking at the SSE report, Phil?

1002. **Mr Flanagan**: Yes.

1003. **Mr Manning**: That is a GB-wide and Ireland business.

1004. **Mr Flanagan**: It is SSE. Is that not what we are talking about?

1005. **Mr Manning**: That is an all-islands business. It is GB and Ireland. You are quoting numbers that apply to the overall wider business.

1006. **Mr Flanagan**: Airtricity and SSE are the one business.

1007. **Mr Manning**: Yes.

1008. **Mr Flanagan**: That is the report that I am quoting.

1009. **Mr Manning**: The business that we have in Northern Ireland adds value to those overall figures and results. Sorry, I thought that we were talking about Northern Ireland and the single electricity market.

1010. **Mr Flanagan**: I do not think that you produce a report just for here, do you? You produce a report for the whole company.

1011. **Mr Manning**: No, we publish annual results.

1012. **Mr Flanagan**: I will move on to the argument that SSE and Airtricity are

the same company. You spoke about the community benefits from your wind farms. If SSE and Airtricity are the one company, why is there such a differential between the amount per megawatt hour of community benefits that people receive here and the amount received in Scotland and Wales?

1013. **Mr Manning**: Sorry, may I just have a moment? Unfortunately, I am slightly sickly.

1014. **Mr Flanagan**: You will get a pile of sympathy.

1015. **Mr Manning**: An aspirin would do fine.

1016. **Mr Flanagan**: I am not even allowed to give you a scone. *[Laughter.]*

1017. **Mr Manning**: The community benefit question is very interesting. We have to seek planning permission to secure the development of any project, particularly wind, which is the main piece that we develop in Northern Ireland. When I do that in other jurisdictions, it is a very straightforward process. It is very visible, the costs are streamlined and I know my exact costs when I go to deliver on that, so I can share the benefit of delivery with our customers. We pay 1% of the revenue of the wind farm to those local community groups. In other jurisdictions, where the value of the community fund is higher, the process is streamlined, so the saving and value can be shared with the customer. However, in Northern Ireland, we tend to have a bit of difficulty when we move through the process because delivery is not as streamlined. If we can get the cost of delivery down, we can share the upside and value of that with communities. We are asking ourselves the question about the value of community benefit here.

1018. **Mr Flanagan**: Is there a direct correlation between the cost of putting a wind farm up here compared with in Scotland and Wales and the community benefits that result? If the community benefits here are one fifth of those in Scotland and Wales and a new wind farm here attracts £1,000 per megawatt hour but £5,000 in Scotland, are you saying that it costs five times more to build a wind farm here than in Scotland?

1019. **Mr Manning**: Why five times?

1020. **Mr Flanagan**: Well, £5,000 per megawatt hour is five times £1,000 per megawatt hour.

1021. **Mr Manning**: We do not contribute £1,000 per megawatt hour. We lead the market and always have. Airtricity was the body that founded the principle of community benefit and involvement. It is 1% of the revenue of the wind farm. I think that ours worked out at, on average, about £2,800 per megawatt hour.

1022. **Mr Flanagan**: Is that here?

1023. **Mr Manning**: Yes.

1024. **Mr Flanagan**: What was it in Scotland?

1025. **Mr Manning**: Scotland is a flat rate of £2,500 a megawatt hour.

1026. **Mr Flanagan**: Is it not £5,000?

1027. **Mr Manning**: No. There is also a wider regional fund: it is £2,500 for a local fund and a further £2,500 for a regional fund.

1028. **Mr Flanagan**: So, effectively, £5,000 has been taken off you by the Government.

1029. **Mr Manning**: No, it is not taken off us by the Government. That is a voluntary fund that we contribute to the local community.

1030. **Mr Flanagan**: Which one is voluntary?

1031. **Mr Manning**: Both of them. The one in Scotland and the one here are both voluntary.

1032. **Mr Flanagan**: So you are volunteering to hand over £5,000 per megawatt hour in Scotland and, on average, you handed out £2,800 here. So does it cost twice as much to build a wind farm here as it does in Scotland?

1033. **Mr Manning**: As I said, there is a differential in their value, and we are looking at that.

1034. **Mr Flanagan**: Is it nearly twice the price here?

1035. **Mr Manning**: No, it is not nearly twice the price.

1036. **Mr Flanagan**: Then why do we get only half the benefit here?

1037. **Mr Manning**: When we started developing community funds in Northern Ireland, Airtricity took the lead.

1038. **Mr Flanagan**: I understand that.

1039. **Mr Manning**: It was the business that set the standard for the rest of the industry. Since then, the rest of the industry has come along in quite a significant way. We are going through a phase of reassessing the value of a community fund and community benefit. However, in all of this, we must ensure that the community gets value from the money contributed, and we are always very keen to focus on that. So, as a business, we will go out and meet local community groups. A pot of money associated with wind farms is available to them, and we will work with them to deliver the best projects that they can.

1040. **Mr Flanagan**: Are any wind farms in the process of being built?

1041. **Mr Manning**: Yes.

1042. **Mr Flanagan**: Will you give me one example and an idea of the proposed community benefits per megawatt hour?

1043. **Mr Manning**: Glenconway is coming towards the back end of the process. Do not forget that you are talking in absolute terms about £2,500 a megawatt hour, whereas we work on percentages. So when the wind farm performs very well, the pot of money available at the back end also does very well, and the community shares the benefits. That was another reason why we went for the percentage. It is historical: this goes back almost 10 years. The 1% revenue ensures that the better site and the value created from that are shared with the community. It is index-linked as well.

1044. **The Chairperson**: We will probably not resolve the community benefit issue here today, although it is very important.

1045. **Mr Manning**: I agree.

1046. **The Chairperson**: You say that you are conducting a review of community benefit. That would be important information for us to have as part of our review, if you were fit to provide us with the details when it is complete. Do you have any indication of when that might be?

1047. **Mr Manning**: We will work on this through the summer.

1048. **The Chairperson**: So you might be finished by the back end of the summer?

1049. **Mr Manning**: Yes, absolutely,

1050. **The Chairperson**: If you could provide us with that, that would be grand. Phil, had you something else to add?

1051. **Mr Flanagan**: I have a question that can be answered with, I hope, a yes or a no. Did the Committee for the Environment seek access to one of your wind farms in west Tyrone last week?

1052. **Mr Manning**: Phil, the letter was read out today at the Committee for the Environment's meeting.

1053. **Mr Flanagan**: If they are dealing with it, that is OK.

1054. **Mr Manning**: Well, perhaps, since you asked the question, you could give me an opportunity to respond to it.

1055. **Mr Flanagan**: If you want to answer it, that is OK.

1056. **Mr Manning**: I do not know whether any members of the Committee saw a UTV piece last Thursday evening. It referred to Bessy Bell, one of the wind farms owned by SSE. All I can say is that our business was very badly misrepresented. We received a phone call on Thursday 21 June from Strabane. It was an informal phone call; there was no formal letter or invitation —

1057. **The Chairperson**: To be fair, that is probably being dealt with elsewhere.

1058. **Mr Manning**: Sorry, Chairman. I appreciate that, but it is important —

1059. **The Chairperson**: I am sorry; we are not getting into that. That business is being dealt with in another Committee.

1060. **Mr Manning**: As Phil brought it up, perhaps I could furnish this Committee with the same letter that the Committee for the Environment received. That will address that point.

1061. **The Chairperson**: That is grand.

1062. **Mr Agnew**: Thank you, David, and your team for your answers. First, Chair, I should declare an interest as an Airtricity customer before I am pulled up for not doing so.

1063. **The Chairperson**: You were not standing outside the door talking to Phil a while ago, were you? *[Laughter.]*

1064. **Mr Agnew**: No, I was not one of those who became a customer during that week-long window. I have been a customer for a number of years.

1065. **Mr Manning**: Do you mean the differential in the price at which wind bids into the market compared with gas?

1066. **Mr Agnew**: Yes.

1067. **Mr Manning**: Wind does not bid into the market. There are two factors associated with wind: priority dispatch and the fact that it is a price taker. On any given day, whatever amount of wind is blowing in the system is dispatched on to the system — that is within the tolerances of the system, if you are talking about system frequency and so on. When the maximum amount of wind is on the system, other plant comes on — generally, coal plant followed by gas plant and then oil peakers, and so on. Whatever the marginal plant is at that point, that is the revenue received.

1068. **Mr Agnew**: I just want to bring you back a bit. Perhaps I misunderstood this, so will you explain how SSE's renewable generation brings down the single electricity market price?

1069. **Mr Manning**: Any given day is broken down into half-hour periods. As demand increases through the day, plant is brought on to the system to meet it. If you can imagine that there was no wind on the system at all, you would most likely see your coal plant coming on first when, let us say, people are getting up in the morning, boiling the kettle and making their breakfast. Then you move into mid-morning, where there is a bit of a lull, and it is a bit quieter. Then, coming into lunchtime, it gets busier, with people making their lunch and so on. Demand then continues to increase through the day, and by the time you get to the evening, you are on your peaker plant, which is the last plant to come on to the system. In each half-hour period, whichever plant is beating the price at that point sets the price for everybody else; if you can imagine that in a conventional context.

1070. **Mr Agnew**: OK. So, when demand is lower and wind is meeting that demand, the price is lower, but when demand increases, all electricity is effectively sold at the same price to the market.

1071. **Mr Manning**: Yes, that is exactly it. In the industry, the language used is that wind destroys its own price. What happens is that, as more and more wind comes on the system, displacing more and more expensive conventional sets, the price gets lower and lower and so it does not make the money back. Does that make sense?

1072. **The Chairperson**: Maybe I could labour that point, Steven; I want to tease this bit out.

1073. **Mr Agnew**: Yes, sure.

1074. **The Chairperson**: Are you anticipating a significant price drop if we meet the 40% renewable target?

1075. **Mr Manning**: No, I think that what is more likely in reality is that it will force down the cost of the wholesale price. However, you will then get to a point where the market is not sufficiently remunerating plant that are on the system. So, it is not the case that the price will collapse away significantly. If there were — we are into the land of theory here — huge amounts of wind on the system, it would become the

predominant fuel, with the marginal cost plant down at the very bottom. However, that plant would have to be remunerated and make money, so you would then have to look at how the market operates and how the market remunerates plant on the system. EirGrid, as the TSO in SONI, is doing a very significant exercise at the moment where it is looking at how you remunerate plant in the whole system if you have a high penetration of renewables. It is called the DS3 programme.

1076. **Mr Agnew**: As somebody who has significantly promoted renewable energy, I rely on the arguments that renewables will certainly stabilise prices, and, I hope, be able to bring the price down in the long term.

1077. **Mr Manning**: The answer to that question is that, at this point, the penetration of renewables in the system is not substantial enough to have the type of material impact that we are discussing here at the moment, although it is having a positive impact. I appreciate that it is, undoubtedly, a complicated issue to explain to the average person on the street.

1078. **Ms Hannon**: I think you are right. It is very difficult for the average person on the street to understand, but it is something that the industry maybe needs to look at with the Consumer Council in order to produce one page on how the electricity market works. That might be useful for people so that they understand that everybody is buying out of the same pool. So, we might talk to the Consumer Council about it.

1079. **Mr Greer**: We have talked about Airtricity and SSE being a renewable generator. Yes, we are, but we also invested in more efficient conventional gas generation. We are building a power station in the SEM, which will be commissioned next year. That will obviously be up to date and use the latest technology, and that in itself will displace some of the older generators that have been there, which will have the same positive impact of reducing the wholesale market prices.

1080. **Mr Agnew**: Gas is essentially the price-setter as the most expensive fuel. The most expensive unit of fuel sets the price. How does that work? We had the analogy that Phil used — I apologise for coming back to it — of the two bags of spuds. The Utility Regulator said, "Yes, but we need all the spuds". In the model that you outlined, that is not strictly true, because, at different points of demand, we may not need gas to come on stream, or whatever it might be. So, as we look to greater penetration of renewables, gas is only the price-setter when there is high demand. Is that an accurate description?

1081. **Mr Manning**: There are different types of plant: base-load; mid-merit; and peaking. In the base-load category, mainly coal would meet that demand. Gas would be in the mid-merit category — that middle-of-the-day type of power. Then, you are getting into open-cycle gas, because it is fast reacting, and oil in the latter part of the day, so that would become the price-setting plant.

1082. **Mr Agnew**: OK. I appreciate the answers, because it is a complex market to get your head around when you do not do it day and daily. On the issue of profits, we have the figures as outlined by Phil from the annual report. I am just disappointed that we cannot have a full discussion about profits because you do not seem to have come with the information. It is a big concern. The perception is out there, rightly or wrongly, that renewable generators are making excessive profits. I fully accept that there are high upfront capital costs. However, on one hand, when you produce a report for your investors, you say that your profits are huge and you are doing great; but, on the other hand, you are coming to us and saying that, actually, your profits are not too big. I am not sure that that circle has been squared today.

1083. **Mr Greer**: There are independent businesses. There is a generation part of the business and a retail part of the business. Different margins are made at different aspects of the value chain.

1084. **Mr Agnew**: Yes, but the retail was 19% and the wholesale generation was 37%. Those are the figures that were in the annual report.

1085. **Mr Greer**: Across SSE?

1086. **Mr Agnew**: Yes.

1087. **Mr Greer**: Power NI, which, essentially, is the price-setter in Northern Ireland, has a regulated margin of 1·7% as such, and we are below it in pricing. We face exactly the same wholesale costs as it for that particular half hour. We will get charged the same price as Power NI and all other suppliers from the SEM. In this local market, those levels of margin are not being made.

1088. **Mr Manning**: Steven, we would like to take those numbers away, and we will write back to the Committee on them.

1089. **Mr Agnew**: I was just expressing disappointment. If I was in your position, I would have anticipated questions about profit, but I appreciate that you are going to come back to us.

1090. **Mr Manning**: The only reality that I can refer to is that the regulated business has a margin of 1·7%. That is what we have to compete at, so, de facto, that is the margin that we get set under retail business. I do not have the numbers for the wholesale market in front of me, but I can present the anecdotal evidence that, if there was that much money to be made in the market, guys would be queuing up to replace the capacity crunch that is coming in 2016, but they are not. From a DETI and NIAUR perspective, they are looking quite closely at what needs to happen in the market in order to get that plant built.

1091. **Mr Dunne**: Thank you very much for your presentation, answering questions, and so on. You gave us a figure of 300,000 electricity and gas consumers in Northern Ireland. What is the breakdown for gas? How is that managed in the existing networks, which you are, obviously, using?

1092. **Ms Hannon**: We have 120,000 gas customers.

1093. **Mr Dunne**: Where are most of those?

1094. **Ms Hannon**: They are in the greater Belfast area. At present, we are unable to compete outside that area.

1095. **Mr Dunne**: Right. What are the savings for gas customers?

1096. **Ms Hannon**: There is no discount for gas because the gas price is regulated. As we are the incumbent supplier, the Utility Regulator, basically, regulates the price of gas.

1097. **Mr Dunne**: What is the advantage, then, of going to you for gas?

1098. **Ms Hannon**: I suppose that, at present, Firmus is competing against us in the greater Belfast area. There is no price advantage in coming to us.

1099. **Mr Manning**: In the same way that Power NI is the regulated entity in electricity, we are the regulated entity in gas. That follows our acquisition of the Phoenix gas supply in the middle of last year. We are the incumbent supplier, so we are regulated by NIAUR, just as Power NI is regulated.

1100. **Mr Dunne**: You have 90 direct and 60 indirect employees. Does that include the sales staff who come round our doors trying to encourage us to switch?

1101. **Mr Manning**: No.

1102. **Mr Dunne**: Who employs them or is responsible for them?

1103. **Mr Manning**: When we run sales campaigns like that, we go out to third parties to provide those salespeople. We will sit down with them, train them and provide specific operational procedures around how they must act when they are on the doorsteps.

1104. **Mr Dunne**: Are you always satisfied with the level of service that you get from those third-party organisations that deal with sales or have you had issues?

1105. **Mr Greer**: Obviously, our obligations about how energy is sold are taken very seriously. We invest a lot of time and training in those members of staff. A lot of processes and quality controls are

put in place. As David mentioned, we have a sale guarantee. If customers are dissatisfied and feel that they have been mis-sold energy, we will put that right.

1106. **Ms Hannon**: And compensate them.

1107. **Mr Dunne**: I was coming to that. Why is there a sales guarantee? Is it because of the negative feedback that you were getting about customer disappointment? We have picked up on that customer disappointment. After they have switched, the actual savings are somewhat disappointing compared with perceived savings.

1108. **Mr Greer**: I was going to say that, sometimes, there is a perception. With regard to the absolute unit cost price, the pricing that we offer customers is lower. We are very transparent, particularly when you have, essentially, a benchmark price, which most customers transfer from Power NI. I think that, for a lot of consumers, their perception of their own consumption changes. Obviously, in a period of cold weather, they may use electrical heating in their house and have it on a bit longer. If there is warm weather, people turn on fans etc. They may be making more cups of tea or whatever. The whole consumption side of things is also a factor in what the ultimate cost is. Effectively, it is a simple equation of the kilowatt hours consumed times a unit price. We can stand over the unit price that we offer customers.

1109. **Mr Dunne**: Is it true that there is slippage of people going back to Power NI from you?

1110. **Mr Manning**: Gordon, the CCNI published a report two weeks ago called 'Power to Switch'. It is a very useful report to have a look at. Basically, what it shows is that, of the customers it surveyed — it did a large customer survey — 97% found the switching process easy with electricity, and, of those, seven out of 10 believed that they had saved money. It is a very positive report, and in switching, the CCNI —

1111. **Mr Dunne**: It is easy to switch, I do not think that we would argue with that, but we have had feedback that it has not been managed as well as people thought it would be. You obviously needed your sales guarantee system to be brought into place to try to steady the ship because of the feedback you were getting on customer satisfaction. Is that fair?

1112. **Mr Manning**: No. We introduced the sales guarantee to give the customer transparency and confidence, and we are the only supplier in the market doing that. I do not think it is fair to characterise —

1113. **Mr Dunne**: To be fair, you had to do it.

1114. **Mr Manning**: Well, no. I will put it to you this way: 88,000 customers switched to Airtricity in the past year, which is a little over 80% of all customers in the market. According to the CCNI report, 97% of customers found that it was easy, and seven in 10 believed that they had saved money. In that type of a market, there is no evidence to suggest that we would need to bring in a sales guarantee. Rather, we felt that, in order to deliver transparency, consistency and confidence for the customer, we would introduce the sales guarantee into the market. The evidence stacks up to suggest that the customers are quite happy.

1115. **Mr Dunne**: My last point is about the North/South interconnector, which will bring in an all-Ireland electricity market. What will be the benefits to the customer? Do you see it as a priority and something that should be pushed by the Executive?

1116. **Mr Manning**: Absolutely. The North/South interconnector is a key piece of transmission infrastructure in the all-island market. Even when the market was defended back around 2005, 2006 and 2007, we were talking about how critical it was to deliver the interconnector. The main piece from a customer perspective is that, without the interconnector, there is quite significant constraint in the system, so you cannot move enough electrons across the wire. As a consequence, that costs, if I remember, and I am not going to contradict any of the numbers that

were presented earlier, but I think it was around £23 million or £24 million. That is the cost of constraint on the system to the customer. I think it was Viridian that presented that number to the Committee.

1117. **Mr Dunne**: The issue of security of supply throughout the island was talked about last week. That is certainly a risk.

1118. **Mr Greer**: It is a huge risk.

1119. **Mr Dunne**: Within Northern Ireland, there is an extremely serious risk, and it is something that we believe could potentially deter businesses, which are large consumers of electricity, from coming here. Do you feel that the Executive should push the interconnector?

1120. **Mr Manning**: Yes. If you look at the amount of generation capacity in the all-island market, you will see that there is adequate capacity to meet the needs of customers on the whole island, but because you do not have that North/South interconnector, you cannot flow power South to North or vice versa. We are moving into a phase where it needs to flow from South to North, because there is a capacity constraint coming in Northern Ireland. Unfortunately, the interconnector is not coming quickly enough, so you have to look at what conventional plant you are going to build on the system in order to meet customer demand in Northern Ireland. It is a critical piece of infrastructure.

1121. **Mr Greer**: If you look at some of the investment in the Republic of Ireland recently, you will see that it has been around data centres and some of the large international names. They have invested in Ireland for a number of reasons, albeit tax is one of them I am sure, and the amount of load that those organisations need is huge. If they thought of looking at Northern Ireland and there was a prospect in the next three to four years that the lights could go off in certain regions, they are certainly not going to spend too long considering it as an option to put their investment in when the whole point of data centres is making sure that they are available 24/7 for their customer base.

1122. **Mr Dunne**: OK. Thanks very much.

1123. **Mr A Maginness**: On that last point, if we are unable to establish the North/South interconnector, would you be supportive of derogations for conventional generation to fill the gap?

1124. **Mr Manning**: I will leave it to the existing plant on the system to have that conversation with DETI and NIAUR. If I could take my Airtricity hat off for a second and talk from a Northern Ireland economic perspective, I would say that security of supply is critical to reputation.

1125. **Mr A Maginness**: Absolutely. I have been struggling to understand the pricing and so forth. I am not going to go into all that again, but, with your permission, Chair, I will ask a more speculative question. I am not sure whether you will be able to answer it. Gas is the price-setter. What would happen if — this is purely hypothetical — there was a development in shale gas throughout these islands? What impact would that have on price?

1126. **Mr Manning**: You had your large energy users in three weeks ago. Some of those guys made comparisons between the energy costs in Northern Ireland and the energy costs in other jurisdictions. One of them was the US, where there is now a very high penetration of shale gas. That has driven the price of gas down to, I think, the equivalent of 20p a therm. As a consequence, power prices have fallen away quite significantly.

1127. **Mr A Maginness**: I understand that the American experience could be replicated in the European experience, particularly these islands.

1128. **Mr Greer**: Essentially, the island of Ireland is a price-taker. We are intrinsically linked to what is happening in the UK market. The UK market, in turn, is linked to Europe and the globe. Over the past 10 or 15 years, the UK continental shelf production has reduced substantially, so the UK market

is becoming more and more reliant on imports, whether from Norway, Europe or through LNG. Obviously, if these islands invested heavily in shale gas, it would put more gas on the system. That would go into the supply/demand balance and would therefore have an impact on the prices.

1129. **The Chairperson**: Thanks very much indeed for coming along and being with us here today. It has proven very helpful. Of course, you will send us the documentation that we requested, including an update of your assessment of the community benefit stuff.

1130. **Mr Manning**: In previous sessions and in this one, the one piece of language that I did not want to use was that it is an extremely complicated market. That is just annoying and unhelpful. However, it is. There are a lot of different factors at play. If anybody wants to sit down and go through the detail of the market to get a better understanding of it, we have offered to do that. We welcome sessions such as this. We welcome the robust debate. It is very useful for consumers, who are your constituents, to be comfortable that what is taking place in the market is reasonable and not unfair to them. That is really important. Thank you for the opportunity to be here today. If Members, collectively or as individuals, would like us at any point to go through how the market operates, we are more than willing to give of our time to do that.

1131. **The Chairperson**: We would find that very helpful. Thank you. I wish you all the best personally, too. I hope that your cold clears up.

19 September 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mrs Sandra Overend

Witnesses:

Mr Nigel Smyth Mr Colin Walsh	*CBI Northern Ireland*
Mr Declan Billington	*John Thompson and Sons*

1132. **The Chairperson**: You are all very welcome indeed. I remind you and anyone with you to turn off mobile phones. We have a recording system for Hansard, and mobile phones have a tendency to interfere with that and make the recording not as good as it should be. We do not want anyone being misinterpreted because of that.

1133. **Mr Colin Walsh (CBI Northern Ireland)**: Thank you, Chairman. We will keep it brief and skip the introductions. Thank you for the opportunity to give you our views. We welcome the inquiry, which is very necessary. In my role as a member of the council of the CBI, it is one of the things that I am particularly concerned about. We have ended up in quite a dangerous place on energy costs, particularly for business and industrial users. I intend to take a minute or two and talk about a few high-level points.

1134. **Mr Declan Billington (John Thompson and Sons)**: I have been in the CBI for, probably, 12 or 13 years. I actually joined because one of the challenges that I saw for our business — I worked for an American company at the time — was the cost of energy. Twelve years on, we still have a competitive disadvantage, and that is a threat to the businesses that are here. What we are doing today is giving you an update on where the world sits. I want to talk about the issues, and from your terms of reference, I think that the Committee understands them well. I want to talk about the costs and the cost differences that we are seeing with regard to the components of electricity cost. Then, I want to talk about the road map and the actions that the CBI is tabling to policymakers in the hope that, perhaps, we can move forward with some solutions.

1135. **The Chairperson**: Thanks very much for that. You raised quite a number of issues that were running about in my mind, and you distilled them very well. You talked about the PSO and that going up on houses and the likes. I saw a proposal for photovoltaic farms as opposed to just individual homes advertised about four or five months ago. A company is advertising for those and is, by post, seeking to establish lands that might be available at, apparently, very lucrative amounts of money. Does that apply equally? I would be thinking that —

1136. **Mr Billington**: The large photovoltaic farms are all about the renewable obligations segment, whereby it is a renewable energy and you get so many ROCs for generating electricity from photovoltaic cells. The business sector can invest in farms, generate electricity and get the ROCs. I cannot remember how many ROCs there are for it, but that is what happens.

1137. **Mr Nigel Smyth (CBI Northern Ireland)**: Most of that £8 million or £9 million a year is set aside to try to address vulnerable customers, energy efficiency, etc, on the back of that. The problem is with how it is structured. Businesses have to pay for that; large customers pay

tens of thousands of pounds towards it but are actually not getting any benefit. We fully support the need to address vulnerable customers. The question is whether our large companies that we are putting under pressure should have to contribute to that.

1138. **The Chairperson**: You referred to renewables. I think you said that, currently, many of them were expensive forms of renewables. I will take you a stage further than that: will you give me some examples of what you see as less expensive sources of renewable energy? Inevitably, that will inform our debates on why electricity costs from renewable sources should be keeping pace with other sources of energy, for example, as a result of gas hikes and the like.

1139. **Mr Billington**: I will share some thoughts with you. My business uses rather than generates electricity, but we struggle to understand the "why?" in all of this all the time, and we have asked the same questions that you are asking.

1140. **The Chairperson**: Are there any thoughts from your members on meeting the renewables deadline?

1141. **Mr Billington**: There is an issue about the pace. Pace is important, and it is about putting the infrastructure investment in place in a timely manner so that we are not paying a big premium in advance of when we need it. Those on the wind energy side believe that the pace is not fast enough. Those of us who buy electricity are concerned that we just cannot afford the price that goes on the grid at the moment. Therefore, it requires DETI and the regulator to take an overview of what is the best pace of roll-out that allows us to deliver the benefits without front-loading the costs and hurting businesses at their most vulnerable time. There is a debate between the generators who say that we need to be doing it and the users who say that they cannot afford any more costs on our system, at least for the next couple of years. It will require DETI and the regulator to take a view. We do not have the answer.

1142. **Mr Smyth**: Ultimately, we have European targets to meet in all of this. A key driver is reducing carbon. We fully support that, but, as Declan has highlighted, we need to do that at the least cost. At the moment, the argument is around the fact that there is a range of costs in renewables and, because we are putting in some quite expensive forms of generation, business has to pick up the tab. At a time when we need more competitive costs, we need to be much more alert to that. I think that the basic issue is that we need much better information around that to understand the consequences of what we are doing. If you speak to NIE as the network provider, you will see that a lot of the consequences of supporting relatively small renewables have quite a significant cost on the network, which everybody is paying for.

1143. **Mr A Maginness**: I have listened very carefully to what you have said, and it reflects very much what Airtricity said to us before the summer break. I have great sympathy with what you are presenting to the Committee on the excessive cost, as you identify it, that businesses in Northern Ireland are paying. That must be addressed. The only problem is this: if I go back to my constituents, who feel hard pressed enough because of the domestic price, and tell them that business in Northern Ireland is getting a bad deal with electricity prices, they might tell me that they are terribly sorry about that but that they are struggling as well. To put it bluntly, would there be a knock-on effect on electricity prices for domestic users if there were some reform of the system? That is a basic political point that I have to put you.

1144. **Mr Billington**: One of the recommendations is that that should be evaluated. First, gas is an example of policy where everyone is a winner: the people who are using heavy fuel oil for their businesses, the domestic sector that is using ordinary heating oil. That is an example of policy that will deliver benefits across the board. With regard to demand and the constraints on the

system and businesses stepping in and generating electricity, it will, first, be lights-out unless we do something. Secondly, is it not better that the income stream flows to businesses rather than to some of the peak generators? The domestic sector will benefit, because the SEM works in such a way that the most expensive piece of plant called in that half hour sets the price. If we avoid creating that spike through shedding demand, the domestic sector does not pay for that spike. Therefore there is an advantage. There is a policy that is a win-win for everyone, but then you are into the tough choice policy.

1145. **Mr A Maginness**: That is the aggregation that you are talking about.

1146. **Mr Billington**: That is the aggregation and demand-side management. Then there are some matters that are purely hard choices. They are about whether the apportionment is fair and whether the decision is that you are not prepared to place any greater burden on the domestic sector. That is a judgement call that needs to be made, because you are trading jobs for fuel bills. We need to know the answer. We do not have the answer. What we do say is this: can someone do a piece of work and find out what the relative shift in burden will be if we replicate what is done elsewhere in Europe, where they are facing the same questions? Is it significant? Is it painful?

1147. **Mr A Maginness**: Can I just interrupt you there? Business costs for electricity in the South are more reasonable. Can we replicate that here? You make a very good point about the common market in electricity generation, but could we replicate the system that pertains in the South without too much disruption to the current system?

1148. **Mr Billington**: The answer is that I do not know, and that is why our road map states that that is a piece of work that the regulator and DETI need to do. We strongly recommend that they do that sooner rather than later, because what you will have as a result is information to help you as policymakers to decide and to let you strike the best balance. You cannot strike the best balance without that information.

1149. **Mr A Maginness**: Are you getting a response from the regulator? I know that you presented your views to the regulator, and I know that a new boss is taking over, but do you find that you are getting some sort of response informally?

1150. **Mr Billington**: We have raised it with the regulator and with DETI, and we have raised the issue that a piece of work needs to be commissioned. There has been some dialogue between them. To be honest, we do not need dialogue; we need a report to be commissioned very quickly that gives us the answers quickly and that will allow policymakers to make informed decisions quickly.

1151. **Mr Smyth**: I would like to add a couple of things on the back of that, Chairman. We are arguing for a road map, and industry needs some idea of what is going to happen over the next two or three years. There is a realisation that this problem will not be addressed in the next number of months, but we need to know where we are going over the next few years. A number of the recommendations that we will be coming forward with — we will hopefully produce something in the next week or two — look at constraint costs, the interconnector, capacity charges and extending gas. Those will all benefit the domestic consumer.

1152. **Mr Billington**: I will make two other brief points. First, if we are an attractive place for large energy users to come, we will at least be on a level playing field with the Republic. More people would be on the grid, bearing a greater amount of costs and, therefore, we can lower the cost to everyone. The flip side to that is that if it is unattractive to business, you will have fewer people on the grid, and a number of businesses will look at self-generation because the policy burdens are so big that it is cheaper to make your own electricity. If that happens, then, by default, you have the worst of all possible results because there would

be fewer people to spread the costs and the cost goes up for everyone. That is why we need someone to take a look at this and to give policymakers like yourselves the information that you need in order to make decisions.

1153. **Mr A Maginness**: The cost of self-generation must be very high.

1154. **Mr Billington**: I generate myself. I generate 5 MW of electricity. I buy around 10% of my need from the grid, and I am looking into investing so that I do not buy anything from the grid. When gas is brought into the west, it will be a very cheap fuel source to generate your own electricity, so policymakers have to be careful that they do not so overload the transmission and distribution system that people will self-generate. Businesses are looking at that critically at the moment.

1155. **The Chairperson**: On the back of that, will you explain the distinction between self-generation and demand-side management? I should have asked you that earlier when you raised demand-side management but, now that it has come up, I am trying to get it clear in my mind. Are they two different concepts or are they one thing?

1156. **Mr Billington**: They are two facets that might actually be the same. In my case, I self-generate because I can use the heat to cook the products that I make and I use the electricity to run the factory. It works very well for me. What I am looking at at the moment with demand-side management — what the industry is looking at — are two things. Sorry; I will take a step back. When our generation capacity was not enough to meet all our needs, we used to stop manufacturing on two production lines between 4.00 pm and 7.00 pm because there was an incentive to do so, and that benefited our business. We were able to switch off 20% to 30% of our need and we were incentivised to do it. A lot of businesses running two shifts can stagger the shifts to make that happen. So you can physically cut back production.

1157. **The Chairperson**: I do not want to probe too much into the nature of your business, but can you give us a global figure on the scale of savings that you feel that your business has had from self-generation? What is the reduction of costs compared with what you would have paid if you had been getting it directly from the grid?

1158. **Mr Billington**: I am trying to remember the percentage. I have had a saving of 10% or 20% in my business, but I am not doing it in the most efficient way. There are other businesses that have invested in standby generation. I use mine, and they get capacity payments, and, once a year, they turn it on for four or five hours. It pays them to have it as backup for their own business, but then they get paid for it. You can think of all the utility companies that themselves need backup generation to supply telephones, lights and water and you then think that there is a huge amount of generation that is doing nothing and ask whether that could, in the short term, solve our security of supply issue. Could it be incentivised that those people bid it into the pool and, therefore, we get local income for local businesses? We have to create a framework where that can happen, and, right now, there is a belief that it will require a change in legislation in the North. It does not require a change in legislation in the South, and we are looking for clarity from DETI and the regulators on whether there is any legal impediment to businesses getting together and doing this.

1159. **The Chairperson**: It is important that we as a Committee establish that too.

1160. **Mr Walsh**: One of the key points to take away on this is that capacity already exists, but the capital investment and so forth has already been made, and you can utilise it if the framework is created to incentivise that. A few moments ago, you mentioned instances when we will face other crunch times, such as that relating to Ballylumford. If you are to avoid the plethora of microgeneration that Declan talked about and which causes great difficulties and challenges

to the grid, and if you are to seek to utilise larger-scale producers of electricity, the timeline to plan for, invest and build one of those sites will take you beyond 2016. I am referring to units such as Declan's, at 4 MW or 5 MW, or the company that I am involved with, which produces 3 MW. Therefore, you are kind of already out of time. If the project has not already been announced for a plus-1 MW system, I contend that it will not happen this side of about 2016.

(The Deputy Chairperson [Mr Flanagan] in the Chair)

1161. **The Deputy Chairperson**: Gentlemen, you are very welcome. Patsy has had to nip out to engage with some of his constituents. He will be back in 10 minutes or so. Can I just clarify who you are speaking for? You are here representing the CBI, and, obviously, you represent a large range of businesses of all shapes and sizes, but you also represent some of the generators. Are you here, solely representing the wider membership base?

1162. **Mr Smyth**: Not at all. We have an extremely wide membership, and that includes everyone from network users, generators, and suppliers, as well as consumers. Clearly, the vast majority of our members are consumers and users, but that is one of the strengths of the organisation. We consult them and come to a view, so we represent all of those members in our proposals. This response was widely consulted on and supported, as was the written submission and the road map that we will, I hope, produce over the next week to 10 days.

1163. **Mr Billington**: It is probably also worth adding that the users of energy are concerned that they may not be here in a couple of years because of the price. The generators of electricity are concerned that they may not have customers in a couple of years, either on the grid or the generation side. Although we may argue sometimes about regulated returns and things like that, there is a consensus that it is better to have a framework for energy in Northern Ireland that encourages inward investment and creates a level playing field, so that we grow and overall costs are being spread over many more users, rather than the reverse.

1164. **The Deputy Chairperson**: I suppose that most of those things are thrashed out in the large energy users' forum. Is that so? Is that where you mainly debate those issues?

1165. **Mr Smyth**: There are various forums. We have a specific forum that involves not just large users but small users. There are some relatively small companies that are energy intensive users, particularly in the plastics sector. Likewise, there are other large companies which are quite low energy users. There are other groups out there too, but one of our strengths is that we have all these different organisations from different parts of the whole energy system. It is dominated by users but we feel that, because of that, we can understand what the issues are. As Declan has said, it is in everyone's interest to create a more competitive environment, attract more investment and grow the economy to create a win-win situation. It is very complex and there are significant challenges, but we believe, as we have tried to highlight, that a number of actions can be taken over time that could help to create a more competitive environment.

1166. **Mr Billington**: It is also fair to say that we decide on a position after we consult with all of our membership, so that we have a consensus before we table anything.

1167. **The Deputy Chairperson**: Can I suggest that the CBI considers extending an invitation to the members of the Committee to attend a forthcoming meeting of the large energy users' forum, so that they can sit in and listen to what is being said by the membership of that forum? I will leave that suggestion with you and see what you think. As for the single electricity market, is the CBI in favour of its further development? Do you think that

it is working, successful and good for society?

1168. **Mr Billington**: I think that the SEM in Ireland is in a better place than the energy generation market in England. There will be issues in a couple of years. One issue that we have is that we cannot access the equipment that is already in the Republic. It is in everyone's interests to use the most efficient equipment all the time, because the price, north and south of the border, will drop if we do so. The SEM has proved itself to be a good generator; the problems are with transmission and distribution and, largely, with the policy that attaches itself to the charges on transmission and distribution. There are different policies north and south of the border.

1169. **The Deputy Chairperson**: Is that presenting any problems, apart from the fact that there are then disproportionate charges for businesses in the North that are trying to compete with businesses in the South? Is that the only problem, or are there other problems?

1170. **Mr Billington**: Put directly, you will find that we will lose the opportunities for database server centres to the South, because its energy is cheaper when it comes through the door. You will lose those job opportunities. I have not considered the wider implications, so I cannot comment on that. I would have to go away and think about it to be honest with you. Right now, a distortion is being created, not because of the true economics but because of different policies that reign North and South.

1171. **The Deputy Chairperson**: If you go away and think about it and come up with something, will you feed that back to the Committee as part of the ongoing review?

1172. **Mr Billington**: Yes.

1173. **The Deputy Chairperson**: You mentioned keeping the lights on and the problems with security of supply. The problem is that it has been looked at in a context of just the North and not on an all-island basis. That is coming in a couple of years. In your view, is the solution to put in additional generation capacity in the North or to get interconnection across the island up and running?

1174. **Mr Billington**: To put extra generation in the North when it already exists in the Republic is simply to add an additional cost to the overall asset base, and somebody will end up paying for that. The regulator produced a report on security of supply in July this year, and it has a very good graph about the total capacity in Ireland, and, although it drops as old plants fade out, there are still more than enough. Why would we add costs that have to be recovered in the pricing when, if we put an interconnector in, we can better use the assets that are there and the price charged by the people who own those assets will drop because they are able to use them more times during the year?

1175. **The Deputy Chairperson**: I presume that that was a rhetorical question.

1176. **Mr Billington**: Yes.

1177. **Mr Smyth**: To reinforce what Declan said earlier, there is a lot of capacity out there in companies through backup, and, if the market was working properly or we had the right incentives, we should be trying to encourage that to come into the marketplace to hit this shortage in around 2016. Strategically, the priority is to set up a North/South electricity interconnector. That has to go through a planning process, but it will need strong political support to make sure that we deliver. We understand that it will not hit the 2016 target. However, we need to go ahead and do that for the sake of efficiency in the market. The fact that we do not have that is costing consumers on the island about £30 million a year, which will only increase because of the constraints caused by wind. As wind continues to increase, the costs of those constraints will get higher, and, ultimately, all consumers, both domestic and businesses, will pay for that.

1178. **The Deputy Chairperson**: There is strong political support for the interconnector. There are differences in how some parties think it should be constructed

but, hopefully, that will be resolved in the time ahead. Is continuing resistance to further all-island cooperation in the energy field and in energy policy causing a problem?

1179. **Mr Billington**: We are no longer looking at an all-island market. Europe is driving us to a regional market, and that means more interconnection to the mainland and also to France and places like that. It is not on our radar to consider any issue apart from a regional market. France has nuclear power, and nuclear power is on 24/7. We do not need to have it in our backyard to take advantage of the fact that it is very cheap energy; we just have to have access to it. It is amazing how much of Europe is run at night from France. At the moment, in theory, when France supplies electricity, it has to go all the way up to Scotland before we could get access to it, whereas a straight interconnector from the South of Ireland to France would enable access to cheap energy. The regional market provides the next opportunity, and we are looking that, but, right now, I am worried about the next two to three years.

1180. **The Deputy Chairperson**: There is some talk about DETI trying to move the North closer to the system that exists in Britain and away from the system in the South. In Britain, they are looking to move closer to the system in the South. Do you have any information on what that is about?

1181. **Mr Billington**: I do not. We need the Moyle interconnector, because it gives us access to cheaper generation costs than England and, even if the prices go up there, there will come a point when we will be able to sell them wind. So, with the second interconnector, security of supply gives us an opportunity, and the more wind we sell, the more it will reduce our costs in Northern Ireland, because the money paid for using the interconnector comes back to reduce our transmission and distribution costs. To answer your question, I am not aware of the specific issue you raised, but I know that, under European regulations, the United Kingdom, the Republic of Ireland, France and places like that are looking at a common market for energy where everyone has to live by the same rules.

1182. **Mr Smyth**: My understanding is that the regulator that is driving a lot of that. There are various ongoing consultative groups. I was surprised by your comment; that is not what I would have perceived. Ultimately, this is about integrating more with bigger markets. At the same time, we need to ensure that those constraint costs or imperfection charges are minimised. We need a strategy to reduce those costs. It is in our interest to have access to as large a market as possible.

1183. **The Deputy Chairperson**: Gas to the west was described as a win-win solution for everybody. However, the fact that gas to the west will further increase electricity costs for everybody is not a win-win for everybody.

1184. **Mr Billington**: Sorry; in what sense?

1185. **The Deputy Chairperson**: The extension of the gas pipeline will increase transmission and distribution costs, thereby putting up everybody's electricity prices because it will cost gas generators more to produce electricity.

1186. **Mr Billington**: First, gas going into the west will displace heavy fuel oil and domestic heating oil. Anyone on the pipe network in the domestic sector will find a saving of, I think, around £700 a year if they are able to access gas. Businesses will no longer use heavy fuel oil to heat water to wash down their facilities. They will use gas, which is much more efficient. Our carbon footprint will also drop dramatically, and that is a plus.

1187. **Mr Smyth**: We are conscious that we cannot extend the gas network everywhere because there are additional costs. Our understanding is that the Executive may set aside an amount of money but, at this stage, I do not know whether we can answer that question because it will be put out to tender. It is clear to us that there are areas, particularly in the mid-Ulster region, where that could be done at a

modest cost and there is a significant load. It becomes more questionable as you go out into the very rural west. At this stage, we cannot answer that, but we would be sensitive to the need to be careful that we do not place an additional burden on all gas consumers — or, at least, not an overly significant burden.

1188. **The Deputy Chairperson**: One phrase that you used about electricity generation was "expensive renewables". Are you talking about the cost of generating electricity from renewable sources or the price that renewable generators are paid?

1189. **Mr Billington**: I am talking about the subsidy that they get to deliver a megawatt of renewable electricity. Indirectly, one would argue that it is expensive because it takes that size of a subsidy to make it happen, but the bottom line is that, if you have a choice of renewable sources and some require a £4 per megawatt incentive and some require £16, it is sensible for all users of energy that we encourage the £4 per megawatt solution.

1190. **The Deputy Chairperson**: Is the big problem coming from the ROCs and the subsidies or from the fact that some renewable generators are bidding into the single electricity market at zero cost and getting paid the highest price in the market at that time? Is there a need for further regulation of how generators are paid for generating?

1191. **Mr Billington**: I will try to answer the question in two parts. First, the expense of renewables is generated by the fact that it is sub-scale and not efficient. I am referring to the size of the ROCs needed to be paid to incentivise them. As for wind generators bidding in at nil, when the wind blows you are better getting as much electricity off the grid as possible. If they bid 100 MW more because the wind is blowing, that avoids an expensive 100 MW plant being switched on. So, yes; they get a premium because, effectively, they generate for free once they have made their capital investment. However, everyone benefits because you displace the oil distillate that was going to be burned to meet demand, which is very expensive and sets the price.

1192. **The Deputy Chairperson**: We received a letter today from someone from whom we had heard previously, but I cannot talk to you about it because it is confidential. However, in part of the letter, the person talks about how their retail business is regulated and has a fixed profit margin. The person gives percentages and goes on to talk about the profits made from generation but does not talk about the percentage profit that their business has made. Even though the person disputes the figures that we outlined, they have not put figures on the table for us. Is there a need to set a fixed profit margin for electricity generators so that when they bid into the market, that is the price at which they are allowed to bid — their costs plus X% — to make it worthwhile for them but fair for consumers?

1193. **Mr Billington**: Twenty or 30 years ago, Margaret Thatcher decided to offer what were called "golden contracts" to the electricity market when it was privatised. That meant that they were guaranteed a certain price for what they did. They then engineered a lot of inefficiencies out of the process and made a great deal of money. That is because they had been given a fixed price, and there was never an ability to claw back the innovations that reduced their cost.

1194. **The Deputy Chairperson**: Did the recent dispute between Phoenix Gas and the Utility Regulator, which led the Competition Commission to determine that some of the savings should be passed back to consumers, not set a precedent, not similar to what Maggie Thatcher did but more in favour of consumers?

1195. **Mr Billington**: I was a correspondent to that and have my own views on the matter. The Competition Commission decided that it was better to allow Phoenix Gas to have what it wanted. It did so because of this concern: if, in Northern Ireland, contracts

and agreements were made and subsequently challenged, why would anyone want to invest in a country where they thought that they understood what the returns of their investment would be, but then, suddenly, the rug was pulled from under them?

1196. **The Deputy Chairperson**: The decision that the Competition Commission took was still more favourable for consumers than that which Phoenix Gas had wanted at the outset.

1197. **Mr Billington**: That is correct. There was some benefit to consumers of the referral to the Competition Commission. I am not quite sure what the question is. The issue —

1198. **The Deputy Chairperson**: Neither am I.

1199. **Mr Billington**: The issue in question in the Phoenix Gas dispute is that there was a dispute between a regulated body and the regulator. That went to the Competition Commission, which took a decision for the greater majority of people in Northern Ireland, and we accept that. The challenge is to try to avoid creating uncertainty for bond holders who lend to these companies so that we can borrow cheap money that works its way through to cheap energy costs. So we need to have a good constructive working relationship between the Utility Regulator and the industry. However, at the same time, we need to make sure that the industry is always challenged to drive down costs.

1200. **The Deputy Chairperson**: It would not do for somebody who took a gamble to make a loss on their investment the odd time.

1201. **Mr Billington**: Currently, a price determination is based on a planned cost. If there are some benefits for those five years, they flow to the company and have to be passed on to users. So companies are incentivised to do better all the time. The flip side of that is that, if they run into a problem, they have to consume that problem themselves until the next price regulation.

1202. **Mr Smyth**: Some relatively new generators on the island of Ireland, which were built within the past 10 years, have been overtaken by other generators. They have gone down the pecking order. So there are significant risks. You are looking at hundreds of millions of pounds of investment on the back of that.

1203. **The Deputy Chairperson**: I want to clarify something. In answer to Alban's question about whether you wanted the cost that large users pay passed on to smaller business users and domestic customers, you said that you wanted the regulator and DETI to do a bit of work on that.

1204. **Mr Billington**: You pre-suppose that we want the cost to be passed on to the domestic sector. We want to understand why the situation in Northern Ireland and England differs from that in the rest of Europe. We also need to understand the consequences of adopting any other model. It does not go beyond that. I think —

1205. **The Deputy Chairperson**: Are you comparing that just with what happens in the South?

1206. **Mr Billington**: The benchmarking paper produced by the regulator before the summer shows that, across Europe, we are the second most expensive for large users, but our domestic sector is one of the cheapest. If you have the same generation market, how can you have a situation in which large users find it very expensive to be here, yet it is the best place in Europe for domestic users to buy electricity? Something does not make sense, and it needs to be understood.

1207. **The Deputy Chairperson**: Was our domestic price not somewhere in the middle?

1208. **Mr Billington**: From memory, it could be middle or lower-middle, but it is significantly different. Also from memory, it is also cheaper than in England.

1209. **The Deputy Chairperson**: Manufacturing NI provided us with a transcript of a debate in the Oireachtas, in which the Minister for the Environment said that the Government wanted to change how

businesses were charged. They wanted to make domestic customers pay more of the cost in order to subsidise businesses. That is against the regulations set out by Europe.

1210. **Mr Billington**: Agreed.

1211. **The Deputy Chairperson**: I presume that you are not advocating that we do that.

1212. **Mr Billington**: No. It is for policymakers in the Republic to answer to Europe if it believes that they are not following European policy, which is that charges should be cost-reflective. So we do not advocate anything like that. We are saying that the Irish Government decided that creating jobs was so important that they were prepared to pass a burden on to consumers. They struck a balance that every politician has to strike. All we are saying is that when you take decisions about how much renewable energy to put on to businesses and how much the tariffs should be, the first thing is to establish the cost-reflective charges. Maybe the charges that we have in Northern Ireland are right. If they are not right, we should establish whether there is anything that we should do about it or whether there is no appetite to do anything about it. I keep coming back to the same thing: let us get the facts on the table quickly and make a judgement. However, the policymakers are the ones who will make the judgement.

(The Chairperson [Mr McGlone] in the Chair)

1213. **Mr Dunne**: I think that most issues have been covered. You have given us a very informative briefing on self-generation and opened our eyes to a lot of the issues. Are you saying that gas will be used as a means to generate electricity?

1214. **Mr Billington**: Some 15 or 16 years ago, heavy fuel oil was used in generators to generate electricity between 4.00 pm and 7.00 pm, and it paid people to use heavy fuel oil between those hours to avoid the high energy costs. Going forward, gas is a much cheaper source of fuel, so there is always a magic balancing point at which businesses will ask themselves this question: "If I look at the five-year plan for my energy costs supplying from the grid, what would it cost, and what would be the benefits if I had gas to do that?" Gas generators will never match a gas power station, but, if you add a lot of transmission and distribution costs, they would do it, but not 24/7; they would just target the most expensive times of day. You are more likely to use gas generation if you can use the waste heat to do something else. It is not a slam dunk. A lot of businesses would find that unless they could use the heat for something, it would not pay to generate the electricity, but as you go on and load more costs —

1215. **Mr Dunne**: Is that combined heat and power (CHP)?

1216. **Mr Billington**: CHP is an opportunity if you have gas and need heat 24/7. However, in answer to your question, it depends on the individual circumstances of a business. Some businesses need hot water for seven hours a day. It would not pay to have CHP for seven hours a day unless you kept loading the energy costs, in which case it might. So there is a lot going on. I am simply saying that a cost will reduce for people in Tyrone and the west, which may create opportunities for them to do something that they could not previously afford to do. It will not be a matter of everyone rushing to self-generate; some businesses that could not do it before will be able to do it now. The higher you raise the bar — the bar being the transmission and distribution costs — the more of them can make that switch.

1217. **Mr Dunne**: It is not the case that, in the main, in the greater Belfast area, large businesses and commercial users have switched to gas where it is available?

1218. **Mr Billington**: I am aware of three large generators. All three, and my organisation is one of them, have CHP, but it works only because all three need the heat. The Royal Group of Hospitals has CHP, but it needs to heat wards for patients 24/7, so you can see how it works there.

1219. **Mr Dunne**: Generally, however, they have switched.

1220. **Mr Billington**: Businesses will switch from heavy fuel oil, but no one will generate electricity for the sake of it unless the tariffs are very good.

1221. **Mr Dunne**: I mean just for general use.

1222. **Mr Smyth**: For general heating, there has been a good take-up.

1223. **Mr Dunne**: That is to be welcomed.

1224. **Mr Billington**: Yes, hugely so.

1225. **Mr Dunne**: Gas has had an impact, especially in the greater Belfast area.

1226. **Mr Billington**: From memory, 50% of the population of the greater Belfast area are on gas, each saving hundreds of pounds a year. With something like gas, you want to encourage as many people to move to it as quickly as possible. It solves fuel poverty, reduces the carbon footprint and you spread the capital expenditure on pipes over many more people.

1227. **Mr Smyth**: The more people on gas, the more the cost is reduced.

1228. **Mr Walsh**: The point is that people are switching for process heating — in a hospital environment or an industrial operation that requires heat for its process. Only a few of the many food businesses have crossed the line to generate because, as Declan said, it pays to self-generate only if you also utilise heat.

1229. **Mr Dunne**: The Committee has been talking about trying to encourage uptake, especially in the domestic market in the greater Belfast area. Where the system exists, it is important that people use the opportunity. We are trying to get the Department for Social Development (DSD) and DETI to introduce incentives, which is difficult because of competition and so on, but we have been trying. Thanks very much.

1230. **Mr Walsh**: You are welcome.

1231. **The Chairperson**: I am conscious that we have another submission to come and that another Committee needs the room at 2.00 pm. So I ask members and witnesses to be succinct in their questions and answers. Thank you.

1232. **Mr Agnew**: I will try to be brief. Thank you very much for your presentation. As Mr Walsh said at the start of the meeting, this is a complex area. Every time we get a presentation, I learn a bit more.

1233. **Mr Billington**: I am saying that when you try to understand the burden of cost, there are two elements: the cost of generation and the cost of distribution. That is the first set of costs. I refer to those as the base, or real costs, of electricity. Then, there are policy costs, which are there because there is a belief that these are the right things to do. Renewables, for example, are the right thing to do, so how do we manage to encourage renewables? So there is a policy for ROCs and so on. We are saying that when you start to add up the policy costs incurred in achieving an objective, you find that you need to be careful that they do not start to frustrate one of your other objectives. We want inward investment, for example, but we are too expensive: our policy costs on renewables are such that people who need a lot of electricity would not want to come here. So I am not arguing for free marketeering or anything; I am saying that a significant proportion of the difference between us and the Republic is the policy on renewables. In the rest of Europe, there is an issue with apportionment, which would, probably, boil down to a policy issue. First, understand the real cost, and, secondly, understand the policy. All we are saying is that policymakers, therefore, control some of the key levers that could add a reduced cost to the energy market in Northern Ireland.

1234. **Mr Agnew**: It works both ways. Another policy driver has been to extend gas to the west. With that comes a £30 million-plus subsidy. So it is not always the case that policy adds cost.

1235. **Mr Billington**: Agreed.

1236. **Mr Agnew**: You talked about expensive renewable sources — again, it comes down to this question of policy — and you referred to a lot of the small-scale renewables. I argue that there is democratisation of energy production there. That is policy, too, but I see it is as positive. There is also tidal energy, which is, of course, large-scale generation. I think that the current proposals are to bring 200 megawatts on to the grid off the north coast. If you will pardon the pun, that is only a drop in the ocean of what we could generate. Tidal energy is considerably expensive. I cannot remember exactly, but I think that it is up around the 4 or 5 ROC level. Is there not a danger that, if we put all of our eggs in the less-expensive-renewables basket, we risk not only the diversity of supply; we risk not driving the innovation that we need in renewables. Indeed, once upon a time, the capital costs of wind energy were prohibitive, and, again, policy drivers were required.

1237. **Mr Billington**: To be brief, the short answer is yes. My point is that policy-makers need to take a view on whether, in the long term, small generating plants will be effective. You are quite right in saying that, initially, wind energy was expensive. Technologies advanced, and it became less expensive. That is reflected in ROCs.

1238. **Mr Agnew**: Is that where you would draw the line? For you, is it not so much the distinction between expensive and cheap but what represents positive investment?

1239. **Mr Billington**: I would draw the line by ensuring that we do not spend more than we need to in order to encourage the renewables that we want. We must not spend so much more up front that the businesses paying for it today will not be here tomorrow to benefit from it.

1240. **Mr Agnew**: A brief question has occurred to me. We talked about getting gas to the west, and you stressed the importance of that. We discussed the importance of the Moyle interconnector. Is there any reason why we could not, or should not, put public subsidy into that infrastructure? Obviously, any investment in infrastructure tends to be passed on to the consumers. With getting gas to the west, we have reduced the cost with a subsidy. Is there any reason why we should not do something similar with the Moyle or North/South interconnectors?

1241. **Mr Smyth**: When the Moyle interconnector was created, and I stand to be corrected, European structural funds were available for it. That may have added something. I cannot answer the question about where it stands at present. There have been problems with it — quite expensive problems involved in creating them. So I do not know what may or may not be available on the back of that. I would be surprised if any European funding could be used.

1242. **Mr Billington**: I think that the principle is that we need to go back to where it was: 500 megawatts. I have not thought about the mechanism, and, therefore, to be honest with you, I cannot express a view on it.

1243. **Mr Walsh**: May I answer your question in another way? Declan very articulately described how there is an all-Ireland market and the chance to move to a larger market. If we leave ourselves restricted from being able to trade in the market, we are in exactly the same circumstance as any other economy that wants to become introverted. The attitude is, "We will just look after ourselves, and we can neither buy nor sell, whether it be food, goods, services or electricity." Every time you create a barrier around your market, you limit your ability. On the days when we have lots of wind, we cannot sell it; on the days when we need what they have, we cannot get it. So our costs can go only one way.

1244. **Mr Agnew**: For clarity, let me say that I absolutely support greater interconnection. How we achieve that definitely needs consideration.

1245. **Mr Billington**: I think that the answer is that, if there appears to be a barrier to a quick resolution, and that barrier is

money, subsidy should be considered. However, if the barrier is not money, we should just get this sorted as quickly as possible.

1246. **Mr Anderson**: I will be brief. I thank the gentlemen for their presentation.

1247. **Mr Billington**: Actually, I want the facts. The facts have to be debated because it may be that there is not a great deal of value to be achieved. We have two scenarios: fewer businesses buy our energy because they are not here or create their own, and that is a disaster for everyone; or more businesses come here and buy energy, in which case the cost drops for everyone. We need to understand whether we have struck the right balance, as required by Europe, and, if not, what the consequences are. Then you can have the debate.

1248. **Mr Anderson**: I think that you said that our electricity was 25% more expensive than that in the Republic.

1249. **Mr Billington**: We are more expensive by about £13 per megawatt, of which about £5, by our analysis, is to do with a different apportionment model.

1250. **Mr Anderson**: That is what I am trying to get at. If this particular renewable levy, which is £6, were taken out, how would the price then compare with that in the Republic?

1251. **Mr Billington**: There is a gap of £13 between our price and that in the Republic. Remove that £6, and you have a gap of £7. Of that £7, roughly £1·50 is PSO. You must question whether business should be paying for a subsidy from which only the domestic sector benefits. The final and most difficult decision is whether we want to address the remaining £5. If we do, we might encourage more businesses and spread the cost; if we do not, we may lose businesses and jobs. How much of the £5 could be saved: is it 50p or £5? Really, someone should do the analysis and tell us before we get too excited about it.

1252. **Mr Anderson**: So it is the analysis that you want.

1253. **Mr Billington**: Of the what?

1254. **Mr Anderson**: Of the extra cost.

1255. **Mr Walsh**: On energy?

1256. **Mr Anderson**: Yes.

1257. **Mr Smyth**: It varies greatly from sector to sector.

1258. **Mr Anderson**: Do we not have any idea?

1259. **Mr Smyth**: Typically, in a commercial office or building, energy, or electricity, accounts for around 0·3% of costs. In manufacturing, it starts at anything between 1% and 5% and rises to probably between 15% and 20% for energy-intensive companies, and there are relatively few of those. That is as a percentage of turnover. For a company making a 5% or 8% margin, all of a sudden, this is a very significant proportion. Ultimately, these companies compete on the basket of costs, and energy is a significant part of that cost in manufacturing.

1260. **Mr Billington**: I will just add that the companies for which energy is a much greater proportion of cost than Nigel outlined are those that are not here today for precisely that reason.

1261. **Mr Walsh**: Another way to look at it is that there is a spectrum of businesses. There are some whose energy costs are quite low because of the nature of their activity, so their sensitivity to energy costs is not very material. Even if energy costs were increased, those guys would not move. For jobs in serviced offices and such, electricity is a tiny component. At the other end of the spectrum is, for example, intensive food processing that involves a lot of heat. Dairies, for example, which may operate to low margins in a very competitive market may be low margin and very competitive, are right at the other end of the spectrum, and a very little bit can pop those guys off the edge. In fact, I contend that the recessionary environment over the past couple of years has restrained some of those companies in making the decision to shift production. They have not been

able to finance a move to somewhere where they would be more economically viable. As the economy continues to improve, we will see some of those guys start to walk.

1262. **Mr Anderson**: We could have this debate all day. You are quite right, Declan, that a lot of issues have to be taken in the round to see whether what people are suggesting would be viable or otherwise. I know that we are pushed for time, so I will leave it at that.

1263. **The Chairperson**: Gentlemen, thank you very much indeed. That has proven a very useful session. I apologise that I had to leave for a while to attend to some other business. Thank you for giving up your time. I found the session very useful and helpful. Inevitably, we will revisit many of the issues in more detail, and I hope that there will be some product at the end of the process, which is the important bit. I look forward to seeing you again, perhaps in a different guise or in different circumstances.

19 September 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mrs Sandra Overend

Witnesses:

Mr Robin McCormick	*Single Electricity*
Mr Brendan O'Sullivan	*Market Operator*

1264. **The Chairperson**: The next item on the agenda is the electricity policy review briefing from the Single Electricity Market Operator (SEMO). Members have a briefing paper from the Assistant Assembly Clerk and a copy of the presentation from SEMO.

1265. **Mr Robin McCormick (Single Electricity Market Operator)**: First, thank you for the opportunity to talk to the Committee about the single electricity market (SEM). It was a very interesting project when it was first considered back in the mid-2000s, and it was quickly grasped as an opportunity to deal with a number of issues that were arising in the South of Ireland and the North of Ireland. There was a security of supply issue arising, in that there was insufficient generation capacity on the island looking forward, so there was a need to develop a market solution to ensure that we had sufficient generation.

1266. **The Chairperson**: Excuse me, Robin, but I have a lack of awareness on this. What does the red area indicate? I know what the blue area represents, but the red area indicates MSQ. What does that stand for?

1267. **Mr McCormick**: That is the system demand. The highest profile is the system demand.

1268. **The Chairperson**: What is the distinction between the blue and the red?

1269. **Mr McCormick**: The blue is the system marginal price. It is read from the right-hand scale, and the demand is read from the left-hand scale. I have probably piled a lot of things into the one graph.

1270. **The Chairperson**: That is grand. Thank you.

1271. **Mr McCormick**: I will now talk about the scale of the market. Some questions have been asked around the capacity mechanism, so there are a number of different elements to what people pay in their bills as a result of the market operating. The energy component is the system marginal price as is worked out through customers' bills. The capacity element is the payments that are made for generators that are available and open to operate on the system.

1272. **The Chairperson**: Thanks very much for that. We hear consumers, be they business or domestic, asking how we lower the cost of electricity. Do you have any ideas?

1273. **Mr McCormick**: Ideas as to how to reduce it?

1274. **The Chairperson**: Yes, to reduce the cost of electricity.

1275. **Mr McCormick**: If the package of measures that is in place were working effectively, that would result in a reduction in prices or a downward pressure on electricity prices.

1276. **The Chairperson**: What measures are you referring to?

1277. **Mr McCormick**: For example, the policy to reach the 40% renewables target. We identified that through increased penetrations of wind, better trading

on the interconnectors, which brings downward pressure on prices, and by asking what things are preventing or making it more difficult for those wind numbers to increase or for us to reach the target. The answer would be the delivery of infrastructure.

1278. **The Chairperson**: OK, thanks for that.

1279. **Mr A Maginness**: Thank you very much for a detailed presentation. We have the single electricity market in Ireland, and it is now proposed to move to a European market or, certainly, a regionalised European market, I presume. Given the pressures that there are on prices and so forth, what effect do you estimate that will have on supply and price?

1280. **Mr McCormick**: I do not think that an exercise has been done to capture the effect, whether it is 5%, 10% or whatever, but the evidence we have from bringing Moyle and the east-west interconnector (EWIC) into commercial operation is that you have access to a larger market. If you make the trading arrangements efficient, you want to see traders use those opportunities, which would be to everybody's benefit.

1281. **Mr Brendan O'Sullivan (Single Electricity Market Operator)**: At the moment, the European work is going in the direction of trading across the interconnectors, either in the GB market or the SEN market. The whole coupling concept is a pan-European concept, which technically, on paper, means that you can actually start trading with traders in France and all over Europe with the existing infrastructure that is there. Obviously, the more interconnection that exists, the more flows can happen and the more efficient it becomes. At the moment, it would mean that the existing interconnectors could be used to import cheaper energy from mainland Europe and not just be limited to what is in the UK.

1282. **Mr A Maginness**: The previous submission by the Confederation of British Industry (CBI) indicated that it felt that the cost of generation was being lowered as a result of the single market. Do you agree with that?

1283. **Mr McCormick**: The system marginal price has been reducing because of the mix of generation that we have at the moment. I think the model means that more efficient generation will want to come into the market and less efficient generation will want to move out of the market. A number of generators are likely to move out of the market over the next few years, because of the age and efficiency of the plant and because of the additional costs that they need to pay out to allow them to continue to comply with emissions legislation, etc. I think that the market model allows for new entrants to come in and, from a customer perspective, improves prices. That will obviously have the effect of pushing out people who simply are not able to compete. So, the model works.

1284. **The Chairperson**: Mr O'Sullivan, I just want to pick up on your point about tapping into other EU markets. At a practical level, what can or is preventing that from happening?

1285. **Mr O'Sullivan**: At the moment, we are not connected to any European markets. We literally have an isolated market. The cross-border flows between ourselves and adjacent markets are determined centrally by the SEN.

1286. **The Chairperson**: Do you mean that — just to get this into my head, because I am not a technical person at all — there is no interconnector between the European mainland and Britain?

1287. **Mr O'Sullivan**: No; I mean from a market perspective. For instance, if I were a trader in France and wanted to send energy to Ireland, what I would have to do is set myself up in England and Ireland so that I could ship my energy, first of all, from France to England and then to Ireland. In the future mechanisms, what will happen is that all regions will go into a central market coupler, which, to all intents and purposes, is similar to what we do in the SEM at the moment except on a European level. So, all the cross-

border nodes will be represented in that. Effectively, somebody bidding energy in Ireland could actually bid it into that central coupler. As long as the energy can flow across all the individual interconnectors, it will end up in a merit position. You could see a surplus on the island of Ireland serving a shortfall in Italy, for instance.

1288. **The Chairperson**: Just to take that a stage further, where is that at the moment? Is the EU taking the initiative on that? How is that happening?

1289. **Mr O'Sullivan**: A couple of initiatives are under way at European level. There is the development of what are called network codes, which will be binding legislation probably some time next year; the European Commission will pass those into law. From a technical perspective, the north-west Europe group, which is made up of system operators from Scandinavia, Germany, Denmark, France and the UK, is developing a pilot scheme. It is running a piece of software whereby those countries are pooling all their residual cross-border trades into one mechanism. It is determining all the individual flows of energy around those areas. That pilot scheme is expected to go live at the end of the year. As it goes live, an additional pilot scheme between France and Spain will join in, and others throughout Europe will join in at different stages. Our timeline in Ireland for joining in is 2016. That is on the basis that most of Europe operates decentralised bilateral-contract-type markets, so they are already working in the same area. We are in a centralised pool market, which is quite different. We have to take the time to reform the SEM arrangements to get to a point where we can more easily plug into this.

1290. **Mr Frew**: My question is not so much on affordability but more on the security of supply. Everybody talks about 2020 targets and one thing and another to do with renewable energy. I am more focused on 2016, and the emissions regulations from Europe. Are we heading for an energy crisis? I will leave it at that.

1291. **Mr McCormick**: No headlines, please.

1292. **Mr Frew**: With all of the weaknesses in our system at present, including the North/South interconnector not being there and the Moyle interconnector being at 50% capacity, and with all of the long-term plans for renewable energy, we do not even seem to be looking at additional or new large-scale generating plants. Should Northern Ireland be looking at that? We talk about connecting to Europe, but if we cannot even connect to Ireland, how will we ever be able to make it to Europe?

1293. **Mr McCormick**: The market is there to incentivise generators to come, whether they are conventional or renewable generators. They have the opportunity of connecting anywhere on the island that works for them. There have been a number of new generators since the early 2000s. There are new units at Ballylumford, there is a new unit at Coolkeeragh and there are additional new units in different places in the South. That has led us to the place where there is a sufficient number. So, there is a sense that the incentive for the generators has delivered. The problem is that we have not followed that with the infrastructure investment. No one would want to build a generator in a place where they were constrained from operating fully in the market. We have to get the two in balance.

1294. **Mr Frew**: I have a final question, Chair. Add into that mix the exploration for gas in Fermanagh and the exploration for oil in the Rathlin basin. How much impact could that make to our supply needs and demands, considering that we are talking about an increase in demand post-2016.

1295. **Mr McCormick**: From an infrastructure perspective, we probably have been helped by the reduction in demand that we have seen over the past number of years. That reduction has come from the economic recession, so the need for that infrastructure at the pace that we had envisaged has helped us a little. We still need to pursue the infrastructure side. If gas extraction in Fermanagh

were to come to fruition, we would have to look at the magnitude of that and at whether it is a domestic and commercial gas supply and whether there are generation opportunities. We would have to look at what size those would be. At this stage, we have not had any connection requests either from the gas folk or the oil folk.

1296. **Mr Agnew**: Thank you, gentlemen, for the information so far. Looking at the system marginal price, we talked about the fact that greater penetration of wind drives down the price but that gas tends to be the price setter. Is penetration across the island of coal or oil insignificant at this stage, or where do they come into the spectrum of price setting?

1297. **Mr O'Sullivan**: On price setting of the wholesale price, they have pushed very far high up the merit order, so they are probably not setting the price in any shape or form. The curve that is in Robin's presentation shows that a huge amount of the volume is based on gas. The demand on the island has to go significantly high or be coupled with significantly dropped wind for the price to go into that space. Earlier this year, it probably did around the end of March. There were a couple of high price increases in the South, and those were driven by really compressed wind and a cold snap, which drove higher demand. It is an unlikely event at this stage. They are more driven on the constraint side, where some of these units still have to be run for local transmission constraints. So, they are contributing to that larger constraint number rather than the actual wholesale price that you are seeing.

1298. **Mr Agnew**: In the SMP trends, we see demand going down but price increasing overall. It would be fair to say that that was down to gas prices. When we look at the factors, such as the big snow demand and the very cold spring, are those gas prices international prices or is that a local price?

1299. **Mr McCormick**: It would be impacted by international prices.

1300. **Mr Agnew**: So, the international price of gas is still rising as a trend, despite the exploitation through fracking and that type of thing, which, we were told, would bring prices down. Despite that, to date, the price has not come down.

1301. **Mr O'Sullivan**: It has not come down at present. The prevailing trend that we see when we do analysis — we do a regular analysis of the shadow price against the prevailing gas price in the UK exchanges — shows that they are mirroring each other very closely.

1302. **Mr Agnew**: I want to look at renewables. Going back to wind as being a downward pressure on price, has there been an assessment of how that interacts with the impact of infrastructure costs of renewables? I hear one presentation and I think that wind drives down price, which is great, and then I hear another presentation that says that the investment that we need in the grid infrastructure will drive prices up, that wind is the root of all evil and that we should not have anything to do with it. *[Laughter.]* I am paraphrasing. How do those two things interact? What kind of scales are we talking about when we consider the downward pressure on price from the unit cost and the increased pressure on price from the requirement for investment in the grid?

1303. **Mr McCormick**: That is probably a difficult set of elements to try to pull together. The policy and the support mechanisms were set, the market was established and the belief was that the market would take all those factors into account and decide what it was going to run for. We had a discussion about tidal power versus wind or whatever, and the market has chosen wind because it is the most available technology at the moment. Some of the other technologies are, perhaps, a bit further away and the incentive of the support is there.

1304. **Mr Agnew**: When it comes to payback, though, looking strategically, we would need to factor in the downward pressure on the price, which is often left out of the discussions.

1305. **The Chairperson**: Thank you very much, gentlemen, for your patience and your information, which was very helpful indeed. As you know, this is part of the review that the Committee is conducting. Hopefully, you will be involved when you see the report coming out with actions that will be taken up in the interests of all consumers. That is why we are here. Thank you for your time, and I will see Robin in the not-too-distant future.

26 September 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Alban Maginness
Ms Maeve McLaughlin
Mrs Sandra Overend

Witnesses:

Mr Roger Casement	*AES Ballylumford*
Mr Ian Luney	
Mr Mark Miller	

1306. **The Chairperson**: We have with us today Mr Mark Miller, vice-president UK and Irish markets, AES Ballylumford; Mr Roger Casement — a historic name — UK plant manager, AES; and Mr Ian Luney, UK commercial manager, AES Ballylumford. You are very welcome. You have up to 10 minutes to make your presentation, and then we will have questioning from members. I am under instruction to watch the clock in the interests of Committee efficiency. Thank you for giving of your time to be with us.

1307. **Mr Mark Miller (AES Ballylumford)**: Good morning. Thank you, Chair, ladies and gentlemen. I will run through a brief statement that will amplify the paper that we submitted last week outlining the position of our assets and how we fit in with the market. We will then be more than happy to answers questions. My colleagues and I thank the Committee for the opportunity to discuss the issues of security of supply and how our business's operations in Northern Ireland are impacted by changing conditions in the single electricity market (SEM).

1308. **The Chairperson**: Thank you very much. Will you clarify a wee technical point for me, please? Your submission states:

"Under PPA until 31/3/2018".

1309. **Mr Ian Luney (AES Ballylumford)**: It is a power purchase agreement, Chair, the legacy contract with Power NI. It is the last one.

1310. **The Chairperson**: That is grand. A number of members wish to speak. I remind them of the time constraints that we agreed the other day.

1311. **Mr Flanagan**: Thank you, gentlemen, for your presentation. It was very helpful. Recently, we engaged with trade union representatives. What level of engagement have you had with them to get their insight into this?

1312. **Mr Roger Casement (AES Ballylumford)**: We constantly engage with the trade unions. We are very open and transparent about what is down the road and the options that are open, so it is a continual process.

1313. **Mr Miller**: It is fair to say that we are fully aware of them making an approach on security of supply issues at the B station, long-term employment and investment. As Roger pointed out, it is about a continuing dialogue and making people in the businesses fully aware of what is coming down the road so that we understand the various solutions.

1314. **Mr Flanagan**: It was the unions who put the matter on the Committee's agenda, so they should be commended for that. Have you any further information on your continuing engagement with the Department of Enterprise, Trade and Investment (DETI) and the Utility Regulator?

1315. **Mr Miller**: We have been in constant dialogue about the B station security of supply issues. We are trying to give the Department and the regulatory authority a clear picture of what we understand to be our range of options, primarily for the B station. The Kilroot aspect is a more recent manifestation. It has been

part of that dialogue, but there has not been nearly as much discussion on that. Clearly, for the past nine months or so, the B station has been the main part of that discussion. We are trying to give as clear a picture as we can, and it is an evolving process of understanding the investment required to provide a solution.

1316. **Mr Flanagan**: To make the B station compliant with the new IED emission limits, what sort of investment are you talking about?

1317. **Mr Casement**: It is very difficult to be precise about the amount before the engineering scoping study is complete. I could give you a number now, but it would not be accurate. I would rather wait until we go through the scoping study. The amount of investment depends on three factors. The first of those is the amount required for the NOx plant to reduce its emissions. Then, we have to work out whether that will change — when you change something in a unit, it has a consequential effect on something else. Finally, we might have to change major steam components, which would increase the capital cost significantly.

1318. **Mr Flanagan**: Have you a budget for the investment, or are you seeking funding from Government or the Utility Regulator?

1319. **Mr Casement**: Whether it makes sense as a stand-alone project, simply going into the merchant market, depends on the capital required. On the basis of our current numbers, which are historical figures, it does not make sense.

1320. **Mr Flanagan**: If derogation were granted for the B station, what kind of investment in time and financial resources would be needed to prolong its productive life?

1321. **Mr Casement**: I am not clear on the question. In that case, there would be no commitment, so we would carry on with our operation as usual.

1322. **Mr Flanagan**: If you got derogation, do you think that you would be allowed to carry on without making any kind of investment?

1323. **Mr Casement**: Absolutely.

1324. **Mr Flanagan**: Is that likely?

1325. **Mr Casement**: The information that we have is that it is not likely.

1326. **Mr Flanagan**: Is there anything that the Committee can do to help you to get derogation? Is there anybody we need to contact and raise the issue with?

1327. **Mr Casement**: It is certainly a political issue with the local environmental regulator. In the current IED legislation, there is no room for manoeuvre. Therefore, as we understand it, it would need EU derogation.

1328. **Mr Flanagan**: You said that you were evaluating the economics of making Kilroot fully IED-compliant from 2016. However, to do that, you have to take into consideration the wider impacts of the single electricity market. Will you explain why the SEM is the key factor in your considerations?

1329. **Mr Luney**: We understand very well how the SEN works and how it remunerates our plant. The real issue is the regulators, North and South, launching a major reform project to ensure that the market complies with European directives. The evolution of that change means that there is a lot more uncertainty about our revenue stream. So, as we look to invest, we also need to look at how we would recover that investment. There are a lot more risks going forward than there are today, and that is our concern. We are trying to understand better what that market list looks like. From our perspective, the sooner we become engaged in the process and the sooner that process takes shape, the sooner we will have a better understanding of the likely risks.

1330. **Mr Flanagan**: Is creating additional generation capacity in the North the best long-term solution for achieving security of supply, or is the best solution getting a North/South interconnector that works

and having sufficient generation across the island of Ireland?

1331. **Mr Miller**: At this stage, our view is that a second North/South interconnector is a key element in the long-term strategy because that would allow access to the most cost-efficient unit at any one time. Clearly, the annual constraint costs, which are sizeable and caused by the lack second interconnector are a primary driver in wanting that project to be completed as quickly as possible.

1332. **Mr Flanagan**: This is my final question: are you looking for derogation until the North/South interconnector is built, or are you looking for permanent derogation?

1333. **Mr Miller**: In respect of which station?

1334. **Mr Flanagan**: The B station.

1335. **Mr Miller**: At a minimum, I think that we would have to able to cover off the period operationally until that interconnector is complete. If we invest in the business to extend its life and to comply, that opens up a range of opportunities for further growth, although those are rather limited given where the B station sits within the market structure. It really turns out to be a service provider. It is a capacity backup option more than a market-value option for us.

1336. **Mr Frew**: Thank you very much for your presentation, gentlemen. AES is very important to Northern Ireland. It is a major business and, of course, a major employer. It is also very important because of the energy it produces.

1337. **Mr Miller**: If you stand back and look at all the stakeholders involved, not only us but everybody who is involved — the consumer, the regulatory authority and government — you see that the simplest and most cost-effective solution is derogation, because that turns into a "business as usual" scenario. We would continue to invest annually in our normal operating costs and in maintenance repair, and the station would continue to exist, doing exactly what it is doing right now, and it would compete on that basis.

1338. **Mr Frew**: You talked about a need for legislative structures to change. Is that at regional, UK or European level, or all three?

1339. **Mr Miller**: That is a good question. I am not sure to what extent the different legislation would change. We have been advised by the environment authorities that the internal review of the legislation that manages the IED component — the aspect of compliance of units — as well as further discussions with DETI has shown that there is no way for a plant that has opted out right now. The B station has opted out; that decision was made back in 2007. Legally, there is no opportunity for it to go through a derogated process. We would have to invest to be compliant with the new emissions standards.

1340. **Mr Frew**: Any investment in the future would be vital. We have to balance the security of supply against the cost of the supply of energy. How can you assure us and the wider community that whatever investment you can make, the cost passed on to the customer will be proportionate and fair?

1341. **Mr Miller**: There are two routes of remuneration. Let us just say that, if we get comfortable with our expectations of what the market would deliver post-2016, we would bear the risk of that investment, as it currently stands. If we struggle based on the investment required to make that into a measurable investment metric — in other words, that we will recover our investment over a certain period — we could be forced down the route of asking for some sort of surety through a capacity contract, as we outlined in our opening statement, to ensure that we will get our investment back.

1342. **Mr Dunne**: Thank you for coming today, gentlemen. Most of the questions have already been asked, but I have a couple of points to make. We welcome the investment that AES makes in Northern Ireland and the employment that you provide. If the B station at Ballylumford ceased to operate, what would be the

impact on employees there in the long term?

1343. **Mr Casement**: There would be a reduction of approximately 85. We would have to do a benchmarking assessment of the numbers that would be required to run the remaining combined cycle gas turbine (CCGT), but it would be roughly that number.

1344. **Mr Dunne**: Would any of those employees be offered an alternative?

1345. **Mr Casement**: There would not be any, to be honest.

1346. **Mr Dunne**: It is quite significant, then.

1347. **Mr Casement**: It is.

1348. **Mr Dunne**: I want to ask about fuel generation. Do you use coal and oil at present?

1349. **Mr Casement**: At Kilroot?

1350. **Mr Dunne**: Yes.

1351. **Mr Casement**: At Kilroot, we use coal 99% of the time. Oil is just the backup fuel that we use in the event of —

1352. **Mr Dunne**: Is coal the most cost-effective fuel at present?

1353. **Mr Casement**: It is the most cost-effective in the market.

1354. **Mr Dunne**: Does it come from all over the world.

1355. **Mr Casement**: Generally, it comes from Russia and South America at present.

1356. **Mr Dunne**: I also want to ask about upgrades. I take it that you are negotiating with the Utility Regulator on possible funding for any upgrade that will be needed?

1357. **Mr Luney**: We are not negotiating. We have had discussions to outline what we need to do in technical terms. We also have concerns about the commercial arrangements and whether there is a merchant position or, as Mark suggested, whether we need some sort of capacity contract to secure the investment. That is the extent of the engagement to date.

1358. **Mr Dunne**: It is early days, then, on that.

1359. **Mr Luney**: It is early days. From our side, technically, we are getting a far better handle on what we need to do to make it comply. The concern is that, commercially, we are still a bit uncertain about the options that would be open to us to secure the investment. The sooner we can get clarity on that, the better it will be for all stakeholders.

1360. **Mr Miller**: We should be clear that two different investments have been mentioned this morning. The one that seems to get the most focus is the B station investment, because it has the potential to fill the largest gap in shortfall of capacity from 2016. The second area of investment, which it is up to us to decide to do, relates to the commercial position of Kilroot. Kilroot will still be a going concern and provide capacity into the market from 2016. However, under current IED legislative requirements, for parts of the year we will be restricted in our ability to offer the full capacity of the project. Therefore, there is a layer on top, and those IED emission limits would force down our ability to compete in the market.

1361. **Mr Dunne**: Is the interconnector key to your long-term plans? If you are to invest to upgrade your power stations and make them compliant, will you see yourselves as a major player in the all-Ireland market when the interconnector comes into service?

1362. **Mr Luney**: The interconnector's coming into service should be welcomed by all. We support that fully. However, the interconnector will not actually affect our position, setting aside the B station, which is slightly different because its revenue stream is from a capacity payment. For the C station and Kilroot thermal units, the interconnector's being there will not affect our merchant position. It will be judged by commodity prices. If commodity prices stay in our favour, our commercial position is secure for that period. If commodity

prices move against us, we will fall out of a competitive position and back to the position of electricity being dispatched to meet system need. The North/South interconnector is more of a strategic issue for the market and for Northern Ireland plc than for the commercial position of AES.

1363. **Mr Dunne**: We are not experts on energy in any way, but will the interconnector not mean that you will be a player across the island?

1364. **Mr Luney**: We already are.

1365. **Mr Miller**: We already are, because we all compete within the same market structure. The constraints are more of a technical management issue in respect of getting power flows to the right spot.

1366. **Mr Dunne**: The right volumes.

1367. **Mr Miller**: Yes, exactly. It is the volume side of it.

1368. **The Chairperson**: You were on the five minutes there, Gordon.

1369. **Mr Douglas**: Thank you for your presentation. I have just joined this Committee, and, to be honest, I am struggling with all this stuff about the LCPD and the IED.

1370. **Mr Flanagan**: You are not the only one.

1371. **Mr Douglas**: I want to talk to you about the TNP.

1372. **The Chairperson**: That is just the computer.

1373. **Mr Douglas**: Yes, how do you switch this on? *[Laughter.]* You talk about Kilroot and say that you are going to opt into the transitional national plan. You say that that will reduce your capacity by 45% but that it should still be sustainable, or perhaps that is me using my own term. For my own information, how can you reduce the capacity by opting into a TNP yet remain viable and sustainable?

1374. **Mr Miller**: It is a great question. We are throwing around acronyms such as LCPD and IED. The whole structure is very complex, and it is difficult even for those of us in the industry to get our heads around the range of available options.

1375. **Mr Douglas**: I assume that that would mean workers having to be paid off or taking reduced hours.

1376. **Mr Miller**: That is correct. The project would cease to exist.

1377. **Mr Douglas**: Sorry, is that an emission bubble?

1378. **Mr Miller**: Yes, it is an emission bubble — an allocation per year. We are eligible for that. Essentially, we can run the plant up to the point at which we run out of those emissions. When we run out, we have to shut down the plant until the next year, when we get a new allocation. The intent of the TNP is to allow the sustained performance of the units and meet the energy needs of the market but still allow some investment.

1379. **Mr Douglas**: Would Labour coming into power have implications for all that, given some of the statements that its leader made this week? I know that that is a political question, but it is also an economic one.

1380. **Mr Miller**: You are champing at the bit to answer that.

1381. **Mr Luney**: I am not champing at the bit, but we are all wrestling with what exactly Labour is proposing, as it is very uncertain. The UK market structure is entirely different from the Irish market structure.

1382. **Mr Douglas**: You also operate in England and Scotland, is that right?

1383. **Mr Luney**: We have wind assets that operate under a contractual arrangement, but they would not be impacted on. The Labour policy is focused on the big six energy suppliers in a different market structure. We are wrestling with what he is proposing, but we do not think that it applies to the island of Ireland.

1384. **Mr Douglas**: That is very helpful. Thank you very much.

1385. **Mr Anderson**: Thank you for your presentation, gentlemen. Like Sammy, I

have just come on to the Committee. I do not want the lights around my home to go out, so I am prepared to have some discussion on the issue.

"AES has demonstrated our long-standing commitment to providing a safe, reliable and cost efficient supply of electricity to Northern Ireland".

"In order to fully understand the likely investment required, a more extensive engineering evaluation will be completed by the end of 2013".

1386. **Mr Casement**: It will be completed. The first stage is complete, and we are waiting for a report on the initial stage. We then have to run the units and do what is called computerised fluid dynamic modelling, which essentially tries to model what will happen the boiler when you make this change to the NOx burners. That will determine whether we need to change some of the major steam components. If we have to change some of steam components, the big issue will be time, because it will take 18 months to order those. That has a big impact and would make a decision a much more urgent issue than if we did not have to invest in the steam components. That will be completed by the end of the year.

1387. **Mr Anderson**: I am trying to tease out the issue of security of supply. I know that we have touched on it, but how do you see that going forward post-2016?

1388. **Mr Casement**: If we are able to make the investment through whatever mechanism — contract or in the market — security of supply will be a much less urgent issue. That would bridge the gap until the second interconnector came online. You still have the issues that you have with any power system, in that you will lose items of plant, but that will help to militate against those losses.

1389. **Mr Anderson**: Are you fairly confident that security of supply will be addressed and that we will not have blackouts?

1390. **Mr Casement**: If the investment does not happen, you have a very small margin when it comes to security of supply. If you lose a major item of plant, you could be in difficulty.

1391. **Mr Miller**: It is fair to say that our understanding, from talking with SONI, is that it will not be short-term loss of plant for a couple of days. There will be sufficient capacity to meet the peak of the day, but the worry is sustained failure, and, unfortunately, we had a failure on GT22 at Ballylumford early last year, and it was a high-impact, low-probability event. Significant failures do happen periodically on large equipment. That is exactly what people are worried about. Not only AES but Coolkeeragh is worried about a sustained loss of any one of the units, as well as our ability to deliver for a long time. That is where the risk really sits.

1392. **Mr Anderson**: How deep is the worry about the sustained loss?

1393. **Mr Luney**: SONI, which is the system operator, made it public that it is very concerned that, post-2015, it could be in a position in which there is a deficit of generation in Northern Ireland to meet supply. The conversation is focused on the B station, but we are aware that SONI is looking at other options alongside the Utility Regulator. If Moyle could be increased to 500 MW on a more reliable basis, that would help. Looking at our assets, we are very mindful of the fact that the B station is closing, but if we can get some clarity around what the commercial arrangements look like going forward and get a sense of what investment we require, the B station can play a really important part in mitigating any concerns that people would have about security of supply and the reliability of Moyle.

1394. **The Chairperson**: Is derogation the only option?

1395. **Mr Luney**: No, it is not the only option. We have talked about derogation. The precedent has been set for the other dynamic around derogation. If Northern Ireland is asking for derogation, the rest of the UK might want one, so there is an issue around that, but it is not the only

option. If we do not get a derogation, the decision is what other options there are. Looking at the B station, we must ask whether we can technically make it comply. We believe that we can make it comply. Then we must ask how much it is going to cost, what we can have in a commercial arrangement to ensure that we can recover our costs. Part of that may be that we just go into the merchant market and be comfortable with how that works.

1396. **The Chairperson**: You are sharp businesspeople. That is why you are in the trade that you are in. Surely you have done the evaluation of all that, such as the cost options, the potentials, what-if this, what-if that. That is why you are where you are.

1397. **Mr Miller**: Exactly. We have alluded in our paper to the fact that we understand that there could be the need for a contract. We have modelled what we think the market looks like. That is our best guess as to what we think the market structure is going to look like and the allocation of value within that market. We have to set that against how much it is going to cost Roger and his team to make the change. It depends on the size of the investment. If the investment is relatively modest and at the lower end of the range, it offers an opportunity in which market remuneration might be more than enough for us to get comfortable, and we would just go ahead and do it. If the investment cost moves to the upper range, it might make it questionable as to whether the market will fairly remunerate us for taking on that investment, given that it has a limited life and a sole need, which is to sit there and get paid capacity. There is a regulatory risk associated with the capacity element. Although our view is that the capacity element is a fundamental part of the market, there is a lot of discussion on how it will be allocated in the long term and to whom it should be allocated. We need to be comfortable that the regulatory risk associated with that remuneration structure satisfies our return criteria. The engineering side is not just a simple case of saying, "This is what we can and cannot do", because there is a potential range of options on the engineering side as well. It is about finding the most optimum solution.

1398. **The Chairperson**: Forgive me for saying so, but I would have anticipated that you would have had some more commercial clarity by now on the best option for the company. I thought that you might be in a better place to know that.

1399. **Mr Miller**: We have been considering a few legs. The first is the remuneration part and the market-income side, and the second is the extent to which capacity is required. That discussion is on how much capacity is required. We have several options. We have three units, so do we do one unit, two units or three units? That determines the extent of the overall investment, and that is matched to what SONI, the system operator, requires. The last element is — sorry, I have lost my track.

1400. **Mr Luney**: Trying to read your mind, I will say that the last element is on the commercial side.

1401. **Mr Miller**: The market structure, yes.

1402. **Mr Luney**: I mentioned earlier that we know that the market will change but have no idea what it will change to. That is not in our gift. The regulators, North and South, are leading that project with newly appointed consultants. We understand the market today very well, but it is very difficult to understand where the regulators will land in the future. That is our primary concern.

1403. **The Chairperson**: The regulators, North and South, shed the primary element of clarity on the project, and you need that to be in a better place to make the decisions that you need to make. Is that what you are saying?

1404. **Mr Luney**: Having clarity on where the market is going will reduce our view of market risks. That is one element. As Mark said, if the investment is not at the upper end of what we need to do, we could take a view of the market risks

and say that, for a certain amount of investment, we are willing to withstand a certain amount of market risk and make a decision to invest off our own bat without recourse to anybody else. If the investment is at the upper end, and the risks remain, it is more difficult to justify that investment. That is why we alluded to some sort of capacity contract whereby, as long as you perform, you have more certainty on what your revenue stream will look like.

1405. **The Chairperson**: Is that capacity contract a new idea or is it unique to your situation? Have those types of capacity contracts been tried and tested elsewhere?

1406. **Mr Luney**: Great question. Back in 2000, those types of contracts were put in place to resolve the very issue that we are talking about today. The B station was due to close in 2001-02 when the C station was built, but there was a concern in Northern Ireland that there was not sufficient capacity, and there was not sufficient capacity in the South. Therefore, those units were extended to provide energy for the North and the South. Those arrangements have been in place before. That having been said, it was an entirely different market structure then. That is a fair point. However, where there is a will, there is a way to try to facilitate that sort of contract. In the current market, there are ancillary service contracts for the provision of services to support the system, such as reserve reactive power. We do not see any reason why you could not offer an ancillary service contract that is tweaked to reflect a capacity support mechanism for a period when Northern Ireland is in difficulty.

1407. **The Chairperson**: Thank you very much indeed. That concludes —

1408. **Mr Flanagan**: Patsy, can I ask a question that may have a yes or no answer?

1409. **The Chairperson**: Very briefly.

1410. **Mr Flanagan**: Is the implementation of the IED uniform across Europe or do different member states have different time frames for implementing it?

1411. **Mr Luney**: The IED is uniform, in that it is a directive for Europe. There could be subtle differences in how member states apply it. I am not that close to it. The UK having a transitional national plan is one of those subtleties that the UK managed to secure. I am not sure what other countries will do, but every EU nation has to comply with IED.

1412. **Mr Miller**: The emission limits are uniform. How member states implement those —

1413. **Mr Flanagan**: Did Europe set a time period and different member states have decided to comply early? Does the IED state that it has to be implemented somewhere in the mid-2020s?

1414. **Mr Miller**: No. On 1 January 2016, the change in emission limitations and structure will be cut to a much more stringent level.

1415. **Mr Casement**: For new plant. For old plant, there is a transition period until 2020 to reach the new limits.

1416. **Mr Flanagan**: Do you have to close on 1 January 2016 even if you are an old plant, from before 1997?

1417. **Mr Casement**: If you opted out of the LCPD. That is the difference.

1418. **Mr Miller**: If you opted out.

1419. **Mr Casement**: That is why the UK will see that big capacity squeeze in 2016.

1420. **The Chairperson**: OK, thank you for that. Part of your submission deals with Northern Ireland's generation security outlook, stating:

"In order to fully understand the likely investment required, a more extensive engineering evaluation will be completed by the end of 2013 to outline the full business case."

1421. **Mr Miller**: That is correct.

1422. **The Chairperson**: How far advanced is that, and will it be completed by the end of 2013?

1423. **Mr Miller**: It will be completed. As Roger said, the last phase of it is understanding the investment cost. We

have got comfortable with what we think the range of options is on the market so that we can do the scenario analysis to understand how much risk is involved.

1424. **The Chairperson**: What factors do you need in place to be best placed to understanding those investment costs? I heard mention of the regulator earlier. I ask just to comprehend where you are likely to be placed by the end of 2013. Will you be best placed?

1425. **Mr Casement**: On the modifications, the important bit is the fluidised modelling. That will happen in the last quarter of this year. On the market changes, the more clarity that there is, the better that we will understand whether we get a return on that investment.

1426. **The Chairperson**: What are the factors for clarity? OK, there will be other things in the markets that could just ping away off in an instant, and that is why you are in the industry that you are in. You understand the risk aspects. However, what are the key elements of clarity that you require to try to make that package come together by the end of this year? We heard what the regulators, North and South, are doing.

1427. **Mr Casement**: The impact on capacity payments post-2016 is the crucial factor that is currently in flux.

1428. **Mr Luney**: We need to get a sense from the Department and the regulators together. They published a paper in the summer outlining the whole issue. We are keen to see how they are following that up. The B station is absolutely an option, although it is also about what other options they are looking at.

1429. **The Chairperson**: So what other options —

1430. **Mr Luney**: We are looking for that coordination.

1431. **The Chairperson**: Presumably, you have been in discussion with the regulators, North and South, and the Department.

1432. **Mr Miller**: As well as with the system operator, because that is an element of understanding how much capacity we think could be required. Other elements are the market structure, the reassurance that we give ourselves that we will be able to be remunerated fairly to recover our investment, and the interaction in the market on that exact investment.

1433. **Mr Luney**: To be clear —

1434. **The Chairperson**: That is what I am looking for.

1435. **Mr Luney**: — if the investment metrics are at the higher end, and we cannot get comfortable with investing on our own bat in the merchant market, then we need some facility in the market to offer us a contract to remunerate. At the minute, there is no such contract or commercial arrangement in place. We cannot make that happen. That has to be a decision of the system operator, the regulator and DETI combined. We need that coordination and for a decision to be made as soon as possible so that we can have a clear sense that, yes, we can go merchant, which is tidy for everybody, or, no, we cannot and instead need a contract of some description, and that may take on a life of its own. However, we need that clarity. That is the point, Chair.

1436. **The Chairperson**: That is grand. Thank you very much for that. Gentlemen, thank you very much for your time. That proved to be very useful.

3 October 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sydney Anderson
Mr Sammy Douglas
Mr Gordon Dunne
Mr Alban Maginness
Mrs Sandra Overend

Witnesses:

Mr Aodhan O'Donnell *Consumer Council*
Mr Richard Williams

1437. **The Chairperson**: Briefing us today are Aodhan O'Donnell and Richard Williams from the Consumer Council. Thank you very much for being here. Aodhan, perhaps you would make your presentation to the Committee on the electricity review.

1438. **Mr Aodhan O'Donnell (Consumer Council)**: Yes, no problem. We thank the Committee for picking up on the issue of energy costs, particularly electricity costs. For us in the Consumer Council, energy costs continue to be the biggest issue for consumers. When we speak to consumers and consumer groups — and I am sure that it is the same for Committee members — those costs are consumers' number-one concern. If you put in context price rises over the past number of years, it is little wonder that that is so. Since 2007, the price of electricity has gone up by 61%, and since 2009 the cost of home heating oil has gone up by 62 %, and gas by 38%. There have been very high rises in energy costs for consumers while incomes have been static or falling.

1439. **Mr Richard Williams (Consumer Council)**: Thanks very much. I have seen some of the briefings that you have had from other organisations on this issue. I realise that some of the issues that I will cover briefly will have been covered by those organisations and that you will probably have got a rather technical view from them. Hopefully, I will be able to give you a little bit more of a consumer context.

1440. **The Chairperson**: I am conscious of the time.

1441. **Mr Williams**: I move on, finally, to issues around the supply side. Aodhan raised a number of issues around competition. The domestic tariff in Northern Ireland is regulated, whereas the tariff for customers in GB is not. Therefore, you might want to compare the two to see which of the systems works better for the consumer.

1442. **The Chairperson**: Thank you very much. I want to start with an issue that has gone round in circles. You mentioned the 79% gross profit from wind energy firms. I listened very carefully, and you said that, in 2005, the cost of generation was 48%, and it is now up to 58%. There has not been a huge increase in renewable energy sources, although there are targets to be met. I am trying to establish how the cost of generating wind has gone up while, at the same time, wind energy firms are returning gross profits of 79%. I would anticipate that there should be some benefit with regard to the overall cost from renewable sources. Energy costs should, in some way, start to flatten out when we use more renewable sources. I can understand that, in markets such as gas, unpredictable situations can affect things. However, that energy is coming from renewable sources, and you mentioned the profit margin. Could you provide us with details of that profit margin? You referred to the consequences of Power NI being regulated. Does that make a case for the introduction of further regulation around those companies?

1443. **Mr Williams**: On the first point, 79% is the figure that has been produced by

the regulators in the Republic and in the North.

1444. **The Chairperson**: Is that on all renewable energy?

1445. **Mr Williams**: It is a report from May of this year on the profitability of the generators in the single electricity market; it details the different types of generators.

1446. **The Chairperson**: OK. Thanks.

1447. **Mr Williams**: We are told that the whole of the electricity network is regulated. The Utility Regulator here told us that they have control over every aspect of the network from supply side — that is Power NI, which is regulated. NIE is the network provider here; it has the monopoly, and it is regulated, and we are told that the generators are regulated. The form of generation is not quite the same as it would be with NIE, but the regulator looks at the cost of the generators that are put into the SEM, so those costs are evaluated. That happens to some extent; however, it is an area that you should look at to see how it works.

1448. **The Chairperson**: Yes. That is my point.

1449. **Mr Williams**: They do not set the price; they take the price.

1450. **The Chairperson**: That is right. It is more or less catch-up time every time with no justifiable reason, other than that they can do that.

1451. **Mr Williams**: They can. The fossil fuel price includes the cost of carbon; wind does not have carbon, so you could argue that they take the cost of carbon.

1452. **The Chairperson**: Thanks very much for that.

1453. **Mr Williams**: One of the points that McIldoon made was around trying to decouple the link between wind and fossil fuel.

1454. **The Chairperson**: The other issue is capacity payments for wind. Do you have any views on that?

1455. **Mr Williams**: Capacity payments are a bit of a problem. We know that they put quite a large amount on to the end price for consumers. The European Union recently issued a paper that looked at various aspects of capacity payments around Europe, and there are different mechanisms available. Not all countries use capacity payments to reward investors to keep or to build generation. There are other ways of doing it, and the EU has been quite critical of capacity payments according to what the Utility Regulator has told us. Wind does not appear to satisfy the point behind capacity payments. They are always available to fill in if something else does not.

1456. **The Chairperson**: Even if they may not be available according to the wind strength?

1457. **Mr Williams**: Exactly. If they are not available, but they are being paid to be available —

1458. **The Chairperson**: Even if they naturally cannot be.

1459. **Mr O'Donnell**: I think that the overarching principle of some form of insurance or capacity is that if there is peak or intermittent demand, that is a good thing because consumers are telling us that the biggest thing for them is security of supply and keeping the lights on. That is obvious. However, when you work out the detail of how that works in practice between two types of generation, wind and the more traditional fossil fuel, and how they are both being rewarded to the same degree or the same extent, then, as McIldoon said, we need to take a look at how that is decoupled.

1460. **Mr Flanagan**: Thank you for the presentation. Are generators being paid too much to generate electricity?

1461. **Mr Williams**: Well, McIldoon concluded that consumers are not getting the best deal. He said that there was confusion and that there were contradictions in the energy policy and that part of that was how generators were paid.

1462. **Mr Flanagan**: Are they paid too much?

1463. **Mr Williams**: He also referred to the fact that —

1464. **Mr Flanagan**: We are trying to come up with an evidence-based report, so a "yes" or a "no" would be enough — preferably a "yes". *[Laughter.]*

1465. **Mr Williams**: Preferably a "yes"? Well, consumers are paying a lot for their energy. You are looking at profits of 79% for wind generation and 49% for conventional generation in the SEM according to the report.

1466. **Mr Flanagan**: That is a bit high.

1467. **Mr O'Donnell**: As a starting point. That would throw up a flag for looking at those returns. There is an issue around the cost of capital and such. McIldoon said that the consumer rather than the industry bore more of the risk than they needed to, so that needs to be balanced out.

1468. **Mr Flanagan**: Have you asked Douglas to update his report in any way recently?

1469. **Mr O'Donnell**: This was the 2012 report that we produced. He produced a report on the back of 37% increases in 2008. We have taken it and asked what has moved on and what has not. That is our starting point. Many of the issues that we raise in the paper are a reflection of what is in that. To a certain degree, the issues are the same as those identified in 2008.

1470. **Mr Flanagan**: What needs to change in the single electricity market to ensure that renewables have a greater downward impact on the prices that consumers pay?

1471. **Mr Williams**: As I said, one of the suggestions is that we should break the link between fossil fuel price and wind.

1472. **Mr Flanagan**: How do you suggest we do that?

1473. **Mr Williams**: The SEM committee has to look at how it structures and designs the market; it is a very complex system. However, there are alternative models; it does not have to be based exactly on the one that it has. They are in the process of having to look at that again, because Europe is now saying that, with interconnection, you need to look at the SEM and see whether it fits in with the British Electricity Trading and Transmission Arrangements (BETTA) model in GB, and with others that operate in Europe. Therefore it knows that electricity market reform is taking place, and now is the opportunity to look at that and say: not only should we reform it with respect to how we can integrate with the rest of Europe but also whether this model gives consumers the best possible outcome and whether there are other models that can be looked at.

1474. **Mr Flanagan**: Would you agree that not all generators should be paid the same price to generate electricity at the same time?

1475. **Mr Williams**: The SEM is a competitive market; therefore, the point behind competition is that generators will bid at a competitive price.

1476. **Mr Flanagan**: Yes, but what they are bidding is not what they are actually paid. Should the price that they are paid reflect their cost and not the —?

1477. **Mr Williams**: That is a detail of a very complex market. It would be too easy to say: no, they simply should not. It is a complex market, and it needs to be looked at. There is a reason behind capacity payments.

1478. **Mr Flanagan**: Therefore if you were to make a recommendation on how that should be dealt with, your recommendation would be that the SEM committee should carry out an assessment or look at it.

1479. **Mr Williams**: Indeed.

1480. **Mr Flanagan**: That is all right. Is competition among electricity generators working, or is further regulation of the price that generators are paid required?

1481. **Mr Williams**: We can only look at the out-turn price.

1482. **Mr O'Donnell**: That is the difficulty with the openness and transparency that we have. I know that this is not the question that you asked, but if you were to ask us whether competition is working for consumers, we would question whether it is, because this is where you need openness and transparency around the competition in electricity generation. We can tell you why we think that there are issues with competition in the domestic market. I know that that is not your question, but it is where we have our expertise, compared to the industry, the market and stakeholders.

1483. **Mr Flanagan**: The Consumer Council recently published a report on switching.

1484. **Mr O'Donnell**: Yes.

1485. **Mr Flanagan**: What ideas have you for greater energy efficiency to save consumers money?

1486. **Mr O'Donnell**: Energy efficiency allows the consumer to take some control and perhaps reduce energy use; it does not address energy-cost issues. We are due to publish a report on the energy efficiency schemes that are run here. There is still a great deal of confusion among consumers about the energy efficiency schemes that are available and their accessibility. We also question whether so many schemes give us enough bang for buck. If the programmes were pulled together better and there was more simplicity in the types of schemes on offer, that would probably increase the number of people taking up energy-efficiency schemes. It might also tackle some of the schemes' administration and management costs. We have recommendations for simplifying schemes for consumers and giving them more access to more schemes. It is more important that we try to streamline things a bit better.

1487. **Mr Flanagan**: Have you any idea when the RP5 price determination is likely to come out?

1488. **Mr O'Donnell**: About a month ago, the Competition Commission applied for and got an extension for six months. That takes it through to March, but it may report sooner. That is the information that we have at the moment.

1489. **The Chairperson**: Phil, at this point will you take over the Chair?

1490. **Mr Dunne**: Thanks. Safe journey, Chair. Take it easy. Gentlemen, you are very welcome.

1491. **The Chairperson**: Thanks very much, gentlemen, I am sorry that I have to go, but what we have heard in exploring some of the key points is very interesting.

1492. **Mr Dunne**: I would like your opinion on the North/South interconnector. Security of supply is causing us more and more concern. Is it necessary to have the interconnector up and running fairly soon?

1493. **Mr Williams**: Definitely. According to all the research and the experts, we are told that the consumer is losing £25 million a year. I think that that is across the whole of Ireland, because of the single electricity market. You will be aware of the security of supply concerns that are emerging because of the closing of Ballylumford and the problems with the Moyle interconnector. The North/South interconnector is crucial to getting through that problem and to keep prices low in future. It allows energy to travel across the whole market unconstrained.

1494. **Mr Dunne**: Have you lobbied on behalf of those trying to get through the planning system?

1495. **Mr O'Donnell**: I do not think that we have directly lobbied on behalf of the scheme. In our reports we have represented all consumers by saying that the cost of not having an interconnector is £25 million and that not having it raises a security of supply issue. That is why we are supportive of ensuring that there is interconnection. We are also trying to ensure that the Moyle interconnection is back up, because I think that it is running at only half capacity. It may be some time before it is fixed as well. Both the North/South and east-west interconnection must be improved.

1496. **Mr Dunne**: Is there a risk to consumers of a drastic increase in the cost of electricity due to the upgrade in the network that you talked about? That would have to be done in conjunction with the Utility Regulator. You would also have an input. Do you see a potential risk in upgrading the network and also in doing what the Republic has done in supplementing industry? Is there a possible risk to consumers that that may happen in future? Does that concern you?

1497. **Mr Williams**: It is an issue of great concern because, as far as we can see, it will add to costs. We do not know how the Competition Commission will decide the price control that it is looking at, but there are very large costs in there, a large proportion of which are for investing in renewing the grid for renewable energy. It will approve some of it; I do not know how much, but that will add certain amounts. In the 'Strategic Energy Framework' of 2010, the Department estimated that between £49 and £93 would be added to the bill of every domestic consumer to reach the 40% renewables target. Other figures attached to the NIE price control were around that, and they are all about adding money on. It all got a bit confused because the regulator's proposals took money off, but there are definitely amounts going on to that. However, a strategic decision has been taken that we have to hit a target of 40% renewable energy.

1498. **Mr Dunne**: The other issue was supplementing industry, which seems to be happening in the Republic. The domestic consumer there is paying more per unit for electricity than are business, commerce and industry. What is your opinion on that?

1499. **Mr Williams**: Our organisation is primarily concerned with domestic consumers. There is a lot of lobbying for business. However, we also recognise that if businesses and the economy are strong, consumers will benefit. It is a question of balancing the two. Our priority is to tackle fuel poverty by keeping bills down for domestic consumers.

1500. **Mr Dunne**: Domestic consumers are your priority.

1501. **Mr Williams**: Fuel poverty has been one of our priorities for some years.

1502. **Mr Dunne**: There have been pilot projects in relation to smart meters. Have you had any feedback on how those are progressing?

1503. **Mr O'Donnell**: We have just been kept informed of the reports of the smart meter project. The University of Ulster led on some of the work on smart meters and some of the pilots. Some of that work is still ongoing. We have been informed, but not —

1504. **Mr Dunne**: Are you drivers for it? Would you encourage buyers to go down that route?

1505. **Mr Williams**: You have to see exactly what benefits smart meters will bring. The important thing with them is that they bring benefits to consumers and industry. We would not expect to see consumers having to pay for —

1506. **Mr Dunne**: The initial cost?

1507. **Mr Williams**: — an innovation that will provide very large benefits to industry as well as consumers.

1508. **Mr Dunne**: So, the cost will be an issue of concern?

1509. **Mr Williams**: If the cost to consumers is excessive and they do not benefit from it; absolutely.

1510. **Mr Dunne**: We are probably going into another cold winter, and we are still stuck with 70% of consumers on oil. What has been done by people such as you to encourage the greater uptake of gas in areas in which the network has already been laid? I understand that, in the greater Belfast area, the uptake rate varies from 27% to about 47%. Surely more should be done by you and others to encourage people to switch.

1511. **Mr O'Donnell**: Those figures are about right. It is close to 50% at the high

levels of homes connected to gas, but something around 90% of the network passes by homes. Up to about 40% or 50% are connected, but up to 90% could be connected. Much more needs to be done. We have been very clear that there are significant savings to be had by consumers through switching from oil to gas. It is £657 on an average bill.

1512. **Mr Dunne**: Is that per year?

1513. **Mr O'Donnell**: Yes. The companies are incentivised to try to encourage people to switch, and they are rewarded for that. A lot of it is about consumer education and awareness; making sure that people are aware that gas is available in their area and that they can switch. We also produced a report last year on the experience of people who had switched from gas. On the whole, without any —

1514. **Mr Dunne**: Switched to gas?

1515. **Mr Williams**: Converted to gas.

1516. **Mr O'Donnell**: Sorry; conversions. The consumer experience has been really positive. People who moved into homes with gas already installed, and who had moved from oil, have had a very positive experience. It is about trying to get over some of the misinformation or fear factor that maybe still exists around having gas as a fuel. We see the consumer experience as being very positive. It is about trying to promote that as much as we can to encourage people to do it. We are doing some more research in areas that are on the gas network but have not connected to see what barriers are preventing people making the switch. There is obviously the cost factor. I think that the average cost of a conversion is £3,000. That is hard money to find. However, if you look at the savings available on an annual basis, and if they can get some support to make the conversion, the savings will be there in three or four years.

1517. **Mr Williams**: The figure of £657 that Aodhan mentioned needs some clarification. A number of figures have been put around by different sources. We have done a lot of work in working out the difference, in practice, for consumers and householders in Northern Ireland. The £657 figure is part of a report in which we have done a lot of research. We have used Sutherland Tables, an industry accepted guide for energy use in the home, to compare gas with oil in kW hours. We have done a lot of calculation to give us the overall domestic energy bill and the difference between a household using gas and one using oil. That is how we came up with the figure of £657. It is quite an astounding figure. You may hear some say that there are different figures. Our report, which, I think we have made available to you, shows that there are other methodologies. We feel that this methodology is robust for the purposes that we want to use it for.

1518. **Mr Agnew**: Thanks for the information so far. There is a lot in your report and presentation about wind and the potential cost to consumers from upgrading the grid. I think you mentioned that you have taken a look at some of the presentations we received on electricity prices. One of the things that wind does, if I understand it correctly, is put a downward pressure on prices when the demand is such that it can be met by wind. It becomes the price setter in that case rather than the price taker. Correct me if I am wrong on that. So, as we increase the amount of wind we use, we increase the number of occasions on which that is the case and we increase the downward pressure on the ultimate price to consumers in that regard.

1519. **Mr Williams**: To be honest, I cannot really answer that. I do not have any evidence that shows it, but I am not disputing it either. The way that the SEM mechanism is set up is quite complex. We do know that wind-generated electricity always runs. It is put on to the system before anything else, so, in that sense, it is not as though it is sitting there idly. If it is available, it is used. I have heard the argument that it can start setting the price. I have heard a counterargument — I am sorry, I do not really know the details — that that might not be a good thing. I am only just

throwing this in. I am afraid I cannot give you more evidence on that matter.

1520. **Mr Agnew**: OK. If you do have more information on that —

1521. **Mr Williams**: I think it is something that really needs to be looked at.

1522. **Mr Agnew**: As you say, it is very complex, and it was relatively new to me as a member of the Committee.

1523. **Mr O'Donnell**: We can certainly check, but I think that Consumer Focus, which is now Consumer Futures, a Scottish organisation, had done some work. We can certainly come back on that. That probably makes sense, because I think that renewable issues were key issues for the Scottish Government.

1524. **Mr Agnew**: The short-term impact of wind is that for a lot of the time it is the price taker: we are being charged the same for wind as we are for gas and the price of gas is going up, etc. However, if, over the long term, replacing more gas with wind is going to be of benefit to consumers, then your organisation will be interested in not just the here and now but in going forward strategically. That is something that I am still trying to get my head around, and any information on that would be appreciated.

1525. **Mr O'Donnell**: From a consumer point of view, the argument is "If this is the case, show the evidence, the openness and the transparency to back up that fact". We have to reassure consumers that massive profits are not being made at their expense, in profit margins and in returns and costs to capital, and that the risk is balanced across consumers and the industry effectively. It is like everything else. We said at the start of the presentation that this is a very complex market. Consumers will never get to the bottom of it, but there needs to be reassurance that things are fair and that they are paying for the cost of energy.

1526. **Mr Agnew**: It is hard enough for us in this room to get our heads around this, so I would not expect consumers to look into the detail. I suppose that we should all consider ourselves to be consumer advocates, and we need to get our heads around it if we are going to perform that role.

1527. **The Deputy Chairperson**: Who am I to say that you do not?

1528. **Mr Agnew**: The switch from oil to gas was mentioned. When we looked at the renewable heat incentive, the Department told us that in GB, or at least in England, the big switch from oil to gas has been done, and they are now trying to get people to switch from gas to renewables. As far as the best interests of consumers are concerned, and with respect to public subsidy and your advice, should we be encouraging people to switch from oil to gas and then to try to encourage them to switch to renewables, or should we, to some extent, give better incentivisation for renewables for domestic consumers to almost cut out the middle man? We know that the price of gas is only going to go up and that it will continue to do so. Although we will get the odd dip, the overall trend is upwards. Gas will continue to get more expensive. So, looking to the long term, does encouraging people to switch from oil to gas solve one problem but switch it to another problem, which is the price of gas?

1529. **Mr Williams**: You need to evaluate the costs and benefits to the consumer. In our response to a consultation on the renewable heat incentive, we said that they should not be looking to run incentives at the same time as this. It does not seem rational to do both if you are considering putting gas in. You are creating a wasted cost and a wasted asset, so there needs to be some planning and dovetailing of the two policies.

1530. **Mr O'Donnell**: Lord Whitty reflected that dovetailing and the view of gas as the transitional fuel for the next 20 to 30 years to build capacity in the renewables sector and give opportunities for people to build that infrastructure.

1531. **Mr Williams**: He also said that gas is a good thing as a stepping stone, but there are certain areas that will never

be on the gas network. Perhaps those should be the areas that are considered first for renewable heating and the like.

1532. **Mrs Overend**: Thank you very much for all of the information today. We have got through a lot of questions so far. You talked about how consumers end up paying for benefits for businesses, and I will turn that idea on its head. We heard from manufacturers and large businesses that complained that the tariff for energy efficiency on the electricity bill is only benefiting the consumers as opposed to benefiting the large industries, because they are as energy-efficient as they possibly could be. They said that consumers are the only ones who can access those energy-efficiency programmes and so on. What are your thoughts on that?

1533. **Mr O'Donnell**: The Energy Bill that is progressing at the moment will place an obligation on businesses, and we have welcomed the fact that that obligation will be extended to the oil industry. So, there is a wider opportunity to provide some support for fuel-poor households. With 42% of homes in fuel poverty, we are concerned that there needs to be a big focus on energy efficiency, and measures to support energy efficiency are paramount. One in two homes spends more than they need to in order to heat their homes, which is a waste of energy. People are using more energy than they need; so, in some ways, that would help to reduce the burden of energy usage, energy generation and energy demand if we can support it. Our view is that those measures should be continued and be focused on ensuring that we try to address the fuel poverty problem that exists currently for so many homes across Northern Ireland.

1534. **Mr Williams**: Quite a lot of work is being done on measures targeting the fuel poor and on finding out who is in the worst fuel poverty. The University of Ulster has done quite a lot of work on that. That enables better targeting, so that the resources go to the people who need them most. That should continue, and we certainly support it.

1535. **Mr Anderson**: Thank you, Deputy Chair, and I thank my colleague.

1536. **The Deputy Chairperson**: Are you sharing time here?

1537. **Mr Anderson**: As you know, I have to leave to go to another Committee. I have a couple of questions about choice and competition in the electricity market.

1538. **Mr O'Donnell**: The market is relatively new to competition for domestic consumers. It is really only in the past two to three years that competition has come in. It took a few years to introduce what they call the "enduring solution" that removed any restrictions on the numbers of people who could switch. Previously, before the systems were in place, there were restrictions.

1539. **Mr Anderson**: Or put them up by even more.

1540. **Mr O'Donnell**: Yes. There is uncertainty about where costs and prices are going to go.

1541. **Mr Anderson**: Is there evidence that what people were promised, or what they thought they were being promised, if they switched did not materialise? Is there any evidence that people have switched back from one supplier to another?

1542. **Mr O'Donnell**: Those who switched found the process satisfactory on the whole and their expectation on savings met. We asked what would drive them to change. A lot of people said that a 10% to 15% saving would make them change. We are seeing that those savings can be made between the highest and the lowest price, but as far as switching back is concerned —

1543. **Mr Williams**: Power NI advises us that people are switching back but not in large numbers because it is early days.

1544. **Mr Anderson**: But, some do switch back.

1545. **Mr Williams**: Yes, we have heard of people switching back.

1546. **Mr Anderson**: Why would they want to do that?

1547. **Mr Williams**: We are told that it is based on service standards. Over the past three years there were problems with the switching process. We had quite a number of complaints about that, with a severe spike. We did a lot of work with the companies on that and worked with the regulator on producing a marketing code to give consumers a level of protection.

1548. **Mr Anderson**: Were those issues resolved?

1549. **Mr Williams**: I would not like to say that they are totally resolved but we are getting there.

1550. **Mr Anderson**: Maybe people want to switch for reasons of cost and want to compare like with like. However, if you switch and have big problems, you will probably want to switch back.

1551. **Mr Williams**: That is what we are being told. Some people come across a problem and say that they are having nothing to do with it, and go back to the people they were with for 20 years.

1552. **Mr O'Donnell**: The other thing is that tariffs change. If you switch once, that will not to stop you switching again to another company, switching back or switching to another deal. However, if you had a back experience of that switch you may feel that it was too much hassle to you to be bothered even to look at it again. So, you will freeze, not move and potentially be on a worse deal. The fact that people switched once should not stop them from switching again. It is a competitive market, so you can change as you wish.

1553. **Mr Anderson**: I can understand that. If I wanted to switch, it would be for cost reasons and how much I could reduce my bill. However, if it is a lot of hassle to change, and there is a bad experience, maybe people will decide that they do not want to do that. Word gets out: "I wouldn't do that because it causes so many problems." However, you are telling us today that the initial problems are being ironed out.

1554. **Mr Williams**: We hope that we are through the worse of that.

1555. **Mr Anderson**: You are over the worst of that?

1556. **Mr O'Donnell**: There was an issue with that, definitely.

1557. **Mr Anderson**: So, we are now over that?

1558. **Mr O'Donnell**: There are interesting differences between the market here and that in GB. Only 4% of consumers in GB appreciated doorstep selling. According to research that we were shown, and perhaps because this is new, or people are not aware of other suppliers, when someone called at the door to let people know about other suppliers there was not as negative a view of doorstep selling here as there was in the GB market. However, there were issues with some of the other selling techniques that have now ceased, such as shopping centre-type approaches and cold stopping people, which we had complaints about.

1559. **Mr Williams**: In Europe, there is a big push for competition, and over the past three years they have introduced the IME 3, which are European directives, a large part of which are about consumer protection. We spent the best part of the past year and a half working with the regulator to feed those directives through in practical terms. They cover things such as the number of days it must take for someone to switch. I think it is 15 business days. They also cover cooling off periods, and door-to-door selling and rules around that.

1560. **Mr Douglas**: You mentioned fuel poverty, and you have the backing of the whole Assembly in trying to address that. When I read some of the papers, it seems that many people in poverty in the Republic of Ireland are subsidised as are some businesses. Manufacturers in Northern Ireland say that it is the opposite here.

1561. **Mr Williams**: The electricity market is broken down into different segments. The regulated part is licensed and is not allowed to discriminate between any different class or group of consumers. So, for that to take place, it is an issue that has to be addressed. It is a social

issue, not one for the regulator to address. The regulator would follow a line from government essentially, which will decide if one needs it more than another. Fuel poverty is a societal issue, and it is not for the regulator to say, "We will allocate costs this way and that way."

1562. **The Deputy Chairperson**: Gentlemen, that is all the questions in this session. Thanks very much.

3 October 2013

Members present for all or part of the proceedings:

Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sammy Douglas
Mr Gordon Dunne
Mrs Sandra Overend

Witnesses:

Mr David Bell *Invest NI*
Ms Olive Hill

1563. **The Deputy Chairperson**: Briefing the Committee today are Olive Hill and David Bell. You are both very welcome. You can make a short statement, and then there will be a few questions for you. The majority of our questions, I presume and hope, will focus on the impact of the price of electricity on Invest NI's ability to attract and retain large industrial and commercial users here.

1564. **Ms Olive Hill (Invest NI)**: Good morning. My name is Olive Hill, and I am director of innovation and technology with Invest NI. I am accompanied by my colleague David Bell, who is one of a number of engineers who work with us to provide technical advice to companies on energy efficiency and renewables. Invest NI meets regularly with companies on a one-to-one basis but also in a round-table scenario to discuss energy and, specifically, electricity prices and the challenges that companies face. The single biggest energy issue for business is the unit cost of electricity, and that, combined with the many existing but also new policies that are emerging, gives out a perception that the pricing of electricity will become even more difficult for some companies. Many of our large energy users in Northern Ireland are companies that form part of international groups. As part of that, productivity and operating costs are always measured across the parent company and the number of sites. That is when we start to see the evidence of some of the problems coming through. In many of the instances that are discussed with us at an individual company level, we are finding that the case, invariably, is that energy costs here are significantly higher — usually at least 30% higher —than at some of the other sister sites in other parts of Europe and further afield.

1565. **Mr Dunne**: Do you hold meetings with the Utility Regulator and try to influence him?

1566. **Ms Hill**: Yes, we have round-table meetings. We have had a few where we have brought the larger energy users in and brought the regulator along, who was Shane, in that instance. Our chief executive has also met him on a number of occasions to put across the issues that we are facing.

1567. **Mr Dunne**: We have all been somewhat shocked and very much made aware of the stark costs that industries are faced with here. We have had a number of them here giving us evidence, but one implied that they were talking about £1 million a month for energy. That is very drastic. Right away, we think about what the Government are doing to help those people. If they do not get help, there is a risk that we will lose them, and we will have all the implications of that to live with. So, if there is anything that you can do to help them as a supplement to support them, I think that it is vital that you do that. Is the issue of energy and security of supply a deterrent to attracting large foreign direct investment in Northern Ireland? Are those factors that are brought into play when you are going out there to bring in new business?

1568. **Ms Hill**: We are very aware of that, but in terms of the support that we can offer alongside jobs, employment and training and so forth, we can mitigate that. So, energy costs may be higher, but we can still offer fairly generous support in other areas. On that basis, they both

balance out, or we do our best to ensure that they balance out. For example, with the big investment down at the harbour, which is when DONG came in, energy was potentially a big issue there, and through working with Belfast Harbour, Northern Ireland put a lot of support behind that project. That helped to mitigate the energy costs.

1569. **Mr Dunne**: It is bound to be a major factor now in relation to bringing in new business and being a place that is attractive or not. It is bound to be on the agenda or checklist of anyone who is talking to you.

1570. **Ms Hill**: From a positive point of view, most of our success in inward investment has been around financial services and business services and so forth, which are not just as energy intensive as mainstream manufacturing, but we are very clear that we want to keep and grow the manufacturing that we have, so it is a big issue for us.

1571. **Mr Dunne**: You touched on the fact that you are giving business advice on energy savings and how they can manage their energy systems. Is that part of what you do?

1572. **Mr David Bell (Invest NI)**: Yes. Through a number of our programmes, we are able to go into a company and do a survey of what they are doing.

1573. **Mr Dunne**: How many people do you have working on such projects?

1574. **Mr D Bell**: We have six people who are working on direct links with companies and direct advice to companies on a range of issues. It is really about saying, "How do you prioritise your energy use? Where can you make the biggest savings? How much is it going to be? What is the payback?". We provide that to quite a number of companies.

1575. **Mr Dunne**: OK, and what about the like of Bombardier? We are very much aware of its energy costs and we have met its people and so on. It is looking at generating its own energy. Have you had an input to that?

1576. **Ms Hill**: Yes, we work closely with them and have in-house experts on anaerobic digestion and biomass who have been heavily involved with Cecil McBurney at Bombardier in taking forward that project. That will be great for Bombardier. The concern is that, if Bombardier comes off grid, there are obvious ramifications for the overall cost of the grid. However, we are in there providing technical support and help.

1577. **Mr Dunne**: Are you working with other firms that are also looking at alternative supply?

1578. **Ms Hill**: Yes, because quite a lot of our larger firms would even have their own energy managers in place, but we would still come in and work alongside them, either to look at new technologies or to review what they are proposing and see whether we can provide anything more to them.

1579. **Mr Dunne**: What about advice on combined heat and power (CHP) plants and so on; is that part of your role?

1580. **Mr D Bell**: Very much so. Co-generation is a big part of what we advise upon. It is not available or useful for many companies. Unless they are running 24 hours a day, it is not useful. However, we advise on things such as heat recovery to provide energy, electricity generation and things like that. We advise companies on all technologies, as they come on line.

1581. **The Deputy Chairperson**: Is the advice that you give to existing companies a discussion that you have with people that are thinking of coming here about the range of natural resources and renewables that there are?

1582. **Ms Hill**: From an investment point of view, we look at the renewable sector as one that we try to attract to Northern Ireland. They would certainly be —

1583. **The Deputy Chairperson**: No, what I am asking is whether, if you have a manufacturing company that is thinking of coming here, would you try to encourage it to use renewable sources

of electricity generation instead of just going onto the grid?

1584. **Ms Hill**: We would certainly make it aware of the targets that we are trying to achieve, what is happening in the renewables sector and the cost associated with renewables and standard. It will come down to the company's requirements. Some will require 24/7, in which case wind may not be an option. What we can put in there depends on the company's location. It also depends on whether it has a biomass source. We gather all of that evidence beforehand to make sure that we provide the best energy cost proposal.

1585. **Mr Douglas**: Thank you for your presentation. I do not see it in these papers; it would be good to get a copy of it.

1586. **Ms Hill**: The introduction? Yes.

1587. **Mr Douglas**: It was very good. Oh, we have got it anyway.

1588. **Ms Hill**: Yes. For example, when the Green Investment Bank was set up in the UK, we made sure that we got it over here. We got it in front of companies so that they see what they could potentially avail themselves of there. We feed strongly, through the Department, into the Department of Energy and Climate Change policies. We do not have the decision-making power around electricity, but we certainly make sure that the concerns and issues facing business are fed through.

1589. **Mrs Overend**: We are talking about not only attracting inward investment from large companies but also keeping those that are here. What about Invest Northern Ireland's help, or other help, in promoting energy-from-waste projects? Do you think that there should be more of those? I will let you go on with that, and then come back with more. Do you think that there should be more help for energy-from-waste projects?

1590. **Ms Hill**: We actually have a couple of people designated to advise on energy from waste. Biomass and energy from waste are a particularly good opportunity for some of our smaller to medium-sized manufacturers in more rural areas. There are a lot of projects in the planning system, so there has been a dramatic change from two years ago to where we are now. People understand the technologies; the technologies are proven, and they are more willing to get involved. So, we provide a lot of advisory support around that. Our technical people go in and help people assess whether the technology that they are going to select will work for them, their feed source and so forth.

1591. **Mrs Overend**: You talked about the difficulty of people going off grid and that the costs that remain have to be spread among a thinner group. Do you think that there should be a limit to those who are going off grid? How do you think that should be managed?

1592. **Ms Hill**: From an individual company point of view, that is a commercial decision. A number of companies that want to do that are finding that the costs are very excessive for them. Even though they are off grid, they still have grid charges to pay. We are working with a number of the bigger players to see what that would look like. There will have to be a solution. Too many going off grid would have a significant impact on the remainder. I do not think that it can be done arbitrarily on a one-by-one basis. I think that we are going to have to come up with a response to that possibility.

1593. **Mrs Overend**: What feeling are you getting from businesses that are going off grid on the costs for connecting to the grid?

1594. **Ms Hill**: Fairly high. One of our major food companies was in last week, and it has had plans to do that for a very long time, but the costs being quoted are quite excessive. David, did you want add something?

1595. **Mr D Bell**: I wanted to say something about the help, which relates to what you said earlier. We fund the Carbon Trust from the interest-free loan scheme for many projects all over energy

conservation and energy efficiency, and also for the installation of renewable energy systems. It is an interest-free loan scheme up to £400,000, and we have £12 million in that scheme at the moment. We keep adding to it, so it is a big incentive for companies in terms of financing the work that they are doing.

1596. **Mr Agnew**: Thank you for the information so far. How many large energy users do we have, and how many people do they employ overall?

1597. **Ms Hill**: With regard to those who are prepared to disclose their energy uses, we think that there are around 35 to 40 companies, and they would be our larger employers. Think for example of the food sector and the large number of jobs involved there. We would be talking in tens of thousands of employees.

1598. **Mr Agnew**: You said that if there were a newbuild plant, you would be limited in the amount of assistance that you could give for energy efficiency because of the relatively low number of jobs that it would relate to. When you are looking at new investors, it would seem that it could be the difference between their businesses being viable or not in Northern Ireland. It is looking at only the direct impact on jobs rather than the indirect impact. Do you agree with that? If so, would you like to have more flexibility in that regard? What are the restrictions? Time and time again, we hear businesses say that their number one and number two concerns are energy prices, and you say that you are limited in how much support you can give them with regard to energy efficiency. Some of the issues around energy prices are outside our control, the Executive's control and your control. Here is an area where we can impact on energy efficiency, and it seems odd to tie our own hands in that regard.

1599. **Ms Hill**: Generally, the constraints will come through the state aid scenario rather than a Northern Ireland scenario. Therefore, irrespective of energy usage, when a company comes in, we have probably three key mechanisms of support: selective financial assistance, which is based round employment support; R&D support; and training and development support. The point that I am trying to make is that we cannot help directly with energy costs. However, if someone comes to us and says that they are having problems with their energy costs and asks whether we can assist them, our answer is probably around advice or a low-cost loan. If a company comes to us and says we want to set up in Northern Ireland and these are our operating costs, and energy is included in that, then that will form the basis of our overall calculation in terms of what support we can put in.

1600. **Mr Agnew**: I think that fairly answers my question. Would it be possible to get more detailed information on the large energy users and the number of jobs that they are responsible for? We are aware of the importance of the issue to them, and we need to quantify their importance to Northern Ireland.

1601. **Ms Hill**: We can provide what we have, yes.

1602. **Mr Dunne**: Can I just ask a quick question? If a manufacturer or commercial operator comes to you and wants a study done, do your staff carry out that study, or do you give them a voucher, or do you engage consultants to carry out the work?

1603. **Ms Hill**: It is a mixture of both. David, for example, is one of the people who does that. It depends very much on capacity and volume.

1604. **Mr D Bell**: I give advice, and we also engage consultants to do an in-depth study, free of charge, to help people prioritise their energy use and put in effective measures to reduce it. We use both in-house and external experience to allow us to focus on the key issues.

1605. **Mr Dunne**: The consultant, then, is paid by Invest NI?

1606. **Ms Hill**: Yes.

1607. **Mr Dunne**: Does that work fairly well?

1608. **Mr D Bell**: Yes.

1609. **Mr Dunne**: Do they give good advice, generally?

1610. **Mr D Bell**: We scrutinise everything and we ensure that the advice is appropriate, timely, and on a continuous basis.

1611. **Mr Dunne**: Have you seen effective results?

1612. **Mr D Bell**: Absolutely. We can demonstrate that through other figures that we can send you.

1613. **Mr Dunne**: Are businesses out there aware that you are available to do this?

1614. **Mr D Bell**: There are many businesses — I mean, most — but I am sure that there are people that are not. We have an outreach scheme, whereby we go round. I was in Newry last week; colleagues were in Coleraine. Two weeks ago, I was in Enniskillen, to make sure that the message is getting out to companies to ensure that they can avail themselves of the programmes that we have to help them.

1615. **Ms Hill**: The other dimension is that councils now have some funding for this under the local economic development measure. We tend to deal with companies with a bill of £30,000 or more, but we have worked with councils under that initiative to ensure that if they feel that they have clusters of companies in their area, they will deliver that sort of support to smaller companies as well.

1616. **Mr Dunne**: Good. Thank you very much.

1617. **Mr D Bell**: We have worked with those people to help them put together programmes. We work with the Business Improvement through Environmental Solutions (BITES) programme for the councils around Belfast and the Sustainable Together through Environmental Management (STEM) programme for councils along the border. We help them put programmes in place.

1618. **The Deputy Chairperson**: According to Manufacturing NI, the Utility Regulator has stated that the strategic energy framework target of 40% renewables by 2020 will add 113% to network costs. Is this something that Invest NI is aware of?

1619. **Ms Hill**: In terms of the overall cost, no. However, there is certainly a very strong perception in industry that this could potentially lead to those sorts of costs going forward. It is one of the areas raised when we have the companies in. If we can get more transparency out as to how those costs are built up and how those figures are being generated, companies will have a better understanding of what lies ahead. Most companies are of the view that their energy costs are only going to increase, either because of resources getting tighter or because of the different policy initiatives that are coming through, for the main part, from Europe.

1620. **The Deputy Chairperson**: Have you raised any of those policy initiatives with the Department of Enterprise, Trade and Investment (DETI)?

1621. **Ms Hill**: We work very closely with DETI's energy branch. For example, when we have those engagements, they have representatives present. In particular instances, we bring up individual companies to meet the Minister or her officials.

1622. **The Deputy Chairperson**: Have you sought to make any changes to DETI policy that have not happened yet?

1623. **Ms Hill**: No. The renewables obligation certificate (ROC) scenario put forward for renewables is very generous in Northern Ireland, and the only challenge that we had — and DETI's policy branch worked with us on it — is when we looked to see whether there was any way that we could come up with a grant scheme for large energy users that would help companies to install equipment that could help reduce costs. I am talking about the larger guys, not the loan fund end of things. The difficulty we had was that you cannot breach state-aid limits. So, we have that in place if someone comes to us, and we can look at that project and see if we want look at a capital grant for them. However, the firm

cannot take that and the ROCs. In any of the cases that we have looked at, almost without exception, the ROCs are more beneficial to the company than any sort of grant that we could give up front.

1624. **The Deputy Chairperson**: In your initial contribution, you said that you had not lost any client companies yet. I think that you said the word "yet" three times. How important is the word "yet" in that?

1625. **Ms Hill**: I think that it is an issue. We are dealing with a number of companies at the moment which cannot get any security on price for their energy costs. If companies could even know what things will look like two or three years down the road — if they could get that sort of continuity — it would give them some comfort. If energy costs keep spiralling the way they are going, it will become harder and harder for some companies to reinvest. I am less concerned about losing what we have and more concerned about us losing potential new investments.

1626. **The Deputy Chairperson**: When representatives of the CBI were here about a fortnight ago, they said that they believe that some companies are still here only because they have been unable to finance a move in the current economic climate. They think that, once things become more favourable and the economy starts to grow and improve, some companies will start to move because of energy costs. Do you agree with those sentiments?

1627. **Ms Hill**: We do not have any evidence that would support that from our perspective. What we do see is that, because of the other support that we can bring in — employment-related support, R&D support and training support — the energy costs are mitigated to some extent. It is a very fine balancing act, but we do not have any evidence of any companies that are ready to move.

1628. **The Deputy Chairperson**: Or that are waiting for things to improve before they move.

1629. **Ms Hill**: No.

1630. **The Deputy Chairperson**: Is security of supply something that your client companies or the large users are raising with you?

1631. **Ms Hill**: Yes. It is a big issue. It is part of the rationale for Bombardier looking at its own resource on site. If it is a 24/7 operation, and it has to be 24/7, and the demand is increasing on the grid and the grid is going to come under stress, companies cannot take the chance of possibly dropping offline for even short periods of time.

1632. **The Deputy Chairperson**: In terms of the whole issue of budgeting and being able to predict what energy costs are going to be in two, three or four years' time, has Invest NI put forward any proposals to DETI?

1633. **Ms Hill**: DETI has the same information as we do. We work alongside DETI on how we see that going forward. Our initial push over the past couple of years has been to make sure that people look at alternative sources of energy, particularly renewables. Some of those are cost-effective, and some take a much longer time in payback. From a commercial point of view, that can be a difficult decision for companies. However, we certainly make companies aware about the opportunities for buying ahead in oil, gas and so forth and negotiating deals. There is a level of competition from suppliers that there maybe has not been historically, and the large players will have their own key negotiations with companies and suppliers. However, there are some restrictions about how much of that information they are prepared to share in the public domain.

1634. **The Deputy Chairperson**: What about trying to avoid price spikes or significant changes? The recent changes in electricity for consumers saw electricity prices rise by almost 18%. Domestic customers want to see more consistent pricing so that they can budget. I presume that that is the same with businesses. Are there any solutions in the form of policy changes that could be brought in to implement that?

1635. **Ms Hill**: My short answer is no. Policy is very curtailed in what it can do by the regulations and the role of the regulator. Even from an EU point of view, the environmental and energy legislation is very complex and restrictive in what you can and cannot do. Other than making people aware and getting then to try to negotiate and get deals in place, we certainly have not been able to make any recommendations.

1636. **Mr Agnew**: Very briefly, is the Carbon Trust's £12 million interest-free loan scheme likely to be exhausted? Has the take-up on that been positive?

1637. **Ms Hill**: It is very heavily subscribed. It is a revolving loan fund. We have £12 million in the pot at the moment, and there are very low levels of bad debt. If you want, it is constantly turning around and around. It is down to energy savings, and we will OK a project provided that it can demonstrate fairly substantial energy savings. We have not had to turn anybody away because of a lack of available funds. Some people have had to wait for some loans to come back in again, but it is a very successful scheme.

1638. **Mr Agnew**: So the £12 million pot seems to be about right at the moment. I assume that it is kept under review

1639. **Ms Hill**: Yes.

1640. **Mr Agnew**: OK. Great.

1641. **The Deputy Chairperson**: Thanks very much.

10 October 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Fearghal McKinney

Witnesses:

Ms Alison Clydesdale	*Department of Enterprise, Trade and Investment*
Mr Fred Frazer	
Ms Fiona Hepper	
Mr David Sterling	
Mr Bill Stevenson	

1642. **The Chairperson**: With us today are the permanent secretary, Mr David Sterling; Ms Fiona Hepper, head of energy division; Alison Clydesdale, principal in renewable electricity policy and legislation; Bill Stevenson, principal in energy markets external; and Fred Frazer, principal in energy markets domestic. You are all very welcome. Thank you for attending today. Do you want to make an opening statement first, or would you prefer to go straight in?

1643. **Mr David Sterling (Department of Enterprise, Trade and Investment)**: I will say a few words, and Fiona will follow up. Would you like to put a limit on the length of time that we speak for?

1644. **The Chairperson**: Yes. I think that you should have been advised that your contribution is restricted to 10 minutes. We have all new sorts of efficiencies brought in here, too.

1645. **Mr Sterling**: Is it 10 minutes for the two of us?

1646. **The Chairperson**: Yes, and then members will contribute. They are restricted to a total of five minutes each. We can take it from there.

1647. **Mr Sterling**: Will you give us a two-minute warning?

1648. **The Chairperson**: I am giving you a warning, anyway. I hope that questions will be succinct. Responses should be succinct and precise.

1649. **Mr Sterling**: I will be brief. I am here simply to reflect the fact that electricity policy is a very high priority for the Minister and the Department. Energy in general is probably the most challenging policy area that we have. There are all sorts of complex technical and regulatory issues. The Minister has responsibility for policy, but she has very few levers. Almost all the delivery is outside her hands. The role of the regulator is pivotal in all that. As you know, regulators, by law, have a high degree of independence, but we seek to influence regulation so that it reflects the policy goals of the Executive. Much of the industry is privatised and operates in markets over which Governments have little influence. Indeed, European policy is very much to free markets from regulation and, in doing so, drive competition.

1650. **Ms Fiona Hepper (Department of Enterprise, Trade and Investment)**: David mentioned the paper that we sent through. Hopefully, you have all had a chance to look through that. It covers the main elements of energy policy and the overarching domestic, national and European legislative framework that impacts on the Northern Ireland market. David also mentioned the SEF, so I will not go into any detail on that, other than to say that it was set as a 10-year strategy. The SEF is trying to balance the many social, economic and environmental issues and the costs and associated risks. In approving that, the Executive and stakeholders were very aware that there are tensions, not least between the initial cost implications for all consumers of moving to an energy mix with a greater proportion of renewables and the challenge presented by social policy issues such as fuel

poverty. However, in producing the SEF, it was absolutely clear that inactivity was the biggest risk of all and that putting off difficult decisions would only add more cost to consumers in the long run. As David mentioned, we are very much focused on the consumers of today but also have an eye on consumers in the future.

1651. **The Chairperson**: Thank you very much for that. Has the Department done any sort of scoping exercise, through or with Invest NI and with its potential clients, to establish where the under-capacity of the network is inhibiting economic development?

1652. **Ms Hepper**: We have not done anything detailed like that. The build-out of the grid is a matter for the regulator and NIE. However, we are aware and have had discussions with some companies about where they want to upgrade their abilities and apply for an enhanced connection with NIE. They have asked us to feed in some views on that. However, we have not done a specific piece of work on it. We know from our work with the regulator where there are some pinch points in the system, but those are looked at on a piece-by-piece basis for individual companies, whether they be Invest NI client companies or new investors on the renewables side. That is where we have a view. The build of the grid is a matter for NIE and the regulator. It involves licence conditions and the money that is available under price controls.

1653. **The Chairperson**: It is, up to a point, but where that inhibits and indeed prevents economic growth and development in an area, it is surprising that you have not done a scoping exercise to establish just where those difficulties and problems are and what should be done. They prevent economic growth and jobs, particularly to the west of the Bann. Another aspect is meeting the target for renewables. I hear from the industry that the lack of capacity in the grid inhibits the ability of the renewables sector to grow and feed into the grid. So, you have it at both sides. You have to meet the targets for renewables, and that work is being held back by the under-capacity of the grid, particularly west of the Bann, where there are mountainous areas and the like. The flip side of that is that, in some towns and villages, lack of capacity in the grid inhibits economic growth. Do you not think that that would be a valuable issue for the Department and Invest NI to focus on?

1654. **Ms Hepper**: My point is that the Department does not need to do that work. It is done as part of the planning that NIE does with the regulator. They look at where the grid needs to be strengthened, and we feed in on that. We are already getting that information, so we do not need to redo it. We have access to the information through NIE, and we have discussions with NIE about its plans and about bringing work forward. For example, one piece of work that we have on the stocks at the moment, using European funding under the competitiveness programme, is developing a project to bring forward investment in aspects of the grid to draw forward renewables. We have potentially upwards of £50 million of competitiveness fund money that could be matched with money from RP5 to draw forward the build of the grid and, particularly, to focus on areas where there are points of weakness, particularly for the renewables agenda.

1655. **The Chairperson**: You said "potentially".

1656. **Ms Hepper**: I said "potentially" because the money is there in the programme and we are working to shape the project. We are getting input from the regulator side, and its board will have a view on that. We are getting proposals from NIE on where line build would be helpful, and it is providing that to us. I say "potentially" because it all has to go through an economic appraisal and we have to make a state aid case.

1657. **The Chairperson**: So, no application is in yet?

1658. **Ms Hepper**: No. All the potential projects that would come under the proposal are on the stocks in NIE for RP5, and we would pull them forward to do them

quicker. However, the reason I used the word "potential" is that this will be a state aid matter, and I do not want to pre-empt any decision on that. The state aid paper is pretty much drafted and should be submitted within the next month or so.

1659. **The Chairperson**: I need to get it clear in my mind: is an application in for this money yet or not?

1660. **Mr Bill Stevenson (Department of Enterprise, Trade and Investment)**: Fiona is referring to the 2014 to 2020 ERDF programme, which is still in the development stages.

1661. **The Chairperson**: It is the new raft of EU moneys.

1662. **Mr Stevenson**: It is.

1663. **The Chairperson**: So, do you anticipate having that ready to go into the application system in January next year?

1664. **Ms Hepper**: We hope to get the state aid paper in by the end of this calendar year or early next year, and NIE has already had a number of discussions with us and the regulator about a range of potential individual projects. In due course, they will all be subject to regulatory scrutiny. So, on a strategic level, we want to get the state aid application in to say, "The money is for £50 million matched with £50 million from RP5" and to get the approval for that, and the detail of individual projects will then come forward in the period 2014 to 2020.

1665. **The Chairperson**: What is the time frame for that? I am looking at businesses that, as of this moment, need extra capacity, whether they are in the renewables sector or are businesses that want to grow and need a better electricity supply.

1666. **Ms Hepper**: If all goes well, that range of projects will be delivered in the 2014 to 2020 period, but NIE will do other build-out and grid reinforcements as part of its normal business, depending on what investments it gets under RP5. It will prioritise.

1667. **The Chairperson**: Thanks for that. We will move on to a few other questions. When Manufacturing NI was with us, it said that the Utility Regulator estimates that renewables would add 113% to the network costs. Given the current high charges to larger industrial and commercial users resulting from renewables and transmission and distribution charges, would a review of the strategic energy framework consider a possible reduction of the 40% target for renewable energy consumption? Is it scheduled to look at that? Are you thinking about looking at that?

1668. **Mr Sterling**: The work that we are about to undertake will help to inform that thinking, but, at the moment, the Minister has no plans to reduce the 40% target. It goes back to the points that I made at the start. If you reduce the 40% target, certain things will happen. It would have an impact on those who had plans to introduce renewable energy and on jobs, and so on. The other side of the argument might be that, if you decide that you want to reduce the target or take longer to get there, you could argue that that might reduce the impact on tariffs for customers. Those questions and considerations will go into the mix.

1669. **The Chairperson**: I will put this to you as a preamble to a more technical question. Power NI bumped its costs up, and its reasoning for that is the fluctuations in the international gas markets and the like. Airtricity, for example, which gave us evidence, subsequently bumped its prices up by the same margin. Can you give us any sort of indication as to why that should happen? People are asking, if we hit the 40% renewables target, whether that will mean that some of the firms that are sourcing from wind will bump their charges up, just because they can. Should that mean some form of extra regulation to control firms? The only reason that I can see for the companies who take some of their energy source from the renewables sector do so is because they can. We looked at the profit margins for some of those companies, and they are quite large.

1670. **Ms Hepper**: Power NI is regulated, so the regulator's office would look at that in a lot of detail. As to the profit that comes from wind, wind has a very low operating cost, mainly because of the zero marginal cost of the fuel. However, we also need to bear in mind that wind is still a relatively new form of technology. It is not as new as it was, but it is still relatively new. A lot of the equipment is new, and there is a high level of depreciation on it. High maintenance and financing costs are involved in getting these projects up and running, and that builds into the margins that companies have. If you strip all that out of some of the profit figures that you may have seen, the level of profit for those companies is around the average, perhaps a bit above.

1671. **The Chairperson**: You referred to wind generators, and you made a very good case there for more profits. However, those were not the profit margins that we were hearing. Granted, companies receive capacity payments and the system marginal price, which rewards generation at the cost of the highest-cost generator, and they receive renewables obligation certificates (ROCs). Invest NI has termed those receipts as being at a very generous level. When the CBI briefed us, it stated that the larger industrial and commercial users are paying around £6 per megawatt more for renewables here than their counterparts on the rest of the island. Why would that be?

1672. **Ms Hepper**: The price of the renewables in the South is largely through the PSO, if I am correct. Overall, we have a figure of — Alison, what is the price that it pays?

1673. **Ms Alison Clydesdale (Department of Enterprise, Trade and Investment)**: The Republic of Ireland funds renewables through a renewable energy feed-in-tariff (REFIT), and other policies through its PSO, and the cost to domestic consumers there is around €42 a year. For small and large commercial users, it is around €129 a year, which is around €10 a month for a small commercial user, and it bills its large industrial consumers on a kVA basis. It bills on demand, so —

1674. **The Chairperson**: Sorry, on what basis?

1675. **Ms Clydesdale**: A kVA, which a measurement of electricity consumption.

1676. **The Chairperson**: What does kVA stand for? Forgive my ignorance.

1677. **Ms Clydesdale**: It stands for "kilovolt-amp". It is a measurement term for a unit of electricity. The point is that it is done on a demand basis, so the more that an industrial consumer uses, the more that it pays. That is consistent here in the North as well.

1678. **The Chairperson**: Thank you for that. I will pick up on a few other issues, but a few other members want to come in now.

1679. **Mr Flanagan**: Thanks for the presentation. You have a very strong delegation here.

1680. **Ms Hepper**: The generators, whether they be thermal, fossil fuel or renewables, get the level of profit that the market and the market design allows them to take. Therefore, from that point of view —

1681. **Mr Flanagan**: It is not a free market, Fiona.

1682. **Ms Hepper**: No.

1683. **Mr Flanagan**: It is an interfered-with market.

1684. **Ms Hepper**: But from that point of view, the market design and how it is set up allows generators to take that level of profit. From that point of view, it is all above board.

1685. **Mr Flanagan**: Will you run that by me again?

1686. **Ms Hepper**: Yes. As part of opening and integrating markets across Europe and better coupling with markets, a new target model of a market has to comply with a set of principles. The EU is driving that through the Agency for the Cooperation of Energy Regulators (ACER), which is the overarching body

for regulators. All markets across Europe are having a look at that model and at what changes they will have to make in order to be compliant. Most markets have to be compliant by 2014. We are a small, isolated island market, so we have a derogation until 2016. In Northern Ireland and ROI, the two regulators and the two Departments are working jointly on a project to see how the SEM needs to be reconfigured to match the target model. One of the things that we and the Department of Communications, Energy and Natural Resources (DCENR) have said to the two regulators is that, in bringing forward the high-level design, we want a thorough cost-benefit analysis to be done to look at all aspects of the market, options for how it is to be redesigned and what impact that will have on consumer groups.

1687. **Mr Flanagan**: Is the purpose to make the SEM operate more like the British electricity trading and transmission arrangements (BETTA) in Britain?

1688. **Ms Hepper**: No. It is to make the SEM, BETTA and whatever is in France and Germany better integrated and better coupled. We all have to work to the same principles and guidelines. It is not as though SEM is turning into BETTA or BETTA is turning into SEM. There is a set of guiding principles that have to be complied with. One of the things that we looked at in that was costs, how things are operated and how we are going to achieve better coupling through the interconnectors with GB and on into Europe. Obviously, if all those interconnectors can work and trade well, there is potential for the cheaper forms of energy, like nuclear, to come across in greater quantities.

1689. **Mr Flanagan**: Yeah, that is what we really need.

1690. **Ms Hepper**: I am honestly not qualified to say. The example that I gave when I answered the Chairman's question is that I am aware from the Single Electricity Market Committee (SEMC) report that there is a figure of 79% for wind. When you distil that to the fact that turbines have high depreciation, maintenance costs and financing costs, and you strip all that out, their profit levels come down to closer to the average of what some of the thermal plants are getting. Moreover, if I recall correctly from that report, during the past few years, the levels of profits that all generators are getting over time in the SEM has been reducing. There are other generators who would say that one of the issues that they are having in BETTA is that, owing to the way in which it is balanced, there is insufficient profit, which means that generators are unable to drive the new investment that is needed with some of the older plant retiring.

1691. **The Chairperson**: Phil, if I could just come in on that point, please —

1692. **Mr Flanagan**: The Member will get an extra minute?

1693. **The Chairperson**: Yes, indeed. Perhaps I missed it, but I do not recall you responding to the issue of regulation and the company — Airtricity in this case — raising its charges just because it could. You referred to Power NI being regulated. Does that make the case for further regulation? I think that that is the specific question that I asked.

1694. **Ms Hepper**: Certainly, the part of the market that has the largest share — Power NI — is very well regulated. The other parts — Airtricity and the other smaller companies — are not regulated, and they take their lead from the others. I do not think that I can say off the top of my head whether that is a signal that you should impose regulation on all parts of the market. Actually, regulation is a proxy for competition. When you do not have enough competition in the market, you regulate. We have five or so companies in the market. Bear in mind that we are quite a small part of the market in Northern Ireland. We have five on the domestic side and eight-plus on the commercial side. That is actually quite a lot of competition in a small market.

1695. **The Chairperson**: The Department is saying that free market rules regulate? I

hope that is not what I am extrapolating from that.

1696. **Mr Sterling**: We would look to the regulator to make a judgement on whether the market was working or not. At the moment, as Fiona said, we have five suppliers in the market, and only one of them is regulated. The hope is that, as it improves, competition should encourage downward pressure on prices. We would look to the regulator in the first instance to give his assessment on whether the market is working.

1697. **Mr Flanagan**: I would not really be that concerned about greater regulation of retail electricity. I am much keener to explore the possibility of regulation at generation level. As a consumer and a political representative, I think that many generators are paid far too much. We had a report from the Utility Regulator that stated that some generators are making 79% profit. We then had a letter from SSE — Airtricity — which was highly confidential and had to be handed back. We still have not got to go through that letter in any detail. Poor old Airtricity always gets the blame because it is one of the largest customer-facing companies, but it also claims that it generates an awful lot of electricity from renewable sources. I think that it is very hard for Airtricity or a company like it to justify putting its domestic prices up because the price of wholesale gas has gone up, even though it generates a substantial amount of its electricity from wind, the price of which has not gone up. Do you find it strange that a company such as Airtricity, or any other company that generates a lot of electricity from renewable sources, uses the rising price of gas, which actually gives it more profit on its generated electricity, as a reason to put prices up for domestic consumers?

1698. **Ms Hepper**: I suppose —

1699. **Mr Flanagan**: A yes would do.

1700. **Ms Hepper**: I do not want to get into territory in which I am not the expert. Those would be largely —

1701. **Mr Flanagan**: Stay where you are and do not join politics, then.

1702. **Ms Hepper**: Absolutely. I think that you are safe on that one. That is a question that the regulator and the people who know the market would be best placed to answer. The way in which the SEM works is that gas is the price-setter and wind is a price-taker. As I said before, wind does have the opportunity to put downward pressure on the wholesale price. That is one of the reasons why, in the longer term, it is good to get more renewables on to the system. That downward pressure on the price also gives us that extra security of supply in the mix. There will always have to be gas or some sort of thermal plant in the system for backup. I would be straying too far outside of my competence to give a strong yes or a strong no.

1703. **Mr Flanagan**: David, do you want to give it a go?

1704. **Mr Sterling**: No, David is going to tackle it from a slightly different angle. I will simply say that, if your inquiry produces evidence suggesting that people are making unreasonable profits, we would have to look at that in conjunction with the regulator.

1705. **Mr Stevenson**: Fiona alluded to this in the comment that she made about the market design and the arrangements that will have to be put in place to be target model-compliant by 2016. The regulator's paper reflects that 72% of the revenues that are being picked up by the generators are picked up through the pool mechanism and a further 17% through the capacity payments mechanism. Therefore, you have almost 90% of the revenues that are attributable to the market design. It is a market design that the regulators put in place for a number of reasons when establishing the SEM at the outset, with security of supply and development of competition being among the key objectives.

1706. **Mr Flanagan**: This is my final question, Chairperson.

1707. **The Chairperson**: We are a bit pressed for time.

1708. **Mr Flanagan**: Renewables have a downward impact on prices. If there were to be a change in, or a review of, the way in which the system works on price and the way in which capacity payments are made, and of the fact that renewable energy generators are paid for carbon prices, would that have a greater downward impact on prices that domestic and industrial consumers pay?

1709. **Ms Hepper**: Capacity mechanisms are there for a purpose, which is security of supply. If they were removed out of the market, either partially or totally, the price would come down. It is a live issue at the moment across Europe. The European Commission is working on papers and finalising its view on capacity mechanisms and whether they should be allowed to operate in the new target model on a fixed-time basis or not at all.

1710. **Mr Douglas**: Thank you for your presentation. I note that SSE has increased its gas and electricity prices this morning by 8·2%. That will certainly cause David Cameron some problems.

1711. **Ms Hepper**: That is in GB.

1712. **Mr Flanagan**: It has caused Ed Miliband more problems.

1713. **Mr Douglas**: Fiona, you mentioned the review of the strategic energy framework 10-year strategy. Can you give us some more details about that review?

1714. **Ms Hepper**: We will tee up the review in the early part of next year, and it will kick off formally later in 2014. We were very keen to do the initial piece of work first. Obviously, the 40% renewables target is at the core of the SEF. The whole electricity market reform is about bringing forward lower carbon generation at the best price to consumers. We are very keen because we have set a stretching target for renewables at 40%. All the stakeholders agreed, and all the information at the time was that that was entirely doable.

1715. **Mr Douglas**: I will go on to the renewable target that you and the Chair mentioned. Manufacturing Northern Ireland told us that that renewable target is the biggest cost driver in public policy. What are your views on that?

1716. **Ms Hepper**: We always have to be careful on some of the costs and information that is put into the public domain. It is not always entirely accurate. For example, some people say that it would take £1 billion of investment in the grid over the next 10 years. Some people say that that is entirely to do with renewables, so that is what is driving costs.

1717. **The Chairperson**: I want to pick up on something. We have to be careful, but you referred to the impact of the review of energy costs, and the likes, and the frequency. When was it most recently done?

1718. **Ms Hepper**: The biggest review of energy policy was done around 2008-09, as the SEF was being prepared. That is when the overall policy was reviewed. Underneath that, we have a regular rolling period of reviews for the incentives, be they on the ROCs side of things for electricity generation or on the renewable heating side. Then, of course, the regulator is regularly reviewing through price controls and tariff reviews. Therefore, there are the overall strategic reviews at the high level and the ongoing business-as-usual reviews. If, for example, we were to say today, off the cuff, that the Minister is going to review the 40% target and that 20% might be better, it would have a very big impact on projects that are coming forward and projects that big developers have in the pipeline and are perhaps about to go into planning. There are job implications, and there are implications for our target, so it starts to become a circle. Therefore, it has to be managed in a strategic way.

1719. **The Chairperson**: I appreciate that point, but I am trying to establish about the overall fundamental review. I think that that is what you were hinting at.

1720. **Ms Hepper**: The overall review was in 2008-09, ahead of preparing the review.

1721. **The Chairperson**: When was it prior to that?

1722. **Ms Hepper**: There was a SEF 2004. It was before my time.

1723. **The Chairperson**: We are talking about a frequency of four or five years.

1724. **Ms Hepper**: Yes. Bear in mind the fact that, when we put the SEF in place, it was a 10-year strategy. The review would be looking at whether the direction of travel is correct, whether the fundamental underpinnings are correct and whether anything new has changed over the past three or four years. We will measure all of that together, and we will take soundings from all the stakeholders.

1725. **The Chairperson**: That is grand. Thank you for that

1726. **Mr Dunne**: Thank you, folks, for coming in this morning. I want to ask about network costs for large industrial and commercial users. We have had evidence from the CBI. Its representatives briefed us and said that firms here pay £5 per megawatt more for transmission and distribution than their counterparts in the Republic of Ireland. How can the Department look at and address those issues? This week, we are looking forward to new investors coming to Northern Ireland. How can large manufacturers in particular be competitive when they are faced with those costs?

1727. **Ms Hepper**: The key piece of work that is in train is being carried out by the Utility Regulator. One of the key features of that will be an examination of network costs and whether they are cost-reflective in their spread across various customer groups. You mentioned the comparison with the South. One of the key issues that emerged from evidence collection in the early stages of the review was the decision of the ROI Government to skew the costs and that domestic consumers would pay for that. That will all go into the mix.

1728. **Mr Dunne**: What is the Department's thinking on that?

1729. **Ms Hepper**: We want to see all the information coming together from the regulator's work. However, as David and I said in our opening statements, we are very alert to the fact that, in energy policy, you are trying to balance a lot of different factors.

1730. **Mr Stevenson**: There is also, of course, the EU dimension. Europe is becoming increasingly concerned about some of the mechanisms that member states have put in place. In its ongoing review of energy policy, it has referred specifically to the consideration that needs to be given to impacts on competitiveness across member states if particular states start to implement measures, and the impact that that has on all classes of consumers. There is a requirement to collect a pot of money through the network charge.

1731. **Mr Dunne**: I suppose there would also be an impact on small and medium-sized businesses, which we have a lot of in Northern Ireland.

1732. **Ms Hepper**: There would.

1733. **Mr Dunne**: Do you surcharge them to benefit the larger businesses? That is a difficult question.

1734. **Mr Sterling**: Those are the interesting policy questions about where to strike the right balance.

1735. **Mr Dunne**: There would be major implications if you were to do that here.

1736. **Ms Hepper**: It goes back to David's frogs. As you knock one down by trying to help one group, another frog pops up, and you end up with a lot of frogs with sore heads, as well as a sore arm.

1737. **Mr Dunne**: Yes. Striking that balance is difficult. Seemingly, the Government in the Republic have made that decision.

1738. **Ms Hepper**: They took a decision at Cabinet level that, for the good of the economy —

1739. **Mr Sterling**: To protect jobs, essentially.

1740. **Ms Hepper**: Yes. They were quite content that householders bear the

additional costs. I imagine that the Minister will have to make a judgement and bring it to the Executive. It would be a cross-cutting issue.

1741. **Mr Dunne**: I would suggest that that should not be done in an election year. *[Laughter.]* Thanks very much.

1742. **The Chairperson**: Have you given any thought to the SEM committee being given the authority to look at those charges within the SEM?

1743. **Ms Hepper**: It already has the authority to do that, and it does it. It does not need to be given the authority because that is part of its role.

1744. **Mr Sterling**: It should be doing that.

1745. **The Chairperson**: It should be?

1746. **Mr Sterling**: I am not suggesting that it is not, but that is part of its role.

1747. **The Chairperson**: It that specifically on network costs?

1748. **Ms Hepper**: We are interested in how network and other costs impact on Northern Ireland, to be a little selfish. Our regulator is looking at that and will bring forward a paper. An update paper is pending, which will put a series of pieces of work in train. It will report on those to the Department and the Committee. The SEM committee has a role in how the market operates: all facets of the market and all the elements, including the network costs and how they are spread.

1749. **Mr Dunne**: I want to return to the first point that I made about the costs. Are you saying that the Utility Regulator is doing a piece of work on that?

1750. **Ms Hepper**: Yes. You will recall that it published a piece of work in March that looked at how Northern Ireland sat alongside European countries. Having put that first piece of work out for consultation and sought views, it is shaping up for its next steps. That is all about the costs in the system, and you should see an update paper on that in the next few weeks.

1751. **Mr Dunne**: OK. Thanks very much

1752. **Mr Frew**: David, in your opening remarks you said that you were concerned about the level of cost for large users. I share that concern greatly —

1753. **The Chairperson**: We are not quorate. We will suspend for a minute. Sorry about this.

Committee suspended.

*On resu*ming —

1754. **The Chairperson**: Sorry about that. We are badly down on our numbers today, if anybody goes out to take a phone call or something like that. Back to you, Paul.

1755. **Mr Frew**: Take two, Chair. Thank you very much. We were discussing the difference between high energy users, the domestic market and small consumers. I will name a company in my constituency, and members will know rightly what I am talking about. I name that company because, when Wilton Crawford was before the Committee, he painted a stark picture. He said that, if things do not change in respect of energy costs in this country, Michelin will not be here in five or 10 years. That is a stark picture. We talked about fuel poverty. Losing 1,000 jobs directly from Michelin and losing about 500 or 1,000 jobs indirectly because of Michelin going would push 2,000 families into fuel poverty overnight. It is right and proper that you are concerned about that and that we start the debate as soon as possible about what we can do.

1756. **Ms Hepper**: The information in the paper is based on the £22·1 million figure for the PSO. In 2013-14, that goes down to £14·3 million. If you were to skew that entirely to the domestic customers, it would put domestics up by about £11 a year, or about 1·5% or 2%. The impact on the large energy users would be to reduce their annual bill by about £14,500. Although there has been a lot of talk about the PSO, the answer to our collective dilemma does not lie in the PSO. It will have to lie somewhere else. We fully appreciate that £14,500 is £14,500, but when your bill is hundreds

of thousands of pounds a month, that does not make a huge difference. However, it will make a huge difference to the small I&Cs and the domestics. We did that piece of work to identify clearly one element of the evidence. We will now add in the other stuff around the other network costs. The regulator will look at how those are balanced and the various options.

1757. **Mr Frew**: If we were able to influence, change or tweak levies, fees and everything else that builds up the energy costs on a bill, other factors, perhaps even the generators, could take advantage of that and increase their charges. Has any work or study been done on that?

1758. **Ms Hepper**: That will all be in the piece of work that the regulator is teeing up now. That is why it is very important that that work gets up and running, because the results will influence any decision-making. Again, it goes back to the point about balancing all the different elements. You do not want to fix one part of the problem only to find that you have either created a loophole somewhere or caused an inadvertent effect somewhere else, as happened with the carbon price floor. The carbon price floor, you will recall, was actually a very good and sensible way to help decarbonise, but it had unintended consequences in Northern Ireland that we had to work through. We have to guard against that.

1759. **Mr Sterling**: You will recall that Bill mentioned earlier that the EU is looking at a number of member states that have skewed their charging policies and tariffs to assist large energy users in particular. We have to be careful that we do not do anything that attracts that sort of attention.

1760. **Mr Frew**: But while it investigates that, the Republic of Ireland companies are being charged 20% less.

1761. **Mr Sterling**: They were quite open about what they did in Dublin. Have we any indication that the EU is looking at that?

1762. **Ms Hepper**: No; we have no indication of that. Indeed, we have no indication of whether they went through a process and had state aid approval for that. That would be for them to justify. Some of that will come out in the wash.

1763. **Mr Sterling**: I just want to stress that the Minister has us and Invest NI working very hard to find ways to facilitate that company and others that are in a similar position. What I would say is that all good ideas are very welcome. We will look at anything that might make a difference.

1764. **Mr Frew**: I mentioned a particular company because its representative was here to present on its behalf. For your information, Chairman, he has now moved on and is a plant manager somewhere else. Even in north Antrim, there are many large users of electricity. You mentioned companies tapping into renewable energy and creating their own energy. Again, that will help those companies, but it will skew the market.

1765. **Mr Sterling**: Yes. If somebody goes off the grid, that obviously apportions the costs to other users. Again, it is another frog.

1766. **Mr Frew**: You would like to think that you could incentivise companies to do that and that it would all help, but what is the Department doing to curb the effect that that would have on the grid and the burden it would place on larger companies that do not go down that route?

1767. **Mr Sterling**: At the moment, we are not actively doing anything to prevent someone from doing that if they decide it is best solution.

1768. **Mr Frew**: I would not say "prevent". How can we assist the other companies, the grid itself and the small users if they have to take a hit because a larger company generated its own energy? How do we help the market so that it is not skewed to the point where it places the burden on other companies?

1769. **Ms Hepper**: The work that the regulator is doing will start to air some of those

issues. It will not be easy to square that circle, because the bottom line is that we need a grid for the 21st century, and that grid has to be paid for. At the same time, as you rightly said, there is the point about protecting several thousand jobs. If a company or even Invest NI said, "You can protect those people by going off the grid and putting in a CHP plant", the balance, then, is between whether you protect those 5,000 jobs and all that flows from that — the knock-on consequences and the multipliers — or whether you get other people to pay a little bit more.

1770. **Mr Frew**: This is my last question, Chairman. We are still in the grip of a recession but, thankfully, we see signs of recovery. Companies did not have the opportunity to move away because of high energy costs; they did not have the capital or the money to do it. That might change in the coming years when they build up capital again. Is any work or investigation going on to try to ensure that those companies do not move away, even to the Republic of Ireland or GB? Is there any work that we can do to help incentivise them to stay here if they have the capacity to move away?

1771. **Mr Sterling**: Invest NI generally works with the business base that it deals with — it does not talk about client companies so much now — to encourage businesses to stay here. I am not sure that any particular work is being done on energy, although we could certainly think about that. Invest NI is continually seeking to ensure that businesses are encouraged and incentivised to stay here.

1772. **Ms Hepper**: When Invest NI representatives were here last week, they talked about the package that it offers, and energy costs is one element that the companies look at. There is also the package of incentives: selective financial assistance, various grants for R&D and innovation, and skills training on top of that. There are also the other wider issues for the Executive, such as industrial derating for manufacturing here and the big issue of corporation tax. All of that starts to come into the frame of the work that you are talking about.

1773. **Mr Sterling**: Generally, we seek to encourage companies to move into advanced manufacturing and to get engaged in research and development. In so doing, they become much more entrenched here and are less likely to move than those that are involved in low-level, simple manufacturing, which is very mobile and can move anywhere.

1774. **The Chairperson**: Thank you very much for being with us today. That concludes our session with you.

24 October 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sammy Douglas
Mr Gordon Dunne
Mr Paul Frew
Mr Fearghal McKinney
Ms Maeve McLaughlin
Mrs Sandra Overend

Witnesses:

Mr Michael Atkinson	*Northern Ireland*
Mr David de Casseres	*Electricity*
Mr Peter Ewing	
Mr Robert Wasson	

1775. **The Chairperson**: I welcome Peter Ewing, deputy managing director and director of regulatory affairs; Robert Wasson, asset management director with responsibility for the overall asset base of NIE; David de Casseres, transmission project director; and Michael Atkinson, head of generation connections. Thank you for being with us today as part of our review; it is good to see you. You have probably been told that the format is that we allow you 10 minutes to make a presentation, and then we have questions and answers from members. Whichever one of you is fronting, the floor is now yours. Please continue.

1776. **Mr Peter Ewing (Northern Ireland Electricity)**: Thank you, Chairman; good morning, Committee members. Thank you for giving us the opportunity to provide an update specifically on the North/South interconnector. You said that we have 10 minutes, so we will try to keep within that if we can. Before we kick off, I will give the Committee a brief overview of NIE's role in the electricity industry before handing over to Robert, who will provide an update on the North/South interconnector. We are obviously happy to take questions after than on the interconnector and any other matters generally as they arise.

1777. **Mr Robert Wasson (Northern Ireland Electricity)**: Good morning, members. Referring back to the briefing note which you should have, I will briefly underscore the main drivers of need for the interconnector. There are three primary drivers for the project. The first driver is to facilitate increased competition in the all-island electricity market. For the market to operate properly it is necessary that all generators are able to compete freely to deliver their production across the island so that customers can benefit from the lowest possible prices. The present network bottleneck that we have at the border restricts that mechanism, which results in electricity prices being higher than they might otherwise be. Those inefficiencies have been estimated to cost customers across the island approximately £25 million per annum. In the context of rising concern over the level of energy prices generally, it is very important to address that bottleneck.

1778. **The Chairperson**: Thank you very much indeed for that. You raised a number of issues of concern. Can we go back to the difference in the computations, the £1 billion versus £500 million? Where did all that come from? How did someone, somewhere get it so wrong?

1779. **Mr Wasson**: The question is really at what stage it was done. Those initial, very high-level estimates were done over five years ago.

1780. **The Chairperson**: Who made those estimates?

1781. **Mr Wasson**: They were done by NIE, but they would have assumed various scenarios, particularly in relation to the development of the 275,000 volt or 275 kV transmission system, which, having used consultants and our own experts' in-depth analysis of what is

actually required, we now believe is not required. That is one aspect. The other thing that has changed since that position, five or six years ago, is that we have the real prospect now that there will be very-large-scale offshore and tidal developments within the next several years. The impact of that is that there is potentially less development required on that 275 kV system around the Province. Those really are the two main factors which lead to a downrating of the overall works that are required. However, as I said, we will get into that in quite a bit more depth with DETI when it carries out its analysis in the coming months.

1782. **The Chairperson**: I hear the point that you are trying to articulate there, by way of a DETI-led thing with regard to strategic planning applications, but, given the course of the debate in the earlier part of the week around the Planning Bill, I think that that is going to be a non-starter for you, guys. You are into the field of politics there.

1783. **Mr Wasson**: OK. I am not aware of the specific case that you mention, so it is probably better to talk about this in general terms. Can you please clarify whether there is a specific concern in your question around connection of renewable generation by a private developer, or is this related to load?

1784. **The Chairperson**: That is one aspect of it. The other aspect is simply economic development; it is not of a renewable nature. We are talking about two types of economy or business here.

1785. **Mr Wasson**: OK. NIE has an obligation, as I have said, to make sure that we have network available, both for people who want to install generation on the system and for growing load requirements. From a timing point of view, what we try to achieve with those investments is balance. So, on the one hand, we want to ensure that, when people need capacity, it is available within a reasonable time frame; on the other, we do not want to invest too far ahead of time because that would be a bad idea for customers, who would have to fund that ahead of time. In relation to load, within our price controls — and obviously we still have to settle the next price control, and we are in the Competition Commission process to do that — we have provision for investment in the networks. We keep abreast of the various loading levels on the networks and make sure that, in aggregate terms, we keep ahead of customer requirements on those networks. We ensure that lines, transformers, substations and so forth do not get overloaded.

1786. **The Chairperson**: You touched on renewables. The last time we met, you said, as we know, with the renewables sector we are talking about mountaintops, and wind turbines and the like being strategically positioned. As it turned out, because of the evolution of industry in the North, Belfast and the east have received all, or a good part, of the investment whereas in the areas where renewables are targeted — into the west and on top of mountains — the infrastructure is weak. I think we said last time, and you can correct me if I am wrong, that in parts of the west, in and around the Sperrins, the substations feeding off that would require something in the order of a £20 million investment upgrade. Can you advise where you are with that, and then we will move on to the North/South interconnector and ask you just one more question?

1787. **Mr Wasson**: OK, that is fine. Renewable generation, and the people who seek to connect that type of generation to the system, split into two main categories that we should mention. The first is what we would refer to as large-scale generation. Typically, those are the wind farms that we see around the Province. We have connected 30 of those, and there are about another 42 at various stages in the pipeline, which is fairly significant. It represents over 530 MW connected already. The bulk of those tend to be in the west of the Province, so they tend to be west of Lough Neagh, because that is where the wind is. One of our challenges is to get that power to where the load is, which tends to be not in the west but in the east of the

Province. So, a lot of the transmission-related developments — some of which have been approved recently by the regulator and which we are working on — are aimed at getting the output of that generation to where the load is.

1788. **The Chairperson**: Will you provide us with some written detail on your projects and your roll-out programme of work for those projects?

1789. **Mr Wasson**: I would be happy to do that.

1790. **The Chairperson**: Can you give us an overview of the North/South interconnector, the process, and where it is at the moment in terms of planning? I know that you had to make some amendments, and that those had to be sent in, so where is that at the moment?

1791. **Mr Wasson**: I will ask David de Casseres to talk to that. David is our project director on the North/South interconnector.

1792. **Mr David de Casseres (Northern Ireland Electricity)**: Just a quick update, then, Chairman. We have undertaken a major piece of work over very many years to identify alternatives for the interconnector and the best way in which the interconnection circuit could be developed while having the lowest possible impact on the environment and the least visual intrusion for people living along the route. In doing that, we engaged for a number of years with people living within 1 kilometre either side of the line. We have held open days. We have been through a great deal of public consultation and discussion stretching back many years before we made a planning application in December 2009.As many people here will remember, there was a decision taken by the then Minister of the Environment that, because of two particular issues — one being concerns over public health and the other being confusion or misunderstanding about whether undergrounding was an option — the subject should be brought to a public inquiry.

1793. **The Chairperson**: Thanks very much for that.

1794. **Mr Dunne**: Thanks very much, and welcome, gentlemen. I think we all recognise the need for the interconnector. It is vital for the future of business in Northern Ireland and for us to grow, as we are planning to do. Will you clarify the length of the interconnector? There is a certain section in Northern Ireland and a certain section in the Republic. Can you clarify the distances involved, please?

1795. **Mr de Casseres**: The length of the overall interconnection development to make the process of interconnection happen as it should between the two transmission networks is 140 km in total. The length in Northern Ireland is just around 34 km.

1796. **Mr Dunne**: How is the section in the Republic progressing?

1797. **Mr de Casseres**: In the Republic of Ireland, the initial submission was made at the same time as we made the submission here; in December 2009. In April 2010, they went through what is known as an oral hearing process. At that process, arising from a number of challenges that were raised at that time, they decided to withdraw their application and go through a process of re-evaluation of the project. That process has been undertaken for a number of years. It was interrupted by the fact that the Government in the Republic have asked for particular reports to be engaged as part of that process and have brought into place new policy in relation to infrastructure as part of that process. There have been some delays there, but EirGrid, which is responsible for developing it in the South has very recently published its preferred project solutions report, setting out what it now proposes to do. It has just concluded public consultation on that in September, and it intends, we understand, to submit the revised application early next year.

1798. **Mr Dunne**: I have a couple of other points. The use of pylons is your preferred option for the construction. How does that fit in with planning policy? We have had the introduction of

wind turbines in the countryside, which, in many cases, have been controversial. How do you feel the construction of what people think is a rather dated system fits in with planning policy? I remember pylons going up in the countryside when I was going to school. That is a few years ago, and I do not recall an awful lot going up recently, but perhaps it is the case that you are still using them. How do you feel that they fit in with planning policy?

1799. **Mr de Casseres**: First, there is no conflict with planning policy. Planning policy does not prevent or oppose the use of overhead lines in any way, shape or form. We are required, in order to provide for electricity transmission circuits, to have three legs of a stool, if you like. We have to make sure that whatever we do is technically capable of doing the job, for one thing. For another thing, it has to be environmentally acceptable. Thirdly, it has to be possible to do it at an economic cost, because at the end of the day the customer is paying for the infrastructure that we install and use. Those are three tests that we have to apply to everything that we do.

1800. **Mr Dunne**: Finally, what is being done to get buy-in from the local community in the proposed area? Has there been much of an effort made by NIE and those working on your behalf to get buy-in locally for the proposed interconnector?

1801. **Mr de Casseres**: As I said a few moments ago, we spent a good deal of time in the early days of planning the route talking to people in the local community, telling them why the interconnector was needed, explaining to them the options that we were looking at for routing it and inviting comments on it. We received very little feedback from the local community in this process, other than, as you will recognise, objections to towers or pylons generally.

1802. **Mr Dunne**: OK. Thanks very much.

1803. **Mr Flanagan**: Gentlemen, thanks for the presentation. I suppose we should be starting off by saying that the construction of two separate grids on this island was the wrong decision to take at the start, and that is what we are dealing with. In terms of where we are now, I presume that you can only speak for NIE and that you cannot speak for EirGrid.

1804. **Mr Wasson**: Yes. We are here to speak for NIE this morning. However, if there are any clarifications that we can give you on EirGrid's process, we are happy to do so.

1805. **Mr Flanagan**: Can we talk about your assessment of the feasibility of underground connection? It will be interesting to read what you said earlier about how we should deal with facts and simply stop considering undergrounding as an option. On what facts are you basing that statement?

1806. **Mr Wasson**: I will ask David in a second to talk about that in a little bit more detail. The basic premise of that statement is that the type of system required to underground the connection is not technically proven anywhere in the world. That is a concern in itself, but it is even more of a concern when you try to apply it to the system that we have in Northern Ireland. Although we like to think of Northern Ireland and the total island as being a substantial piece of territory, it is tiny in electrical system terms. If you compare it with continental Europe in electrical system terms, it is very small. That leads to difficulties with operating those types of system.

1807. **Mr Flanagan**: I am not trying to put words in your mouth, but is your justification for not doing it that it has not been done anywhere else?

1808. **Mr Wasson**: It is that it is not technically proven. We would be in a situation in which there would be a very substantial investment. Some of the estimates for the cost of such a piece of technology are almost €1·2 billion. It is a very significant cost, which, of course, would fall to customers.

1809. **Mr Flanagan**: Sorry, what is going to be €1·2 billion?

1810. **Mr Wasson**: The cost of a DC link. Potentially, it is up to just short of €1·2 billion.

1811. **Mr Flanagan**: And who came up with the €1·2 billion figure?

1812. **Mr Wasson**: David will talk about the detail of that in a second. We have had some expert advice on that.

1813. **Mr Flanagan**: I will just pick up on that point. I am quoting from a report from the Joint Committee on Communications, Natural Resources and Agriculture in the Oireachtas. On the technical feasibility of undergrounding, it states:

> *"Notwithstanding EirGrid's lack of specific information the Committee feels that the following concerns remain ... There is limited information on the failure rate of HVDC cables. However in the East-West Interconnector Review ... submitted to the Committee it was stated that there is no reason to assume a higher failure rate for HVDC cables than for High Voltage Alternating Current ("HVAC")."*

1814. **Mr Wasson**: The issue does not really relate to the failure of the cables. The key issue is whether that link will allow the operation of the two systems to happen synchronously. We are getting into power engineering terms, but, basically, you want the two systems to look as one. If they do not, that can have very significant issues.

1815. **Mr de Casseres**: I do not want to go into technical detail, and I am sure that you do not want me to do that. It is very important for us to understand —

1816. **Mr Flanagan**: Do not be scared to go into technical detail.

1817. **Mr de Casseres**: I am not scared of it, but I do not want to bore everyone or treat you all to a lecture. A few minutes ago, I referred to the fact that we have three tests that we have to put into place around major investment in infrastructure. Those tests, if I just say them again: we have to make sure that whatever we do will do the job and perform technically. That is the first one. The second one is that it has to be environmentally acceptable. The whole process with the PAC and the planning process is about that second one. It is a judgement that has to be made by competent authorities. The third test is economic; it has to be affordable or right, in terms of what people can afford to pay. Customers cannot pay for gold-plating. They need to pay for what is necessary and appropriate, and we have an obligation to provide that. So those three tests are uppermost in our minds and are very close to everything that we do as a business.

1818. **Mr Flanagan**: David, I do not accept that because something has never been done, it cannot happen.

1819. **Mr de Casseres**: Absolutely. I do not either. We can invent all sorts of things. I am just observing that it has never been done. That is not the whole reason, Mr Flanagan. If we were to use a DC system, which is a different technology, for connecting the two networks, that DC system, again, has never been used to link on a synchronous power system in the way in which we want this thing to work. That is back to the first test: that we make sure that it works properly. We have to consider all of those things when we come to designing this, and that is why we are not in favour of undergrounding.

1820. **Mr Flanagan**: Robert mentioned a figure of £1·2 billion.

1821. **Mr de Casseres**: We have set out the figures very clearly in the submission that we have just made. This is one of the reasons why the public inquiry here was called for. We are very much aware that there was initially confusion between the differences in the costs, as different costs were quoted for different scenarios and technologies. So we went away and asked independent engineers to update all the costs, bringing them right up to date with modern technology, and provide us with the cost differentials. Let me refer to that, so that I do not get it wrong. In the report, the costs are quoted in euro so that there is no confusion over things like exchange rates. The assessment of the

overall cost of interconnection using an AC overhead line was €225 million.

1822. **Mr Flanagan**: Whose assessment is this?

1823. **Mr de Casseres**: This is PB Power's assessment.

1824. **Mr Flanagan**: They are the consultants that you hired?

1825. **Mr de Casseres**: They were the engineers that we appointed to do this work.

1826. **Mr Flanagan**: That is all right.

1827. **Mr de Casseres**: The cost of an AC underground cable was €1,070 million, so that is just over €1 billion. And the cost of a DC link, which again uses an underground cable, but which is a completely different technology, is €1·17 billion. That is where the €1·2 billion —

1828. **Mr Flanagan**: Is there a difference in capacity between those?

1829. **Mr de Casseres**: No. That is for the same overall capacity.

1830. **Mr Flanagan**: OK. The international expert review that was commissioned by Pat Rabbitte found that the overground link would cost about €170 million and that undergrounding it cost about €500 million. However, undergrounding it was only half as effective, which is a ratio of one sixth as good, or three times the price for half the quality. Your figures indicate that it is five times more expensive. In that report, did anybody say that it is not feasible to do it underground?

1831. **Mr de Casseres**: Sorry? In which —

1832. **Mr Flanagan**: In the report that you got those engineers to do. Did they say that it was not feasible to underground it? Or was it simply a pricing matter?

1833. **Mr de Casseres**: It depends on what you mean by "feasible". What we have just been attempting to point out —

1834. **Mr Flanagan**: The phrase that your organisation keeps using is that "it might not work". That also means that it might work or it could work.

1835. **Mr de Casseres**: OK, let me just get back into the technologies. We keep talking about undergrounding —

1836. **The Chairperson**: We can hypothesise about that one all day. If you do not mind, will you please make your answer to that question brief? We have allowed a fair wee bit of latitude on going over there, and a number of other members have indicated that they want to ask questions.

1837. **Mr de Casseres**: I will. I just wanted to make sure that we were describing the same thing. We have an AC system on the island. AC means alternating current, and Robert referred to synchronisation. For this thing to do the job that we need it to do, it needs to synchronise properly between the North and South of the island so that we have one single synchronised transmission system. That is the fundamental job that this thing needs to do. That means that it has to either be an AC circuit or behave as if it is an AC circuit. You can use a DC circuit, but then it has to have very complex and very difficult control systems put around it so that it behaves like an AC circuit. The example that has been used is the difference between using a motorway, which has continuous travel in both directions, and something like a ferry, which still gets cars from A to B but in a different way. You have to use technology, with different costs, and there are different risks and issues.

1838. **The Chairperson**: Thanks very much for that. Thanks, Phil. One point on the technical aspect of things has come up. Security of supply is a major issue and is part of the review that we are conducting. Are there any opportunities for post-2016, which has been flagged as potentially being D-Year — any possibilities for the likes of cross-border linkages, say between Newry and Dundalk, Strabane and Lifford and Derry and Letterkenny, that would help obviate that problem? You are the technical guys, and this is just simple old me asking the question.

1839. **Mr Wasson**: Chairman, I will take the first portion of that question. The short

answer to whether there are any other alternatives that we could look at from an interconnection point of view is no. Extensive studies have been carried out —

1840. **The Chairperson**: Just to clarify, I was not talking about alternatives. I am looking at the process and, rightly or wrongly, the slowness of where we are at the moment. With the best will in the world, your drivers and experiences do not indicate to me that you will have a North/South interconnector in place by or for 2016. Probably the word to use is "fallbacks". Are there any fallbacks so that, if we have a problem with security of supply, somebody can flick a switch and, say, connect to Dundalk, Monaghan, Lifford or Letterkenny? Is there anything that you can do to put that in place? You are the technical guys. I am just asking a simple question.

1841. **Mr Wasson**: For clarification, we have two points of standby connection that are quite separate from the existing interconnector. Those are much smaller standby connectors between our networks on the 110 kV systems. Really, those are only used for fault situations and they are very limited in their power transfer capability. That is not what they are for. They are there so that, in the event of a fault, one side of the border can supply the other to a limited extent.

1842. **The Chairperson**: Where are they, Robert?

1843. **Mr Wasson**: One is in Enniskillen, and the second is close to Letterkenny. Therefore, again, the short answer is no. Those are purely standby connections that cannot be used for the very heavy bulk transfer of power that you need to sort the security-of-supply situation out; nor do we have other points on either of the networks that would allow that to happen. The mooted interconnector is really the only game in town for what we need to do for system security.

1844. **Mrs Overend**: Thank you very much for coming today. The conversation has been very interesting so far, and you have answered a lot of my questions. I want to pick up on the previous point. Is there any chance of those two standby connections being upgraded? Is the network system underlying them not suitable for that? Is there any way of enhancing or developing those connections further so that they can become proper full-time connections?

1845. **Mr de Casseres**: Those options were looked at in the early stages of looking at the overall options for interconnection. Simply put, the answer is no. Interconnecting at a lower voltage of 110 kV using multiple connections does not do the job. It does not enable the two networks to lock together in a strong and stable fashion, which is what we need to do. I referred to the synchronous interlocking of the two transmission grids. Connecting through a small-scale system does not achieve that. You could still end up with instability between the two grids. It does not provide a solution. As Robert said, it provides a short-term flow for rescue and fault conditions, but it does not lock the grids together in the way that we need to.

1846. **Mrs Overend**: It just seems logical that, if there are pylons already connecting at those points, we should use those, rather than building new pylons etc. However, you have said that those are not capable of doing that. Sorry; that is just the basic logic to my mind.

1847. **Mr de Casseres**: They are in the wrong place. They are in weak parts of the network and are used for power export under certain conditions. They are not in the right place so it is just not possible to use them.

1848. **Mr Wasson**: I would like to expand on David's point. Chair, you asked us to send you some details on what NIE is doing generally to reinforce the system. We can send you a diagram that will highlight that. What you will see in that diagram is that, in the east of the Province, we have a very strong 275,000 volt — 275 kV — system, which is the top voltage in our transmission system in Northern Ireland. Underlying that, we have a 110,000 volt system across the Province. However, to the west of Lough Neagh, with the exception of a double-

circuit line to Coolkeeragh, we have only the 110 kV system. For the type of interconnection that we need for the bulk transfer of power that would be very close to the peak demand for the whole system in Northern Ireland, we would have to connect the 275 kV system to the 400 kV system in the South. That is what the mooted interconnector would do. The issue with the network in the west of the Province is that we do not have 275 kV there. From a planning perspective, to put that in place would be just the same as trying to build the interconnector. That is the issue.

1849. **Mrs Overend**: That is fair enough. I appreciate the detail. I understand that NIE incurs certain penalties around the generators. If the generators cannot sell as much energy as they supply, NIE incurs penalties for not being able to get rid of all the energy that is generated. Perhaps, I have not got that right. Are there some sort of penalties that the generators incur and pass on to the consumer?

1850. **Mr Michael Atkinson (Northern Ireland Electricity)**: NIE does not directly make payments if there are restrictions on the amount of capacity at a point in time that mean that the large generators have to pull back or reduce their output. The all-island pooling mechanism, which is managed by the Systems Operator for Northern Ireland (SONI) and EirGrid, provides compensation to the generators. That is not an NIE function as such, but is administered through the all-island pooling and settlement arrangement. The generators are compensated if they have to be constrained in their outputs, but that is not an NIE function as such.

1851. **Mr Wasson**: There is a fund in the trading mechanism to allow for that. That is really to get round the imperfections that are in the system at present because of transmission constraints, which are being dealt with over time.

1852. **Mrs Overend**: Ultimately, who pays for that?

1853. **Mr Wasson**: The customer.

1854. **Mrs Overend**: The customer pays for that. So, in effect, the customer is already paying for the lack of a North/South interconnector?

1855. **Mr Wasson**: That is correct.

1856. **Mr Frew**: It is £25 million.

1857. **Mrs Overend**: Sorry, Paul. You pitched in there about how much that was. I was just going to ask.

1858. **Mr Frew**: Go ahead. *[Laughter.]*

1859. **Mrs Overend**: I did not quite hear you.

1860. **Mr Atkinson**: I think that it is the £25 million per annum figure that was referred to earlier with respect to the impact of not having the interconnector in place.

1861. **Mrs Overend**: I appreciate that. I have another couple of questions if you do not mind, Chair. I will be quick. My five minutes are not up yet.

1862. **The Chairperson**: You could ask both of them at the one time. I am conscious that Paul has to get away. He is next to speak.

1863. **Mrs Overend**: I wanted to ask about connection charges. Perhaps that is not appropriate for today. You referred to the use of renewables as being key in the future. Many constituents and businesses go through the process when they want to put up wind turbines, and so on. However, they have to go through the planning process before they can connect to the grid. They sometimes find that the costs to connect to the grid are so huge that they cannot proceed any further. Have you any comments on the huge connection charges that people incur?

1864. **Mr Atkinson**: I can pick up on that. I know that we are constrained by time but I may need a couple of minutes to answer that, because it is quite an important issue.

1865. **Mrs Overend**: Perhaps we could bring you back to talk about it some other time.

1866. **The Chairperson**: Could we get an answer to that in writing? I am conscious of the efficiency of the meeting.

1867. **Mr Atkinson**: Yes. I can say, very briefly, that we will be publishing an information map very shortly on our website.

1868. **The Chairperson**: That is good.

1869. **Mr Atkinson**: It relates particularly to the concern that you have raised, which is, typically, the smaller single turbines. Essentially, they connect not to the transmission but to the distribution parts of our network. We are finding, in the north and north-west of the Province, that capacity is running out very quickly. As a result of that, developers are, in many cases, having to take on board quite significant reinforcement costs, in addition to the immediate costs of getting them onto the network. That is causing some very scary costs for constituents.

1870. **The Chairperson**: We will pick up on that. The Clerk has made a note of Mrs Overend's question, which we will forward to you. Did you say that you were due to publish that map or that it has been published?

1871. **Mr Atkinson**: We have spent some time pulling that together. By the end of this week, it will be available on the NIE website.

1872. **The Chairperson**: That will be helpful. Perhaps someone could send that link to us.

1873. **Mr Atkinson**: Sure.

1874. **The Chairperson**: Go ahead, Mr Frew.

1875. **Mr Frew**: Thank you, Chair. I was getting frustrated there; that is why I chipped in. The whole issue frustrates me. The time lag on the North/South interconnector, which is vital for the economy, not least for businesses and the public with regard to their bills, is a gigantic issue. It is really huge. This is one of the biggest things that the Government need to put in place now. It should have been in place by now.

1876. **Mr de Casseres**: I think that I mentioned earlier that the next stage is that the Department of the Environment Planning Service must return the whole package of applications to the Planning Appeals Commission. It must be satisfied that all of the questions have been asked and that it is fully valid and complete. It is going through that process and the public consultation now. It is very much aware that it has to do that fully and properly. They will take the time that they need to take because there is no point in doing it too quickly and then finding that it is challenged. They are telling us that it will take until December or perhaps slightly beyond to get to that point. Beyond that point, the Planning Appeals Commission will engage with that, examine what is in it, and decide when and how it can fit a reconvened inquiry into its programme. We are very anxious for that to happen very quickly because, as Robert said, we are very much aware of the need for this to happen quickly. The planning consent is absolutely mission critical. After that, we can move forward to do other things to accelerate construction. Until we have consent, however, we cannot start to do anything. That is why we are so engaged on this issue.

1877. **Mr Frew**: I get the whole concept of the technology and the fact that this is really the only show in town when it comes to alternatives for interconnection at that transmission level. I understand the shape of the grid at present and I understand the differential in costs between overhead and underground lines. I am perplexed, having grown up and lived in the shadow of pylons all my life. Phil, you will agree that I am pretty normal.

1878. **Mrs Overend**: That is debatable. *[Laughter.]*

1879. **Mr Frew**: One of the points that we have not raised here, which we should have raised because it is foremost in our minds when it comes to the Moyle interconnector and the problems there with faults, is the time differential and the cost to fix a fault in an overhead

line, as opposed to a fault underground. Can you elaborate on that?

1880. **Mr Wasson**: David will answer that question in a moment. I apologise for repeating myself, but, again, if you do not mind me saying so, Mr Frew, I would make the point that it is completely hypothetical. I want this point to come across clearly. Our unequivocal view, with apologies to the Committee, is that any further consideration of underground cables is fantasy.

1881. **Mr Frew**: It would help this Committee to realise how much nonsense the notion of underground lines is.

1882. **The Chairperson**: You cannot fix a hypothetical situation, to be fair. Mr Wasson, as we have already heard, quite rightly pointed to the fact that there is little, if any, experience of it around the world, with the exception of Japan. With that caveat, I will let you continue with your answer.

1883. **Mr Wasson**: We are happy to address that hypothetical question.

1884. **Mr de Casseres**: OK. By its nature, you can very quickly identify when things have gone wrong with an overhead cable. As Mr Dunne said, it is a relatively low-tech piece of technology that has been used for many years. You can send people out to climb the tower and fix whatever has happened relatively quickly. An underground cable, especially the type of cable that we would use if we went down that route, hypothetically, for this circuit, would be a very complicated piece of technology. It would, potentially, take a very long time to find a fault and potentially an extremely long time to fix it, because very specialised people with very specialised equipment would be required. It would take a minimum of several weeks but it could take months to fix even a single fault on such a cable.

1885. **The Chairperson**: Are you moving into the realm of hypothesis there, or is that based on actual experience with underground cabling in Japan?

1886. **Mr de Casseres**: Not necessarily in Japan —

1887. **The Chairperson**: Wherever it is being used. You outlined that the main area was Japan. I do not want to get into the realm of utter hypothesis, from one week to fix something to several months. That would be a really bad situation, particularly if we are in the realm of hypothesis. Perhaps we should constrain our liberal interpretation of what underground cabling does for us.

1888. **Mr de Casseres**: That is not hypothesis, Chairman. When we talked about Japan, we talked about where the longest such cable at that voltage is used in the world. There are many places in the world where cables are used. We use them ourselves in Northern Ireland; we have high-voltage transmission cables in short lengths. They are used widely throughout the world where they need to be used, usually in short lengths and where it is justified. Therefore, there is experience of what it costs to repair them. There are people who repair them and there is a great deal of statistical material that we can provide to the Committee.

1889. **The Chairperson**: That would be useful.

1890. **Mr de Casseres**: We already have provided that, in fact, in the material presented in our environmental statement, which sets out the times and the costs associated with repair. It is a very real issue; Mr Frew is absolutely right. It is one of the areas where the two technologies depart, shall we say.

1891. **Mr Douglas**: My question is fairly brief. My colleague asked about consultation. You said that a lot of consultation had already taken place. Could you outline what further consultation will take place? Obviously, whatever we agree to, be it overhead lines or whatever, we need people to be on board. As Mr Frew has already said, he lived beside overhead lines and he is obviously very normal. Can you outline the type of consultation that you will continue over the coming period?

1892. **Mr de Casseres**: We are now past the point of formal consultation because, having performed that consultation, we

have made a decision and our process has moved into an application for something that we propose to do. The decision now lies with the competent planning authorities to make that judgement. We are now in a process that is governed by the Planning Appeals Commission. Although it has adjourned, it will reconvene. In that process, it is very much the commission's decision as to whether this is acceptable, and whether we have done enough, principally on the environmental issues, for this to be considered environmentally acceptable and achieve planning approval. Therefore, we are no longer engaging in consultation as such. However, as I said earlier, we are absolutely open to explaining to people what our thought processes are, presenting the facts, and so on.

1893. **Mr Douglas**: That is what I am talking about, because I imagine that people will come back to you if there is disturbance within their area, neighbourhood or land. You are open to that type of — I described it as consultation — but it is perhaps provision of information.

1894. **Mr de Casseres**: Absolutely.

1895. **Mr Agnew**: Thank you, gentlemen, for the information so far. It has been a fascinating discussion, as it always is on these issues. Let me return to the wider upgrade of the grid. During your opening briefing, you mentioned the downward pressure on price that the increased capacity of renewables brings. Much is made of the increase in price that is required to fund upgrades to facilitate the increased capacity of renewables. Have you made any assessment of that? I have heard a lot of figures, and I would be interested in your estimate of the money required for the extra capacity for renewables. I would like to hear your estimate because I have heard different figures. What would you have to spend anyway if you were not allowing for renewables?

1896. **Mr Ewing**: We are not involved in the single electricity market, so we are not experts in the wholesale price and how it is likely to be affected by renewables. DETI just recently kicked off a study that will bring all those aspects together: the cost of the grid, the cost of the ROCs and the impact on the system marginal price. From our side — the network side — there is an increased cost, but the benefits are seen elsewhere. That should come out of this DETI review.

1897. **Mr Agnew**: What are your estimates for the required infrastructure improvements? What is your estimate for the differential between what is required to maintain business as usual and what is required to facilitate the increased capacity for renewables?

1898. **Mr Ewing**: We tend to look at renewables separately from our core network and maintaining its safety and reliability. In essence, we are going to be close to 20% to 25% renewables in the next couple of years. That will have cost less than £100 million in increased costs in the network, which is less than 1% of the end-user customer bill. Therefore, we can get to the 20% to 25% renewables target relatively cheaply when it comes to network reinforcement. The big issue comes when we try to go from that to the 40% target. That is when there will be substantially larger sums involved. That is the difference between the £100 million and the £500 million; the high-voltage network will require very expensive reinforcement. Again, that should be part of the DETI study, which seeks to bring together all the different aspects of this.

1899. **Mr Agnew**: Those figures are significant, but they are significantly lower than the ones we were recently given by the Utility Regulator.

1900. **Mr Ewing**: The £1 billion figure was a very early estimate seven years ago, and fed into the strategic energy framework. A lot has happened since then.

1901. **Mr Agnew**: Even more recently, the Utility Regulator told me of a figure of £800 million, and then came back to the Committee and said that it was £1 billion. That £1 billion is a nice round figure, but it does not seem to have any

basis in fact any more. Would that be fair to say?

1902. **Mr Wasson**: We have a fairly clear view of what the costs will be over the next several years. To reinforce the transmission system to allow renewables, we have been, in effect, going for the low-hanging fruit first. So you make the smaller investments that will allow capacity to be released. Gradually, that gets more difficult.

1903. **Mr Agnew**: You mentioned the constraints on wind energy due to a lack of interconnection and the required upgrade. Will the interconnection and upgrade just take us up to 40% or can it take us to 40% and beyond? Will that also mean that the connection charges referred to by the Chair and Mrs Overend for those who wish to connect to the grid come down because the grid is reinforced, or am I misunderstanding how that works? Is that going to have an impact on connection charges?

1904. **Mr Wasson**: There will not be an impact on connection charges as such. As you will probably be aware, we cluster wind farms; we refer to cluster substations. The idea is that you have several wind farms connected to one node. We are trying to minimise the number of overhead lines that are built, so we do that primarily for visual amenity reasons. In effect, those developers fund the costs of the cluster substation and their own direct costs. There is not really any impact on connection charges. The deeper network reinforcement required to connect those cluster substations to the system is in the figures that we have quoted. Ultimately, that is funded by the customer.

1905. **Mr Agnew**: What capacity of renewables could the grid facilitate post the interconnection and upgrade of the sort that we are talking about? Would that take us beyond 40%, or is it just getting us to where it could facilitate 40% without constraint?

1906. **Mr Wasson**: The main point to make about the interconnector is that it will be almost impossible for us to get beyond the 26% or 27% figure without the interconnector, for operational reasons. I think that SONI may have spoken about that already. That is the role of the interconnector in getting towards the 40% target. In addition, other local reinforcement needs to happen on the transmission network. That is part of the various plans that I have just outlined.

1907. **Mr Atkinson**: I would like to make a point of clarification. The lady spoke earlier about the high costs of connection. We are talking about large-scale wind farms where there is a structured approach to developing the infrastructure that can support them. In the case of the smaller wind turbines that you referred to earlier, there are no investment plans at the minute to deal with some of the distribution-level investments that would be required to accommodate some of those connections. We are talking about two categories. We have made some progress with the regulator on some very low-level investments in that area, but there is the potential that that problem will not go away quickly. None of the plans that we have talked about really address that.

1908. **The Chairperson**: I am a wee bit lost. Distinguish for me how you differentiate between a farm application, and a multiplicity of individual applications. You should know better than anyone that, often, one farmer hears about it, and agents go round farmers and landowners saying that they should sign up to this, that and the other. Usually, the applications come in from a cluster. Will you distinguish for me the difference in the approach taken by you between a wind farm application and a cluster of simultaneous individual turbine applications?

1909. **Mr Atkinson**: The wind farm applications tend to come in as quite chunky megawatt totals, maybe 20 MW, 30 MW or 40 MW. Invariably, they will connect at a higher voltage and impact on our transmission system. Whether the application is from a single turbine or a cluster of the small turbines that you referred to in the second category, they

will, individually, connect at a much lower voltage into the network.

1910. **The Chairperson**: Their cumulative effect is what I am trying to get at.

1911. **Mr Atkinson**: They tend not to apply together, but —

1912. **The Chairperson**: Sorry; I know that they do not apply together. However, their cumulative effect on a grid or the network in one given location will, presumably, be on a par with a wind farm application down the road.

1913. **Mr Atkinson**: You need quite a lot of the smaller ones. The small wind farms typically produce 150 kW or 200 kW. You need an awful lot of those to get anywhere near the size of a typical wind farm connection.

1914. **The Chairperson**: I am just trying to get —

1915. **Mr Atkinson**: The key point is that those smaller individual wind turbines, because of the nature of their construction and how they perform electrically, connect to the network at a much lower voltage level. They connect to the network in parts that are currently not provided for in terms of any organised investment programme. So, although you can do all that work higher up the network, which tends to accommodate bringing on the larger, chunkier wind farms, provision is not being made as such to develop the network to accommodate —

1916. **The Chairperson**: Why is that? Normally, as we encounter them, I am sure that all you have to do is ring Planning Service and say, "stick a few pinpricks on a map there so that we can see just how those individual ones are developing". Why is there no read-across between, say, you and Planning Service? Ultimately you are consulted as part of an application process when the approval is received for it. Why is there no joined-up evaluation or assessment of the impact on the grid? You say it is done at the wind farm level, but is there no —

1917. **Mr Atkinson**: The only way I can answer that is to say that the very sizeable incentives that were put in place for the small-scale generators — which are much more significant in terms of ROCs than they are for the large wind farms — were put in place by DETI without, as far as I understand it, any structured engagement with NIE about what that might mean from a network point of view. So there have been swathes of incentives sent out to those small-scale developers. They have taken those on board with the best intentions and, as a result of that, have gone through the planning application process. They have to go through that process before they come to us. The only thing we can really do is try to have a better understanding of the volumes that are coming through planning, which continue to be quite high at the moment, and try to alert the various industry forums to the fact that there is no certainty that they will be able to get it at a reasonable connection cost onto the grid. So there is a joined-up thing that has to work through DETI, the Planning Service and us to give that joined-up view.

1918. **The Chairperson**: You identified what you see as the problem, so there should be a bit more joined-up, collaborative work here, but how do you assess that?

1919. **Mr Atkinson**: In terms of assessing —

1920. **The Chairperson**: How could you assess it? We have identified a problem. What do you see as a solution to that problem? The people who are putting in the individual applications are coming to us on occasions complaining about NIE either charging too much or taking so long — sure I have been with you about this on a number of occasions — to put in place a proper grid connection, or even an evaluation of the potential cost of the grid connection. What do you see as the solution to that?

1921. **Mr Atkinson**: There has certainly been frustration about the time to get to some of the answers in that area. We have tried to work as best we can with the various parties, including the regulator and DETI, to bring forward some of those answers more quickly, but, ultimately, the cumulative effect of

the smaller generators does require, in some cases, much more significant investments to go into the distribution grid if they are to be connected successfully. The view that we have, in conjunction with our understanding from the regulator's point of view, is that the regulator has considerable concerns about the economic benefit of making those investments in the distribution system to allow more small-scale generators to connect. So there is a fundamental mismatch or block there in how that is going to be funded.

1922. **The Chairperson**: I hear what you are saying, but I just want to rewind a little bit. Maybe I am missing something that you said. Investment is one thing, but you will want to know where you target that investment, which, from what I heard, was the problem that you identified earlier. You said that you had engagement with DETI. What has been the outcome of that engagement?

1923. **Mr Atkinson**: The outcome of the engagement between us, the regulator and DETI has been that we have brought forward proposals for investments in a number of parts of the Province. I will just summarise that very briefly. There are around 60 what we call main substation areas in the north and north-west of the Province that are affected. Of those 60, around 40 require investments of a relatively low order to allow significantly more generation to connect. After a protracted process with the regulator, we now have an outcome. The regulator has decided that it will allow those investments to proceed, and we will potentially be able to give some good news in the next day or so to some of those investors who have been waiting for some time to get an answer. It means that there is potentially bad news in the case of 20 or so of those substations, where the level of investment required is much more significant — maybe in the order of millions of pounds — and which the regulator does not feel is easily passed on to the general customer base. If we turn that round and levy those costs on individual developers themselves, it would probably make their projects uneconomic. So there is some bad news emerging out of that as well. Potentially, it is a stalemate which we are going to have to do a lot more work to get through. However, there is some progress.

1924. **Ms Maeve McLaughlin**: Thank you for the presentation. The question I have is in and around the standby connections. You suggested that that is not a solution and that it is not enough to link up the two systems. Is that because of their location?

1925. **Mr Wasson**: It is primarily because of their location. Because they are in the west of the Province, those connections are from our 110 kV network across to a similar network in the Republic. Those networks are quite distant; they are in a completely different part of the Province to our stronger 275 kV networks. To have proper interconnection, it needs to be between the 275 kV network in Northern Ireland and the 400 kV network in the South.

1926. **Ms Maeve McLaughlin**: I am just thinking practically. Given the centres of population North and South along the border counties, are there opportunities there or not? Are you simply ruling that out?

1927. **Mr Wasson**: It does not solve the technical issues —

1928. **Ms Maeve McLaughlin**: There are opportunities? I am talking specifically about security of supply. Are there opportunities in other locations?

1929. **Mr Wasson**: The short answer to that question is no. David, do you want to expand on that?

1930. **Mr de Casseres**: We have explained in the presentation we made as part of our planning that we looked at a number of options for connecting the two networks. As Robert has said, there is a 275 kV network in the North and a 400 kV network in the South. We need to connect up those two networks. To do that and make it effective, it has to be done at strong points in both networks. We looked at various ways in which

they could be connected and the one that we have selected, and which we have developed for the interconnector, connects both between the strongest points and between points which are sensible in that they present the least overall distance. In that way, we have minimal impact on the environment and we make sure that we keep a good distance between our existing interconnector and the new one that we propose. If they were too close, they would be subject to the same risks.

1931. **Ms Maeve McLaughlin**: Given that we are dealing with two low voltage standby systems, if we were dealing with higher voltage systems, would there be a potential for a solution to the security of supply problem? I would think that there would be. You have referenced the fact that location is an issue, because, as your map quite clearly outlines, there are issues with the west. These locations are situated there; so if they were situated somewhere else or there was a different location that included a high-voltage or higher-voltage system, would it be easier? Would it be a temporary solution? Would it be a solution to security of supply?

1932. **Mr Wasson**: Let me help clarify this. We are straying into the territory of power engineering again. The whole question of security of supply in Northern Ireland is about major generation and transmission capacity. For example, the new interconnector will mean that we will have a transfer capability, North to South, of some 1,500 MW. That is equivalent to two major power stations. It is at that level that we are talking about the capability of the interconnector. It is needed to provide that high-level system security, to make sure that we have a stable system at generating station and transmission system levels within Northern Ireland. To do that properly, we need to interconnect much more strongly with the South.

1933. **Ms Maeve McLaughlin**: I am sorry, Robert; I just want to make this point. We are talking about security of supply being an issue post-2016.

1934. **Mr Wasson**: That is right, yes.

1935. **Ms Maeve McLaughlin**: So, it has not been resolved.

1936. **Mr Wasson**: No.

1937. **Ms Maeve McLaughlin**: Sometimes, I just want a yes or a no on this. I am suggesting that there may be different locations for interconnection possibilities or interventions that may be used.

1938. **Mr Wasson**: Yes.

1939. **Ms Maeve McLaughlin**: Leaving aside the low-voltage systems in the west, would a different location assist the security of supply issue?

1940. **The Chairperson**: There seems to be a wee bit of confusion around the table. We are not talking about an alternative. We want clarification, not about an alternative to the interconnector which, obviously, will not be in place by 2016, but about the stopgaps or measures that can be taken to obviate that. It is not about an alternative to the North/South inter-connector. You can park it, because it will go through wherever it goes through.

1941. **Mr Wasson**: I can give you a yes or no answer on that. There is no alternative. From the point of view of what we might call a network fix for that problem, we are aware that the Department and the regulator are looking at various other plan Bs for additional generation that might be brought on board in Northern Ireland. That is one thing, but in terms of a network fix, there is none.

1942. **The Chairperson**: I want to have absolute clarity on this. I will ask Maeve to allow me to labour this point. There is no alternative at present. Are there measures that can be taken to enhance what currently exists to bring it to the point where it could be used as a fallback in the event of any difficulties with security of supply post-2016?

1943. **Mr de Casseres**: The answer is no. You asked for a yes or no, and the answer is no.

1944. **The Chairperson**: Why not? Can you expand a little bit on that? Is it prohibitive costs? What is it?

1945. **Mr de Casseres**: It is not about costs. You said that you were not talking about an alternative to the interconnector. If you need something that is a new interconnection, then something has to be built that would be an alternative. What you are saying is conflicting.

1946. **The Chairperson**: There is no conflict there at all. I know nothing about the technical stuff that you are talking about. Just start with a blank sheet there. Robert, you explained earlier that there were two points, one at Enniskillen and one at Letterkenny. What can be put in place with those points to ensure some sort of enhancement to aid with security of supply post-2016? In other words, why is there not a doability factor in there? Explain to me, the average five eighths, please.

1947. **Mr de Casseres**: The answer is that we are talking about completely different things. The security of supply issue is about the fact that within the boundaries of Northern Ireland and its ability to access power, it has to take that from power stations that are within Northern Ireland or else it has to get power from interconnectors to Scotland or from the interconnector to the Republic of Ireland. There is already an interconnector to the Republic of Ireland which already has a high level of capability. The reason why it is currently restricted is because the system operators will not accept the risk of a sudden shock to the whole network if there was a fault on that system. It is a bit like an aeroplane that needs two engines because the risk of what might happen if it has one engine and loses it is so high. In order to use the existing interconnector to its full capacity, we need another one. When we have both, we can use it to its full capacity. That is why we need that interconnector. That is what limits the flow between north and south at the moment.

1948. **The Chairperson**: I understand that bit, but what is inhibiting the potential flow from any other outlet — or any other inlet, whichever you want to call it? I just do not understand that bit at the moment.

1949. **Mr de Casseres**: They are already used; they are already available.

1950. **The Chairperson**: I know that they are used and available, but I am trying to get us now post-2016.

1951. **Mr de Casseres**: I do not want to get too technical, but the two interconnectors that we have at the moment are at 110 kV, and if you have a system fault event that causes a need for a significant flow on the interconnector, those two interconnectors are tripped out. I cannot go into the detail of this without getting very technical, but because of stability and voltage problems —

1952. **The Chairperson**: I tell you what. We will probably not get to the source of it here today, but I would appreciate some sort of a paper from you. You say that you cannot go into the technical detail, but I would appreciate having some of that technical detail to learn, and if it could be of use to the Committee, please just —

1953. **Mr de Casseres**: We can do that. I assure you that it is not —

1954. **The Chairperson**: Back to you, Maeve, and thank you for allowing me to intervene.

1955. **Ms Maeve McLaughlin**: I want to ask about the grid strengthening proposals, the map that is about to be published and — I will be called a whinger — the differential across the North in voltage systems. I assume that that is not new information, but that it has been common knowledge for a while. Is that correct?

1956. **Mr Wasson**: Michael's map — I hesitate to call it Michael's map, it is NIE's map — will be published in the next several days. People will see from it that the main issues are showing in the west of the Province. However, that is not because of particular network weaknesses in the west of the Province. It is because, in broad terms, that is where the wind blows and that is where —

1957. **Ms Maeve McLaughlin**: I am sorry to interrupt you. Has it been known for some time, or is this new information?

1958. **Mr Wasson**: I am sorry. Has what been known?

1959. **Ms Maeve McLaughlin**: The differential in voltage systems between the west and east. Is that clear?

1960. **Mr Wasson**: I am sorry. I just do not understand.

1961. **Ms Maeve McLaughlin**: You have shown a map that clearly shows differentials in the north and the north-west.

1962. **Mr Atkinson**: Let me explain. This map needs to be understood fully. It mainly draws attention to congestion problems on what we call the lower parts of our distribution network. Those are the parts of the network that the small generators connect into. However, it is also symptomatic that there is generally a weakness, not just in lower distribution levels here, but also in the higher-level transmission voltages as well in those areas.

1963. **Ms Maeve McLaughlin**: I am just conscious of the time. I will ask the question again: is that information new, or is it something that has been known for a considerable time? That is straightforward.

1964. **Mr Atkinson**: The facts have been there for a long time.

1965. **Ms Maeve McLaughlin**: Can I then suggest, or ask for, clarification? In relation to the telehouse data centre link in the north-west, the Project Kelvin hub, did NIE give advice to the project promoters, which were DETI and another company? This was heralded as a major, all-singing, all-dancing connection for the entire North. Now I am getting information that the grid is too weak.

1966. **Mr Atkinson**: Correct me if I am wrong, Robert, but there are no secrets anywhere between NIE and DETI as to the nature of the grid or where it is strong or weak. That information is very much available to DETI, and it forms part of the discussions that we have had for various grid-strengthening regimes.

1967. **Ms Maeve McLaughlin**: You would have been consulted

1968. **Mr Atkinson**: There are no secrets about this.

1969. **Ms Maeve McLaughlin**: That is all I wanted to clarify.

1970. **Mr Wasson**: Chair and Ms McLaughlin, let me re-emphasise a point that I made right at the beginning. In previous sessions there has been some reference to economic development or load investments being restrained. That is not the case. For instance, in relation to Project Kelvin — and I am open to correction here — I am not aware of any issues that there have been around the connection of any loads in that particular area.

1971. **Ms Maeve McLaughlin**: Well, there is certainly a suggestion that the grid is a problem. I will just leave it at that. It has been clarified.

1972. **The Chairperson**: Obviously, there may well be issues around this in different geographical localities. I know that you, Robert, and your colleagues have been more than facilitating in arranging meetings to iron those things out. However, if members have particular problems in their constituencies, it would be helpful if they could follow those up with you.

1973. **Mr Wasson**: We would be very happy to do that. Indeed, we would be very happy — although I know that it is, probably, not quite in line with the terms of reference of this particular group — to meet again to talk about connection issues, the grid and local issues.

1974. **Mr McKinney**: It is not even a question so much as some more information. Earlier you talked about the £1 billion cost in your submission around the 2009 strategic energy framework. Now, that has dropped to £500 million. Could we get something on paper about that?

1975. **Mr Wasson**: Yes. We would be happy to do that.

1976. **Mr Flanagan**: Can I ask another question, Chair?

1977. **The Chairperson**: Very briefly, Phil.

1978. **Mr Flanagan**: If you do not get planning permission for the interconnector, what will you do?

1979. **Mr de Casseres**: If we do not get planning permission for it, will be not be able to build it.

1980. **Mr Flanagan**: What is the plan B? Everybody says that we need it, and we do need it. So, what are you going to do?

1981. **Mr de Casseres**: As NIE, we do not have a plan B.

1982. **Mr Ewing**: There would need to be more generation.

1983. **Mr Flanagan**: It is what everybody wants to hear.

1984. **Mr de Casseres**: It then becomes an issue for DETI and the regulator to decide whether there is another way to deal with security-of-supply issues. Any other way that it might adopt is going to cost more money and put prices up.

1985. **Mr Flanagan**: So, even if planning permission is turned down, you will not explore the possibility of an underground interconnector?

1986. **Mr de Casseres**: We have looked at the technology. We have told you that it is not feasible.

1987. **The Chairperson**: I think that your colleague was coming on to exploring further generation options. Is that what you were saying, Mr Ewing?

1988. **Mr Ewing**: The interconnector is the only thing that we can do from the network's perspective. Plan B, as you know, is to keep the units on at Ballylumford or to have other kinds of generation. It is the shortfall in generation that is security of supply, not the network limitations, apart from —

1989. **Mr Flanagan**: Your big argument for an interconnector has not really been the reduction in surplus capacity, but the €25 million annual cost to consumers on the island of Ireland. If there is no interconnector, that problem still exists. How are you going to sort that problem out?

1990. **Mr de Casseres**: If we are not able to build the interconnector because we do not get planning approval, we cannot build it. It is as simple as that. We could go away and look at other places where it could be built and come back and take a great deal of time to do that — because it takes many years to go through that sort of process — but we very much hope that we have put out a very clear picture. We very much hope that the authorities will provide us with permission, and do so quickly.

1991. **The Chairperson**: Just one other thing. In terms of the interconnector, you know the way we have the renewable sector, and what it does is factor in a community benefit element to anything that it might or might not do.

1992. **Mr Flanagan**: It is supposed to.

1993. **The Chairperson**: Yes; they say that they factor it in. Have you, in your deliberations, your application or as part of your management thought process, at any stage, factored in or thought of a community benefit element to what you are doing if the application goes ahead?

1994. **Mr Dunne**: That sounds more positive, Chair.

1995. **The Chairperson**: You can say yes, no or that you will think about it and come back to us when you have done that and give us a few ideas as to what that might be.

1996. **Mr de Casseres**: It is not that we have not thought about it, Chairman. It is a question that people have asked. It is certainly an issue that is being raised in many parts of the world as one of the ways in which infrastructure projects could gain better support in communities. However, there is no mechanism in this jurisdiction. Certainly, there is no mechanism for such a payment or benefit to be considered. It would be a matter for the regulator to decide that it was worth all customers

paying whatever that payment might be to specific communities that then have to find infrastructure in their vicinities. It would not just be a matter for electricity infrastructure; it would be a matter that would affect any infrastructure that is built in Northern Ireland. So, I suggest that it is really a policy issue for government and regulators to consider whether that is something which is —

1997. **The Chairperson**: So, as a company, you have ruled that out?

1998. **Mr de Casseres**: It is not something for NIE to do, because we have no mechanism to pass it on.

1999. **The Chairperson**: Yes. As a company, you have ruled out doing anything of community benefit which could help with the project. You are saying, essentially, that it is for the Department and the Utility Regulator — it is over to them.

2000. **Mr Flanagan**: It must not be making any profit, Patsy.

2001. **The Chairperson**: That is grand. I appreciate your answer.

2002. **Mr Wasson**: Thank you.

5 November 2013

Members present for all or part of the proceedings:

Mr Patsy McGlone (Chairperson)
Mr Phil Flanagan (Deputy Chairperson)
Mr Steven Agnew
Mr Sydney Anderson
Mr Gordon Dunne
Mr Paul Frew
Mr Fearghal McKinney
Mrs Sandra Overend

Witnesses:

Ms Jo Aston — *Northern Ireland Authority for*
Ms Jenny Pyper — *Utility Regulation*
Mr Kevin Shiels

2003. **The Chairperson**: We have with us here today Jenny Pyper, the new chief executive officer in the office of the Utility Regulator, who took up her position just within the past few days. Jenny, it is good to see you. You are very welcome indeed. Congratulations on your appointment.

2004. **Ms Jenny Pyper (Northern Ireland Authority for Utility Regulation)**: Thank you, Chair.

2005. **The Chairperson**: Also with us today are Kevin Shiels, the retail and customer protection director; and Jo Aston, the water director. You are very welcome indeed.

2006. Jenny, I have already congratulated you on taking up your new position. I am sure that your colleagues have informed you that the process is that we invite witnesses to make a presentation of up to 10 minutes, and then there is a question and answer session. If you are happy enough, please proceed.

2007. **Ms Pyper**: I am, Chair. Thank you for the opportunity. It is a few years since I appeared before this Committee, but since leaving the Department of Enterprise, Trade and Investment (DETI), I have been in front of the Committee for Regional Development and the Committee for Social Development. I have been working in those two areas for the past few years. I hope that all that experience will help me as I lead the Utility Regulator team forward and we try to balance the many competing demands — economic, environmental and social — that face energy and water regulation.

2008. I know that you, Chairman, appreciate that this is day two for me in my new job, so I will rely very heavily on my directors, Jo and Kevin, when it comes to answering your questions. However, I think it entirely appropriate that I am with them this morning to hear at first hand the views of the Committee, particularly given your ongoing inquiry into the security of supply and electricity prices.

2009. The Utility Regulator has started work to improve transparency and understanding of the complexity around electricity prices, and the paper published in March gave its initial findings. It is fair to say that the initial paper has been widely welcomed by all stakeholders. It provoked some very positive debate, including across government, and with the Committee, industry and consumer groups. The issues could not be higher on the Northern Ireland agenda, but they are also right at the top of the GB agenda. The further analysis that we have done since March should contribute further to the debate, and, hopefully, it will help to inform your review. It also points to additional work that needs to be done by the Utility Regulator, alone and in conjunction with many of the other stakeholders, including DETI. As I said previously, I would love to be able to say that I have the silver bullet that will resolve the issues. Sadly, you will know only too well, because you have heard evidence from so many different groups over recent months, that the issues are complex and interwoven. The impact of any actions taken to try to address electricity prices really needs to be fully

understood. That is where the unique position of the regulator is hugely important, as we can bring impartial, independent and transparent analysis to the complexity.

2010. I do not want to say anything more to set the scene. We propose to start by looking briefly at security of supply issues. Jo will lead on that, and Kevin will pick up on related pricing issues and talk you through the key elements and findings in our paper. We will then be happy to take your questions.

2011. **Ms Jo Aston (Northern Ireland Authority for Utility Regulation)**: Thank you, Chair and Committee members. I will talk about the risk and how it was identified. As part of the regulatory process, the System Operator for Northern Ireland (SONI) identified a risk to security of supply from 2016 and a deficit in supply from 2021. It is worth noting that there is still a surplus of supply from January 2016, but it is a question of whether there might be a sustained outage of a large generating unit. That is the risk that we are trying to manage.

2012. From 2021, we are in deficit, which is a real issue. It is worth reflecting on why that is the case. The failure to deliver the North/South interconnector within the time frame projected in DETI's strategic energy framework is very significant. The framework projected its being delivered by 2013-14. We all know that that is not the case. In fact, we will probably not get it until 2018, and even that is from a positive perspective on the delivery time frame.

2013. The 2016 date has come about by virtue of the need to comply with the EU large combustion plant directive. That will impact on some of the large generating units at Ballylumford, which will have to be taken out of service. That is compounded by the fact that the Moyle interconnector has failed and is operating at about half its full capacity.

2014. So, having set the scene, what are we doing to manage the risk? That is the real question that I hope to address today. In June, we published a joint paper with DETI that set out the context and issues around security of supply. We explored with the Minister of the Environment the possibility of getting a further derogation. That would be a great solution to the problem of having to upgrade the plants at Ballylumford and taking them out of service. However, we have been informed that they are already in a derogation position and that there is no scope for a further derogation, so that is not a solution.

2015. We are liaising with Mutual Energy, which has put two interim solutions on the table. It is progressing those, and they look very positive for delivery in 2014. However, the two interim solutions are novel, and both rely on the cables already in the ground, which are failing. They do not negate the risk, and, therefore, we think that there is still a need to explore further the scale of that risk. I am in discussion with the System Operator to determine the quantum: if we still have a surplus of 200 MW, what is the additional wattage that we need to make us comfortable that we will not have an outage in that situation?

2016. I also asked the System Operator to look further into whether the demand side and renewables would help out in that situation. Again, that would be another good solution. However, they have already included those calculations in their projections, and it is not really viable, within the time frame, to get anything more out of those two avenues.

2017. I continue to work with the System Operator to identify how we can procure additional generation capacity and what the scale of that capacity should be. Discussions are ongoing on that and have not bottomed out as yet.

2018. We hope to publish a further update paper, in conjunction with DETI, this November. Fundamentally, looking to the long term, we need that permanent solution to the Moyle interconnector, but it will not deliver until 2017. We really need the delivery of the North/South interconnector, not just for security of supply reasons but to help the cost of

energy, because it will help the market and drive down prices.

2019. **Mr Kevin Shiels (Northern Ireland Authority for Utility Regulation)**: Thank you for the opportunity to talk to you about prices, which is what I will concentrate on today. It is an opportune time to have this discussion because it has been six months since we put out the March paper, which kicked off the whole prices debate. The Committee has had a lot of interaction with stakeholders in the intervening time. We have now produced a follow-up paper, which was published yesterday, and you have a copy of that in front of you.

2020. There is a lot of detail in the follow-up paper. We will probably get into a lot of detail on prices when members ask questions. I will begin by showing you a couple of high-level strategic slides, because there is currently quite a lot of debate on energy pricing issues, even at the GB level. Much of the debate in GB on wholesale and retail pricing has relevance to issues that we have also been tackling in Northern Ireland.

2021. It is worth taking a step back to think about some of the strategic issues and using those as a context and framework for a more detailed conversation about the issues that affect Northern Ireland electricity prices. On slide 6, we have tried to demonstrate that there is a key set of competing priorities in energy, of which the Committee will probably be well aware. They have been the subject of much of your debate with and briefings from the various stakeholders since we issued the March paper.

2022. There are competing priorities in the cost of energy infrastructure and the cost of bills for domestic and industrial customers. There are concerns about security of supply, sustainability and decarbonisation. In energy, we often find that those are competing tensions and concerns, which pull in different directions. All economies, Governments and societies have to decide where to land in that mix. Policy regulators and stakeholders have to decide on the balance between those competing priorities. The issues that we tackle in Northern Ireland in this "trilemma", as it is called, are no different from the issues being considered across Europe and in all advanced energy economies. We will come back to the issue of trade-offs several times this morning, so it is important to bear that in mind.

2023. Slide 7 details the other context issue that is really important in the whole pricing debate, which is that of shared responsibilities. This is a key lesson that we are learning from the current GB debate on energy. In GB, there has been much debate about who does what and what people's roles are in understanding what is going on in the energy scene. From our point of view, there are four key stakeholder groups here, each of which has a responsibility to understand what is going on in energy and make informed policy decisions at the back end of an evidence-based debate.

2024. The role of government is to set strategy, policy, targets and legislation. As the regulator, we have a role to provide an independent viewpoint and regulate to protect customers. We have expertise and data sets that we can bring to the table to help you and government make good evidence-based policy decisions on energy. The industry itself has a role to play. That has been one of the main focuses of the GB energy debate and includes the role of the industry in being transparent. It has to ensure that other stakeholders are clear on what the prices and profits are, where they are earning, what they are earning and so on. Consumers also have a role to play. They need to be informed and active, and, in the modern energy markets in which competition is in play, they need to shop around. We also need consumers to be involved, educated and active in order to make the markets work effectively .

2025. That was the second strategic context slide, and it is very important because some of the issues that we will come back to relate to who has a role, and what that role is, in the energy conundrum of keeping prices as low as

possible, while keeping the lights on and serving sustainability concerns.

2026. The next slide shows where we have got to. We produced the March 2013 paper. At the start of the debate, we tried to shine a light on the electricity pricing issues and generate a good, healthy debate on what was going on there. We think that we have achieved that. We had a lot of responses to that paper, which we have now published on our website. Our follow-up paper, which was published yesterday, is a stocktake and culmination of all that we have heard, thought about and developed since we issued the March paper.

2027. The Committee has announced its review of prices and the security of supply. That has been very helpful. Listening to, and being made aware of, the various stakeholder briefings that you have had as part of that has helped us to develop our thinking.

2028. I am conscious of time, so, for those who have not had a chance to go through the paper yet, I will end by talking through some of the key findings and issues in our paper. I will talk for a couple of minutes on several key headings.

2029. As ever in this debate, we divided our analysis into wholesale, network and retail because that is a useful way to frame the debate. I will talk briefly about each of those, and then I will talk about some of the renewable issues that have come up during the past six months.

2030. The paper's key finding on wholesale costs is that they make up about 70% of the final bill. The percentage differs depending on the customer, but it is roughly 70%. Another key finding is that the single electricity market (SEM) has been beneficial to Northern Ireland. Through it we have avoided some of the problems seen recently in GB — for example, problems with transparency and efficient investment signals. We are in a better position in respect of wholesale and generation issues than we would have been in the absence of SEM. We have a very transparent market in which prices and quantities are available every half hour. The SEM arrangements also promote the efficient scheduling of generators. The paper also notes that the SEM Committee is willing to engage with anyone on any aspect of the wholesale market in which material improvements can be made or further discussions are required. I will talk a bit more about that in due course.

2031. Wholesale prices in the SEM are higher than those generated in the British Electricity Trading and Transmission Arrangements (BETTA) market in GB. That can be attributed to several factors, including raw fuel input prices; higher fuel, transport and shrinkage costs; generation mix factors between the two jurisdictions; economy of scale differences; and, potentially, to the view of some commentators that wholesale prices in GB are "too low" to incentivise the required investment in new generation.

2032. Going forward, the regulatory authorities recognise that further work is needed to review the SEM arrangements and, where appropriate, to consider options for improving the SEM market model. That will be done in the short term by a review of its effectiveness by the SEM Committee and, in the medium term, through the delivery of the EU-wide regional integration project.

2033. Network costs make up 20% to 30% of the final electricity price, and the key findings of the paper are that, in Northern Ireland overall, our total network cost comparisons are being benchmarked with other jurisdictions. No material issues were raised in that area in response to our March paper — I am talking about network costs at an overall market level. However, the allocation of network costs between customer groups does materially impact on price differentials. Other jurisdictions in Europe, for example, have taken explicit policy decisions to favour non-domestic customers — industrial customers — at the expense of domestic customers. The Northern Ireland Authority for Northern Ireland (NIAUR) considers that further work is needed to identify and model the impact of jurisdictional network cost

differences and their impact across different customer groups. We hope to commence that in the next few weeks, and we will work alongside DETI on that project to bring it to fruition in the coming months.

2034. The final 5% to 10% of the cost stack in electricity prices is at the retail end of the market. The Northern Ireland retail market is in a pretty good place. The current regulatory regime enables transparency, and we have control over the margins earned and the electricity prices for the dominant suppliers in the domestic and small industrial sectors. We have monitored what has gone on in the GB energy retail market in recent years and taken many steps to ensure that those problems do not emerge here. In fact, if anything, the GB energy market is starting to point to some elements of the Northern Ireland regulatory model as things that might be used to improve the GB energy scene. Some recent policy announcements in GB relate to measures already in place in Northern Ireland or within the SEM. NIAUR is commencing a number of projects to influence the operation of the supply companies and the regulatory framework behind them. We will introduce a new retail market monitoring regime and review the effectiveness of competition in the electricity supply markets. Those are projects for 2014.

2035. I will move on to renewables. I separate that area only because, usually, when we talk about prices, we stick to wholesale, network and retail. I have separated out renewables because it has been the subject of so much debate in the past six months, both in responses to our paper and in the briefings made to the Committee. I know that it has raised a lot of issues and questions. Our paper notes some key points. Renewables bring both costs and benefits to any electricity market — that is true anywhere. Weighing up the impact of those, in both the short and long term, can be difficult. However, we will help to facilitate that debate. We think it important to split renewable issues into three main elements: the role of renewables in the wholesale market itself; the renewables incentivisation framework; and other impacts that renewables bring to electricity systems, for example, on grid reinforcement requirements. We think that splitting the renewables issues in three allows a better framework, allowing us to get our heads around all the various renewable issues that can complicate matters.

2036. An important and substantive proportion of revenue for renewables comes from the incentivisation framework for renewable generation, as opposed to the SEM market itself. We note that DETI has committed to a review of the costs and benefits of renewables in the Northern Ireland context and in the context of the 40% renewable generation target. We welcome that review, and we will provide whatever assistance we can to DETI.

2037. In our final slide, we set out the actions that we, as the Utility Regulator, will take in the coming period on the wholesale, network and retail aspects of electricity in order to build on our work over the past six months.

2038. Thank you, Chairman.

2039. **The Chairperson**: Thank you very much indeed for that. Let me pick up on your point about renewables. I see that you have broken renewables issues down into three areas. Do you take the view that incentivisation is too generous and delivers too high a margin of profit?

2040. **Mr Shiels**: We have no view on that specific question, Chairman. That is why the DETI review is very welcome. It will look at the whole area of renewable incentivisation: the costs and benefits that renewables will bring; and the costs of meeting the renewable targets. That will feed into the DETI review of its strategic energy framework. From my point of view, looking at everything that has been said about renewables in the past six months, the costs and benefits that they bring must be thoroughly weighed up. I presume that this is what the DETI review will bring to the table, which is, I think, very welcome. I do not

have a view on whether renewables are over- or under-compensated because of the incentivisation framework. I think that a government policy has been put forward to deliver higher levels of renewable generation, and an incentivisation regime is in place to deliver that.

2041. **Ms Pyper**: The SEM Committee has been looking at some interesting work, and Jo will talk about that.

2042. **Ms Aston**: I will put a few facts on the table about wind and peat. The SEM Committee has just published a generator cost: performance report, which identifies the profit margins of the different generators. We can say that 34% — one third — of the revenue turnover from wind and peat is attributable to renewables incentives. We apply four renewables obligation certificates (ROCs) for small generation units, whereas there is just less than one ROC for larger generation units. So the incentive mechanisms were probably there for a very good reason at the time that they were being developed. However, now is probably the right time to revisit them to see whether they are delivering what we want, having reached a good level of renewables to date, in getting to the next 40% in a way that is sustainable and most cost-beneficial for customers in Northern Ireland.

2043. **The Chairperson**: There is one other point on which I would like clarity. When the NIE people were here, we tried to explore the issue of the North/South interconnector and security of supply, but we did not seem to get anywhere. People were of the view that, even with a good wind, there would be an interregnum period in which there would, potentially, be a difficulty with security of supply before the North/South interconnector could be delivered. We were exploring the options, and this was the point at which we did not appear to get much information. Things went a wee bit grey at that point from the NIE people. We were exploring the two options, and Enniskillen and Letterkenny were mentioned, where a feed already comes through from the rest of the island. We were trying to tease out whether, in the intervening period, works could be done to enhance either of those current live connections to take some advantage of the existing supply in the rest of the island. We were hit with, "We cannot really get into this. This is very technical." So we have asked NIE for the technical detail to explore that further, and, indeed, we will probably ask for your opinion on it. I think that NIE suggested that you had been informed on this. Have you any opinion on that, or is there is any information that you could provide us with, either today or subsequent to this meeting, to leave us in a much more informed position than we currently are?

2044. **Ms Aston**: We are very happy to supply additional information, and it probably will be necessary to do so, but let me give you a bit of a feel for the situation. I have been exploring with the System Operator the scale of the problem of security of supply and what the potential solutions are. Have we tested everything? What safety factor is already there, given that we still have a surplus of 200 MW? I am not an electrical engineer, but I understand that more can be taken from the two existing North/South interconnectors, as NIE has done on previous occasions. However, there is an upper limit at which there is instability in the network. Therefore, they cannot be taken very much further. The flex is not sufficient to address the shortfall that we are talking about here. I say "the shortfall", but I am still trying to bottom out what the quantum of that shortfall is. Do we need another 200 MW or what? Therefore, I am still working with the System Operator on the scenarios for what we need to give us the comfort factor.

2045. **The Chairperson**: That brings me on nicely to my next question. The surplus margin is projected to reduce from 600 MW to 200 MW from 2016. What is the minimum surplus margin at which you will still have security of supply and below which it is determined that there will not be security of supply?

2046. **Ms Aston**: I have been asking myself that question. If the Moyle interconnector, with its interim solutions, which are not totally reliable, were up and running to 450 MW, would that do it? The other question is this: what is the likelihood of prolonged outage? I have been advised that that actually happened in January 2012. I then asked questions around that, such as, "What was the status of the Moyle interconnector at that time?", and I believe that it was operating at a lower capacity at that stage as well.

2047. **The Chairperson**: At a lower capacity?

2048. **Ms Aston**: Yes, at a lower capacity. There seemed to be a fault at that time, yet we seemed to get through it. Again, I am exploring the boundaries of what the likelihood is and what the consequences would be, but I have not come to the end of that. I want to bottom that out to find out what additional capacity we need to plug the gap in order to leave ourselves comfortable.

2049. **The Chairperson**: If you are assured of the gap that needs to be plugged, is there enough supply via Enniskillen and Letterkenny to do that, or are there enhanced works that could take place in the intervening period to accommodate and deliver that?

2050. **Ms Aston**: I am not sure that there are enhanced works to be done, because, from what I understand of the network, even if you do them, there will not be enough network capacity at those more remote locations. If you look at the renewables connections that we are trying to make happen throughout the network, you see that there are restrictions on those, because the network grid is not able to take it. Therefore, I am not sure that that would provide or be a viable solution. It is certainly not one of the options for plugging the gap that I am pursuing at the moment.

2051. I have asked SONI to look at demand-side management and the aggregated units to see whether there is any additional potential there. I think that it has already factored that into the equation in its capacity statement. SONI has informed me that the scale is likely to be another 100 MW or 200 MW. Once you are talking about that scale, those sorts of smaller options are not sufficient to plug the gap that we are talking about here. It is important to set that out so that everybody understands that avenues are being explored.

2052. **The Chairperson**: That is grand. Thanks very much for that.

2053. **Mr Flanagan**: Congratulations on your recent appointment, Jenny. I want to ask about the debate on the surplus capacity of 200 MW. I was at the EirGrid conference that you addressed last Thursday. I think that it was the guy from France who spoke about the difference between power and energy, and he said that politicians never understand the difference. My reaction was, "What difference?" I had to find out from EirGrid what he meant, and it was quite an interesting concept. We are told that there is surplus capacity of 200 MW, but do we actually know how much surplus power there is?

2054. **Ms Aston**: I am the water director, so can I butt out at this stage?

2055. **The Chairperson**: Give it to us in litres. *[Laughter.]*

2056. **Ms Aston**: The way in which I would answer that question, perhaps not comprehensively, is, and I am happy to come back to it —

2057. **Mr Flanagan**: I am happy for you to say that you do not know.

2058. **Ms Aston**: I do not know.

2059. **Mr Flanagan**: That is fine.

2060. **Ms Aston**: I do not know the subtleties that you are talking about.

2061. **Mr Flanagan**: Is it subtleties that you are going to look at?

2062. **Ms Aston**: What I will say is that we need, and can use, 200 MW of useable capacity. That is what I am focusing on in finding out what we need to plug the gap. It is not those megawatts. What

do we have surplus? It is the 200 MW that —

2063. **Mr Flanagan**: What I do not understand is that you are talking about plugging a gap, but there is already a surplus of 200 MW there. If nothing goes wrong, that is plenty.

2064. **Ms Aston**: That is absolutely right. The next stage is to ask what the scenario is. The scenario is that we have sustained a large plant outage, and there is a risk of that. We must ask what the likelihood of that happening is. What would be the consequence, and are we or are we not prepared to live with that consequence? What is the cost of removing that risk? If it is a reasonable cost, I think that most of us would wish to do it. If it is not a reasonable cost, we may decide —

2065. **Mr Flanagan**: Who pays for that risk? Is it the consumer or is it the companies?

2066. **Ms Aston**: If we leave the risk there and the lights do go out, we will all suffer.

2067. **Mr Flanagan**: Sorry, I will redraft my question. At the moment, there is a surplus of 600 MW. Who pays to generate those extra 400 MW? Is it the consumers or is it something that the companies do out of the goodness of their heart?

2068. **Ms Aston**: It depends. It goes back to the single electricity market, so it is back to how the companies are remunerated for the electricity that they use every half hour that they bid into the market. The consumer pays for what is used. The whole single electricity market structure is a structure whereby companies get rewarded for the immediate short-term costs of uplifts and maintaining the asset, and also for the capital investment over the longer period. It is built in so that they get paid only for the units that are used every half hour.

2069. **Ms Pyper**: I think that it is fair to say that the System Operator is cautious and tries to be prudent, instead of playing fast and loose with the risk of the lights going out. Therefore, a lot of the further work that Jo was talking about — about needing to understand what the quantum of the risk is — is to get underneath the detail of what the System Operator is saying. We must ask what we need for generation adequacy and determine what we need to be absolutely sure that we can keep the lights on. It is about drilling down underneath that.

2070. **Mr Flanagan**: But you cannot be sure.

2071. **Ms Pyper**: As Jo said, it is about assessing the level of risk. We could take a chance and say that all the generators are fine, that they have all been through their servicing schedules, and so on, and that nothing could go wrong, but what if something does go wrong? The last thing that we want is for the lights to go out. Keeping the lights on is such a fundamental issue. That is where the Utility Regulator finds itself in that independent position in the middle, trying to make a balanced decision about the level of risk and about how to be most prudent when it comes to plugging any gap should it materialise. It is not an exact science. It will take dialogue with DETI and with the System Operator really to understand whether we have an acceptable level of risk that we are managing at the minimum cost to consumers.

2072. **Mr Flanagan**: You could have 1 GW of surplus capacity yet there could still be a situation in which you do not have enough. How do you measure the threshold?

2073. **Ms Pyper**: That is the expert judgement that we have to —

2074. **Mr Flanagan**: You are gambling with consumers' money, really.

2075. **Ms Aston**: With electricity, we like the comfort of being able to switch on our lights every morning. We like to know that that is there. We like not to have to worry about it. That is very important.

2076. **Mr Flanagan**: "Keeping the lights on" is a very emotive term.

2077. **Ms Aston**: If you have excess capacity in the market, you drive down prices, because there is better competition. We have been living with a surplus of perhaps 600 MW, which has left us very comfortable. It has left us in a position in which the market is better because there is more capacity than we need, so, with demand and supply, that is a very good position to be in. Once you have less surplus, you are at the mercy of the marketplace and its cost implications, which is not a good place to be.

2078. In all industries, such as the water industry and the electricity industry, there are standards of security. There are limits of lost load. The surplus that we currently have — 200 MW, I understand — does cover that standard for Northern Ireland. The issue is that we are dependent on a small number of large generating units, and any one of them going out will cause us a problem because of the scale of the units. Therefore, it is prudent and important for us, working with the System Operator, to work down through what the scale of the risk is. What is the likelihood of it happening? If we can then remove it at reasonable cost to the consumer, I think that that is a reasonable thing to do. If the risk has a very low likelihood, and to plug the gap would incur a very big cost, I think that a different decision might be called for.

2079. **Mr Flanagan**: But you are plugging a gap before a gap exists. That is my problem. I have no difficulty driving a car with the diesel light on, although perhaps other people do have a problem with that. However, it is not a problem that concerns me. Can I ask —

2080. **Ms Aston**: Think about an aeroplane. It has two engines. Why does it have two engines? It needs only one, so why does it have two? It has two because the risk of failure is too great. That is what we are really talking about.

2081. **Mr Flanagan**: It is not quite as dramatic as a plane falling out of the sky.

2082. **Ms Aston**: No, it is not as dramatic as that. What I am asking today is this: do we have a real risk here or not? I am not sure that it is a very significant risk, but I think that there is a risk there, and I want to assure the Committee that we are working with the right players to get to the bottom of it.

2083. **Mr Flanagan**: From a regulatory point of view, what is your office doing to change consumer behaviour to use more electricity at night when there is low demand in the system and probably surplus capacity in the market? Most washing machines and tumble dryers come with a delayed start, not that I use them much, so you can set them to come on in three, nine or 12 hours. From a pricing and regulatory point of view, what consideration has the regulator's office given to changing all that again?

2084. **Ms Aston**: We have had a pilot scheme on smart metering, which hands the power over to consumers to decide when they use their electricity. We have got the outworkings of that scheme and are now in engagement with DETI on how we roll that out.

2085. **Mr Flanagan**: As part of that pilot, were consumers told, "This is your smart meter, and this tells you how much electricity you are using", or were users educated that they are better using electricity at night because you will make it cheaper for them? Was that been part of the pilot, or was your pilot the exact same as the one in Limerick?

2086. **Ms Aston**: No, the pilot has been to put a metering box into people's homes to allow them to see how they use and distribute electricity. Part of the pilot involved analysing how you can encourage people to redistribute their use factor and determining what the benefit is so that consumers can see that benefit and change their behaviour.

2087. **Mr Flanagan**: If there is a single unitary price of electricity regardless of the day, it does not matter, from a pricing point of view, when consumers use electricity. Therefore, if it were cheaper in the middle of the night, when there is less demand on the system because fewer

people are using electricity, would it not be sensible, in line with your smart meters, to encourage people to use such equipment at night because it is cheaper to do so?

2088. **Ms Aston**: Absolutely, and that is part of the smart metering programme.

2089. **Mr Flanagan**: Was it part of the pilot, though?

2090. **Ms Aston**: The pilot did not impact on the bills. It was a pilot on how consumers use their electricity.

2091. **Ms Pyper**: It was aimed more at getting people used to the idea of seeing how much they were using. We are all very used to switching the lights on, leaving our phone charging, leaving our TV on and not really worrying about whether we take a two-minute or 10-minute shower. Therefore, part of the pilot was about education and letting people see that they could switch all their lights and machines off yet there might still be electricity being used.

2092. Improving people's awareness is a key part of changing their behaviour. We are all very slow to change our behaviour. Look how long it took for people to get used to putting their seat belt on automatically. That was a change in behaviour that took years. Changing people's behaviour around usage of electricity requires a similar amount of time. They have to have an awareness of what they are using and when they are using it, and that is largely what the pilot achieved. The next stage in smart metering will be seeing the link with cost.

2093. **The Chairperson**: I am anxious to move on. There are a few other members looking to come in.

2094. **Mr Flanagan**: Patsy, this is my final point.

2095. **The Chairperson**: Can you make it a smart point?

2096. **Mr Flanagan**: It is not a question. People were encouraged to wear their seat belts because if they did not do so, they would be financially penalised.

2097. **The Chairperson**: You are not talking about putting the price of electricity up.

2098. **Mr Flanagan**: No, I am on about putting it down at night to try to encourage more people to use electricity then.

2099. **Mr Dunne**: Thanks very much for coming along this afternoon. How significant is the North/South interconnector to security of supply? How will the future market in the Republic and Northern Ireland, and how we manage it, be impacted on by the interconnector that we are hearing so much debate about?

2100. **Ms Aston**: We have been discussing the risk from 2016. However, if we do not do something, there will be a deficit come 2021, if the Ballylumford plant is removed. Fundamentally, therefore, it is crucial that we get the North/South interconnector in place and energised well before 2021.

2101. Additionally, we are operating with a single electricity market at the moment. All the interconnectors — the Moyle interconnector and the North/South interconnector when it comes — add flexibility. They allow us to use and procure electricity at the cheapest cost, which drives down prices, because we can sell into the GB market and procure out of it when things are not cheap.

2102. **Mr Dunne**: That is where the big gains are going to be.

2103. **Ms Aston**: We want as much flexibility and capacity in the electricity system as possible. The North/South interconnector will play a fundamental part in security of supply and an important part in driving down prices.

2104. **Mr Dunne**: The savings will be passed on to the consumer, then.

2105. **Ms Aston**: Absolutely.

2106. **Mr Dunne**: They will be? Domestic and industrial?

2107. **Ms Aston**: Yes.

2108. **Ms Pyper**: If I remember correctly, when we did the cost-benefit analysis of the single electricity market to try to

establish whether it had the potential to bring benefits for consumers, there were around £7 million of savings that could be made attributable to the North/South interconnector. We have not been able to get those savings in the single electricity market because we have not had that second interconnector. The cost-benefit analysis assumed the second interconnector. There are savings to be made there.

2109. **Mr Shiels**: We talk all the time about how difficult it is to get lower costs. A lot of the conversations about prices are about how difficult it is to achieve lower electricity costs. The North/South interconnector is a project that will deliver lower costs.

2110. **Mr Dunne**: Good. Thank you.

2111. I have a couple of other points. We have heard rumours about potential new business. Is there any evidence that we are losing out to new business because of the lack of security of supply and the inability to give assurance to potential new businesses that there will not be an issue further downstream? Are you aware of any evidence of that?

2112. **Ms Aston**: I am not aware of any evidence at all. It has never been mentioned to us as being an issue.

2113. **Mr Shiels**: When Invest Northern Ireland was at the Committee, its view was that, although electricity prices are an issue — I am thinking about prices rather than security of supply — the benefits of Northern Ireland as an investment attraction for other reasons outweighed the electricity price factor.

2114. **Mr Dunne**: I think that that is perhaps the way that businesses compensate for it.

2115. **Mr Shiels**: There is a skilled workforce and other beneficial aspects.

2116. **The Chairperson**: If I can just pick up on that point, Gordon, there were two issues: one was the price and the other was the availability of a supply that was of sufficient magnitude to work for expansion of the business, which is a slightly different thing.

2117. **Mr Shiels**: I was talking about prices. You are right.

2118. **The Chairperson**: Do you have anything further to add on that, because the matter has certainly been raised with me?

2119. **Mr Dunne**: The high energy users with IT-based systems need security of supply. They need high capacity and high volume, and we have been told that there is a risk out there that people are not coming in because of the potential risk to the long-term security of supply.

2120. **Ms Aston**: Come 2021, where the capacity statement is stating that we will be in a deficit, I think that that would be an issue. It is therefore a fundamental assurance to put out there before the 2021 deadline.

2121. As to the 2016 time frame, hopefully the discussion around the table provides some assurance about the risk that is there and how it is being managed. I would like to think that, come quarter 1 next year, the further investigations or exploration with the system market around the quantum of the gap, the risk and how it can be plugged will put answers on the table.

2122. **Mr Dunne**: I have a couple of other points, Chair.

2123. We have been enlightened here to the cost to the industry. The big consumers are paying heavily for their electricity, and many of them are now looking at alternative means of supply. What more can be done to try to accommodate work with the big manufacturing users? We had one manufacturer in who is competing throughout Europe for business and claimed to be paying an electricity bill of £1 million a month. What more can be done to try to address the problem? I know that there are various solutions, and I think that you are looking at them in your paper, which, to be honest, I have not studied yet. I think that you will do further work on that. This is critical to the future of big business in Northern Ireland.

2124. **Mr Shiels**: Absolutely. Electricity prices are one of the major issues for the Northern Ireland economy, and that is true both for industrial consumers and for domestic consumers. We hear often that we have one of the highest levels of fuel poverty at domestic level in the whole of the UK, so electricity prices are important both for domestic and for industrial consumers. That is why we are trying to shine a light on the key drivers for electricity prices.

2125. Our research particularly shows that, for domestic users and smaller businesses, the pricing relativities are that Northern Ireland sits around mid-Europe and slightly above, depending on the timescale of the data. For the large energy users (LEUs) and business customers, we have some of the highest prices in Europe. Part of the work that we are doing is on understanding exactly why that pattern emerges. As I said earlier, our paper shows that it is partly to do with the network cost allocations relative to other jurisdictions and partly to do with the level of other costs that large energy users in Northern Ireland have relative to other jurisdictions, such as renewable incentivisation costs.

2126. As I said at the beginning, priorities of price, security of supply and sustainability are always going to be in tension. We have already talked today about the price that we are willing to pay for security of supply, and the costs that it will take to buy that. All those tensions will constantly exist for Northern Ireland, but what we try to do is get to the bottom of the key drivers and data and provide the Committee, DETI and other Departments with the information needed to make informed policy decisions about where to land on that policy trilemma.

2127. What we need to do in the short term, on the LEU cost front, is to get to the bottom of the network costs allocations point, which is what the project that we will kick off in the next few weeks will do. We are working on that alongside DETI, and then we will be able to come to you with an informed set of numbers.

2128. **Mr Dunne**: When is that likely to be?

2129. **Mr Shiels**: Are you asking when the research will be completed?

2130. **Mr Dunne**: Yes.

2131. **Mr Shiels**: It will be completed early in 2014.

2132. **Mr Dunne**: In about six or seven months' time, then.

2133. Last winter was very severe in certain areas. The heavy snow was quite localised, and in fact some of it was quite close to here, over the Holywood hills. If we have snow like that throughout Northern Ireland, is there a risk that there will be a major failure of the network system, considering its condition, age and various other issues? Is that of concern to the Utility Regulator? What brings that question to mind is that, as was mentioned, during that weather the lights in Belfast went out. Fortunately for us, it was for only 20 or 25 minutes in the greater Belfast area. We were affected by it, but the lights were back on in about 25 minutes. However, had we had that severe snowy weather throughout Northern Ireland, is there a risk of major failures?

2134. **Ms Pyper**: It is a timely question, and one that I discussed with the senior management team yesterday in a discussion on winter readiness.

2135. **Mr Dunne**: Good. You are thinking outside the box.

2136. **Ms Pyper**: I will let Jo take that question, because she has had first-hand experience of a winter crisis, albeit on the water side.

2137. **Ms Aston**: Yes. I lived through that 2010-11 freeze/thaw investigation. We are dependent on all the companies that we regulate. They are the people with the expertise, and they need to manage the network. Our responsibility is not to make sure that they are adequately financed to discharge their duties. However, we realise that extreme weather events are becoming more frequent, and therefore we look to our

companies to ensure that they have comprehensive major incident plans in place and that, when they submit their business plans to us for a price control, they have looked at the resilience issues in the network and identified maintenance issues and what they need to do to address them. We find that NIE has a lot of issues with strong storms. That is its particular issue.

2138. **Mr Dunne**: I see that you touched wood there.

2139. **Ms Aston**: I am touching wood. When Northern Ireland Water (NIW) experienced the massive freeze/thaw event, a lot came down to the behaviour of individuals. Householders had to be mindful of the possibility of their own supply pipes freezing. It is about having information and about being as ready as we can be.

2140. **Ms Pyper**: It is down to managing the risk. There may be a need or demand from some of the energy companies to invest in and gold-plate their infrastructure. It is the regulator's job to get a balance and manage the risk between having good, robust and resilient infrastructure in place, without gold-plating it to the extent that it would withstand any unforeseen weather event or natural disaster. We are looking at that and challenging the companies on their investment plans. They all produce winter readiness plans and test them, and that is something that we have sight of.

2141. **Mr Dunne**: Do you scrutinise them?

2142. **Ms Pyper**: We look to see that they have done that work thoroughly. That is something that we were talking about with the senior management team yesterday.

2143. **Mr McKinney**: Thank you, Chair. Congratulations on your appointment, Jenny. I have two specific questions on pricing and one general one. Obviously, you have reported on there being some debate about the energy market's design, the SMP and capacity payments. Could the market be restructured to give renewable energy a percentage of the SMP or to cap the level for renewables based on a reasonable rate of return?

2144. **Mr Shiels**: I guess that I have a couple of points to make in that area. The SEM was set up with an awful of thought, consultation and effort; it did not happen by accident and took a long time to put in place. The arrangements for the SMP aspect, together with the capacity payment aspect, are there deliberately to try and mimic the payments required to incentivise long-term efficient generation to take place.

2145. A project called regional integration is coming up in the next year. It is about establishing a standard set of principles that will apply to all wholesale markets across Europe. A project has already kicked off to deliver the changes required for the regional integration project in the SEM systems and mechanisms. Many different things are being looked at in that project, including the structure of payments and the structure of the payment and training arrangements in the SEM. So, it is an opportunity to look at things such as that.

2146. Structuring the wholesale markets is a tremendously complicated business. Wholesale investments are awarded over a very long depreciation period. Therefore, what we should not do is try to tinker with, or have knee-jerk reactions to, wholesale systems. These things need to be thought about and done properly. However, the sort of things that you are talking about could be considered with regard to future changes to SEM.

2147. **Mr McKinney**: How does the capacity pot work? If there is potential drop-off, is there time to review it?

2148. **Mr Shiels**: I am not going to try to describe the operation of the capacity payment mechanism because I know that it is complicated and I am certainly not an expert on it. The theory behind it is that it is there to top up the payments made from the SMP to generators. The SMP covers their short-run marginal costs, and the theory is that capacity

payment mechanisms are there to top that up and reward longer-term investment requirements. So, there is good thinking behind it. I do not know the precise answer to your question. However, I am happy to take it away and come back to you on it in a written response.

2149. **Ms Pyper**: The key point is that we are having to look at the design of the market again because of the drive from Europe with the regional integration project. It took many years — and I know, because I was there — to develop the design for the single electricity market. I think that it would be difficult for us to do anything significant with the SEM given that we have the regional integration project. However, I know, and Jo can confirm, that at the meeting in October the SEM committee looked at, and took a paper on, improving competitiveness. It was looking to see whether there was anything that could be done in the short term to try and, I suppose, tweak the SEM model without causing major concerns or balancing shocks in the market.

2150. The direction of travel that Europe has now set us on means that it would be difficult for us to develop, consult and implement changes to the SEM as it stands. That is not to say that there are not opportunities to improve things in the new market with the new regional integration project.

2151. **Mr McKinney**: I have a general point. I am relatively new to this, so forgive me. It strikes me that this is one of those debates where, if you had the choice, you would not start from here, if you know what I mean. You are dealing with a potential crisis in 2016 or potentially further, if you do not do anything, in 2021. Is there any sense that this could be widened or developed in a way á la the Netherlands, which put together the energy agreement for sustainable growth? It brought all of the partners in. We have had Phil reflecting on customers. We have had the domestic and industrial aspect of this also. Is there a way in which the debate could be reconfigured in order to get everybody in to agree the future vision? From what I hear, we are looking at trying to plug a gap at present. I am not hearing the vision.

2152. **Ms Aston**: I suppose that what I would say is that we would not start from here. I think the reason why we are here is that we do not have the North/South interconnector, which was part of the strategic energy framework. That was the plan. A vision was set out to have that in 2013-14. That is why we are here.

2153. The SEM has delivered benefits. We do not have the lack of transparency that exists in the GB market and we are in a much better place. Part of the regional integration project is about making the market European-based so that we are competitive. We are looking at models across Europe to get the learning in, but we must remember our context in Northern Ireland and our limitation and remoteness here and not throw the baby out with the bath water. Part of the work that Jenny mentioned was about what we can do now to improve prices in the short term. It is also important to know what is working well in the SEM and hold on to it. It is about learning lessons about what is good and how we can improve it.

2154. **Ms Pyper**: It is interesting to see what has happened in the GB market. The Labour Party's statements about what must be done show that the direction of travel that Ed Miliband has been signalling is moving towards what we have. We have a very transparent pool system in the SEM and a lot of regulation. It is a very regulated market, and Ed Miliband is calling for more regulation and a move from the bilateral contract mechanism, which there is in the British Electricity Trading and Transmission Arrangements, which seems to have failed to deliver the necessary investment to give the security of supply assurances needed in the GB market.

2155. It is not that we are complacent, but we are in a position where we have a transparent pool market. Yes, we

have identified that there is a potential security-of-supply risk, largely because of the failure to deliver the second North/South interconnector, but we are aware of that risk and are alive to it. We are trying to quantify it and we are looking at possible solutions. It is not that we are in a really bad place. Jo is right; we are sitting with a market that is working well. Looking at the input that the Committee has had from other commentators, many of them have acknowledged that the SEM has delivered benefits for Northern Ireland. That is an important point to reinforce.

2156. **Mr Shiels**: All those points are reflected in our paper, Fearghal.

2157. **Mr Agnew**: I apologise to the witnesses and the Committee for being late; I had to chair another meeting. I congratulate Jenny on her appointment to her new post.

2158. I do not know much you have followed our oral briefings on this subject, but we have heard a lot about the cost of upgrading the network in order to incorporate renewables. What is often repeated is that renewables have a downward pressure on price, but no one can tell me the extent of that. I do not know whether you are doing any work on assessing and quantifying it. If there is a debate about the costs and benefits of renewables, it seems to be about the costs but not the benefits.

2159. **Ms Pyper**: I am not sure whether you heard the end of Kevin's presentation —

2160. **Mr Agnew**: No, I am sorry, I did not.

2161. **Ms Pyper**: — but one of the papers in the pack looks at key issues. I will let Kevin speak about that. It looks at renewables in three elements and tries to help the Committee understand the tensions that you mentioned.

2162. **Mr Shiels**: We followed the debate quite a lot over the past six months. I have talked to the Committee a lot about wholesale and our work on retail issues. We separated renewables out as well because there has been so much comment and debate about them over the past six months. We appreciate that with renewables there is a huge set of issues to get your head around, and that it is not a simple matter of doing a sum to say that X benefits plus Y costs equals Z, which is the benefit of renewables. It is too complicated for that. The DETI review of renewable penetration is welcome, because that should be some sort of structured exercise to start to make a better assessment.

2163. **Mr Agnew**: Do you know when it is due to report?

2164. **Mr Shiels**: No. I have not been talking to DETI about the timeline for that. We thought that, to aid debate, it would be useful to split the issues around renewables into three elements. The first is the role of renewables in the SEM; the second is the incentivisation framework around renewables, and the third is the other impacts that renewables bring, whether avoiding carbon or bringing extra grid and connection costs. I am reflecting some of the pros and cons that were made to you many times by several different stakeholders.

2165. It is almost impossible to put a figure on it and say that renewables are a good or bad thing. At the end of the day, there is a government policy and target to improve renewables generation, and we are working with DETI to help to implement that. The purpose of the renewables aspect of our pricing paper was to try to make clearer what the renewables impacts were in the context of prices and bring more evidence to the debate.

2166. **Mr Agnew**: We heard from the NIE, which has re-estimated the cost of upgrades required to incorporate the 40% of renewables to the grid. Is its figure of £500 million one that you have interrogated? Is it a valuation that you accept? I do not see any benefit in the NIE underselling the investment required because, obviously, it has to go to you to justify any investment. What are your views on the figure? It is significantly down on the figure of £1 billion originally estimated.

2167. **Ms Aston**: As you said, the NIE has to submit to us, and justify, every bid that it wants to upgrade the network. It is the NIE's responsibility to make sure that the network remains economic. Therefore, it brings cases to us for renewables and investment. We have approved investment of probably between £30 million and £35 million to date. It has taken us a long way in that percentage. I cannot say whether the gap is £500 million or £1 billion. We should be getting closer to the right number. I could not stand over the £500 million and talk about how much gold-plating there is or how much is actually needed. We need very robust detailed plans so that Northern Ireland Electricity is more than talking about a global ballpark figure into a network plan of investment to upgrade to have the vision of what we want, where we want it and how we want to develop it. Looking at that gap, you could say that we have got the low-hanging fruit to get renewables as far as we have. Perhaps it will be a lot more costly to get them to the next stage and meet the next target. It feeds in very appropriately to the review of renewables that DETI will undertake.

2168. **Mr Agnew**: Apologies if this has already been raised: where are your powers in relation to connection charges? A common complaint that we hear in the Committee is that connection charges are too high, particularly when you get to small-scale renewables, where the costs are still quite high in comparison with the benefits of investment. The NIE has given us its case as to why the charges are the way they are, but are you satisfied with the charging?

2169. **Mr Shiels**: The NIE has a network connection statement, which we have to regulate and approve. It has been verified. All connections have to be made by the NIE under that policy. To that extent, the connection charges are known and verified.

2170. **Mr Agnew**: How do those compare with GB or the Republic of Ireland? It is not for you to judge whether those who complain are right, but is there a discrepancy in charges with other regions?

2171. **Ms Aston**: When it comes to connections and renewables, it is about what is necessary and what the consumer connecting has to pay for. I am not sure that you can benchmark that. Northern Ireland Electricity needs to make sure that a connection is economic in its policy for charging for connections. My understanding is that it is able to connect, but that if what it is connecting to requires an upgrade it has to upgrade up to a 33 kW cable line. Beyond that, it does not, but if that upgrade is needed, it has to pay for that. The cost of connection will vary with the individual circumstance.

2172. There is then the requirement to upgrade the network beyond 33 kW. Recently, we approved investment to about 40 substations — actually, it is 30 substations, I got my numbers wrong there. That will allow quite a few additional connections to be made, because, again, the wider customer base has to carry that. We have looked at the economics and they are justified. Therefore we have approved it.

2173. **Mr Agnew**: Thank you very much; that is very helpful.

2174. **The Chairperson**: Thanks very much for that, and thank you for being with us. Earlier, I mentioned Enniskillen and Letterkenny. Have you any information to share with us on that?

2175. **Ms Aston**: I have taken a note of it.

2176. **The Chairperson**: I know that other members have made a few queries around that. Could you pass them on to us?

2177. We have a number of other questions; we had quite a number here. The Clerk will forward those to you, and, perhaps, you could respond in writing.

2178. **Ms Pyper**: That is fine.

2179. **The Chairperson**: Again, I wish you well, and thank you very much for your time.

2180. **Ms Pyper**: Thank you, Chairman, and thank you for the opportunity. I know

that we will be talking to you on these issues again. If we can do any more, such as go through our paper to help aid the Committee's inquiry, we would be happy to do so, if that would be helpful. We are also happy to talk to researchers about the information that we have.

2181. **The Chairperson**: That is great. Thank you.

Appendix 3

Written Submissions

Appendix 3 – Written Submissions

1. AES briefing
2. CBI – Northern Ireland's roadmap to reducing energy prices
3. CBI response to Utility Regulator
4. Consumer Council briefing
5. Consumer Council McIldoon Report
6. Consumer Council - Lord Whitty Report – Energising Northern Ireland
7. Consumer Council – Switching Energy
8. DETI briefing
9. DETI response regarding Moyle Interconnector fault
10. DETI response to Committee queries
11. Energia briefing
12. GMB, Prospect and Unite Trade Unions briefing
13. Invest NI briefing
14. Manufacturing NI letter regarding high energy costs
15. Manufacturing NI response to Consumer Council on RP5
16. Manufacturing NI response to Utility Regulator
17. Mutual Energy briefing January 2013
18. Mutual Energy briefing October 2013
19. Northern Ireland Electricity briefing
20. Northern Ireland Electricity response to Committee queries
21. SONI briefing
22. SONI All Island Generation Statement 2012-2021
23. Utility Regulator written submission 1
24. Utility Regulator written submission 2
25. Utility Regulator written submission 3

AES Written Briefing Electricity Policy Review

AES Submission to ETI Committee Security of Supply

Executive Summary

AES would like to thank the Committee for the opportunity to discuss the issues of security of supply and how AES' business operations are impacted by changing conditions within the Single Electricity Market (SEM). There will be three representatives available to present and discuss a range of issues:

- Mr. Mark Miller, Vice President UK and Irish Markets;
- Mr. Roger Casement, UK Plant Manager; and
- Mr. Ian Luney, UK Commercial Manager.

AES Business Operations

AES has been part of the Northern Ireland energy landscape since 1992 and with the acquisition of Premier Power Limited in 2010, it now owns and operates two power generating stations within Northern Ireland with a total installed capacity of 1,918MW which comprises about 16% of the installed capacity in the SEM. AES Kilroot Power Limited, located in Carrickfergus and AES Ballylumford Limited, located in Island Magee, are wholly owned subsidiaries of the AES Corporation.

AES employs 248 people across both sites. We also sponsor a comprehensive apprenticeship, under graduate and graduate scheme, offering opportunities to a further two dozen candidates to learn trade skills, enhance their university educational curriculums and further develop their CVs through post graduate employment contracts.

AES' assets are summarised in the following tables:

Kilroot	Technology/Fuel	Commercial Status	General Market Position
K1	Dual fired coal (210MW)/oil (260MW) unit	Merchant	Base load/mid merit
K2	Dual fired coal (210 MW)/oil (260MW) unit	Merchant	Base load/mid-merit
GT1	29MW OCGT (distillate)	Merchant	Fast start, peaking units
GT2	29MW OCGT (distillate)	Merchant	Fast start, peaking units
GT3	42MW OCGT (distillate)	Merchant	Fast start, peaking units
GT4	42MW OCGT (distillate)	Merchant	Fast start, peaking units
B4	180MW gas fired thermal unit	Merchant – due to close 31/12/2015	Slow start, peaking units. System support dispatch
B5	180MW gas fired thermal unit	Merchant – due to close 31/12/2015	Slow start, peaking units. System support dispatch

Kilroot	Technology/Fuel	Commercial Status	General Market Position
B6	180MW gas fired thermal unit	Merchant – due to close 31/12/2015	Slow start, peaking units. System support dispatch
CCGT Unit 10	100MW gas fired CCGT (single shaft)	Under PPA until 31/3/2018 – counterparty has six month one way cancellation option.	Mid-merit – marginal unit Limited reserve
CCGT Unit 20	500MW gas fired CCGT (multi shaft)	Under PPA until 31/3/2018 – counterparty has six month one way cancellation option.	Mid-merit – marginal unit Multi-shaft design therefore high degree of flexibility
GT1	58MW OCGT (distillate)	Merchant	Fast start, peaking units
GT2	58MW OCGT (distillate)	Merchant	Fast start, peaking units

Note: In addition AES also owns and operates 87 MW of wind capacity in England and Scotland which operate within the GB power market BETTA, with a further 250 MW development pipeline in Scotland. The commercial position within the SEM is primarily driven by commodity relationships between coal, gas and carbon and also the efficiency of the individual units. However, the commercial position is also highly influenced by the level of system demand, extent of wind generation and loss of load probability (i.e. extent of other generators being available versus demand). Irrespective of competitive commercial positioning within the market, generating units can be dispatched by SONI (the Transmission System Operator – TSO) to support system technical needs.

Environmental Legislation and Implications on AES' assets

All of AES' assets must comply with the EU's Large Combustion Plant Directive (LCPD) up to the end of 2015 and its successor, the Industrial Emissions Directive (IED) from 1st January 2016.

Kilroot has achieved LCPD compliance through the addition of Flue Gas Desulphurisation (FGD) and low-NOx combustion equipment. In order to meet more stringent NOx and SO2 emission limits under IED, there are several options available to AES including:

1. Limited hours of operation up to 2023; or
2. A transitional plan (the "Transitional National Plan or TNP") which would allow restricted operation of the plant up to 2020; or
3. Invest to make the plant compliant with IED emission limits from 2016.

AES' current view is that it will opt into the TNP. Assuming no further significant capital investment, under the TNP option the capacity factor of the Kilroot coal/oil units will be limited to approximately 45% from 2016 – 2020, with a further reduction in operations to 1500 hours per annum from June 2020. While the TNP will not necessarily limit the maximum output across the year, mass emissions of NOx and SO2 will be subject to an aggregate limit which could require AES to de-rate the plant over pro-longed periods during the year to manage its emission bubbles.

Ballylumford C-Station is currently compliant with LCPD and future IED emissions while firing gas, but investment will be required in Unit 10 to enable running on back up fuel. Ballylumford B-Station opted out of the LCPD in 2007 and will cease operations on 31 December 2015.

Northern Ireland Generation Security Outlook

It is our understanding based on discussions with SONI and information from the DETI/ NIAUR paper dated 12 June 2013, there is an increased risk to Northern Ireland's generation security from 2016. This is driven by the delay in the North-South Interconnector, closure of the Ballylumford BStation, reduced capacity of the Moyle Interconnector and potential restrictions on Kilroot capacity due to IED. The generation risk remains material until the completion of the second North-South interconnector or additional capacity is available in Northern Ireland.

In relation to Kilroot, AES is evaluating the economics of making Kilroot fully IED compliant from 2016, however this is heavily impacted by its commercial position within the SEM. Uncertainty over future coal, gas and carbon pricing, the limited ability to hedge long-term fuel positions that align with market rules and vagueness over energy market structures also play a very important part in this investment decision.

Setting aside these uncertainties, our initial view, based on current market conditions and discussions with several equipment suppliers, is that the investment metrics look promising, but are subject to further engineering design review and development of an appropriate risk mitigation strategy. Likely modifications to the plant could include further refinement of existing FGD/low-NOx combustion equipment and/or the installation of Selective Non-Catalytic Reduction (SNCR). Any investment would be subject to securing AES internal approvals and relevant environmental/planning consents.

In relation to Ballylumford, the B-Station does not comply with the new IED emission limits without significant investment and modifications to the boiler units. Initial engineering assessments have recently been carried out and AES believes that it is technically possible to modify the units to comply with IED requirements.

Furthermore, anticipated changes to the electricity market in 2016, including likely restructuring of capacity and ancillary services payments, will play a key part in determining the overall project risks. Given these uncertainties, it is likely that a capacity contract would be required to make this a commercially attractive project. In order to fully understand the likely investment required, a more extensive engineering evaluation will be completed by the end of 2013 to outline the full business case.

Summary Position

AES has demonstrated our long-standing commitment to providing a safe, reliable and cost efficient supply of electricity to Northern Ireland and indeed within SEM. We once again stand at the threshold of significant change to the energy markets in the next few years. AES is committed to engaging with all stakeholders to assess our role in addressing post-2016 generation security risks and indeed, offering energy solutions that serve the need of all stakeholders.

CBI Northern Irelands roadmap to reducing energy prices

Nathan

Sorry for the delay in responding to your email

I have responded below to the two questions you raised. I have also attach a short paper on an outline roadmap which we referred to during our oral session with the committee – I would appreciate if you can circulate this to the Committee members.

During the briefing you agreed to provide the Committee with further information as detailed below:

- It was suggested that an invitation to the Committee to meet the Large Users Forum in CBI would be welcomed - *We no longer have a larger user forum , but would be open to inviting Committee members along to an appropriate meeting of CBI members in the future. There is a separate UK based large energy users group which has some presence in Northern Ireland – not sure if there was some confusion with it. Earlier in the year we did run a series of events with Invest NI and with Northern Ireland Manufacturing under a 'large energy users' forum but these events have concluded*.
- During the briefing it was stated that the two different policies on the island of Ireland created distortion. It was asked what the implications of that distortion were for businesses in Northern Ireland and you agreed to send a response on this.
    - *Current situation has resulted in significantly lower electricity prices for larger energy users in Republic of Ireland than in Northern Ireland – driven by a two key factors: environmental costs/levies and how they are applied, and allocation of transmission and distributions costs*
    - *The implications of such decisions are that whilst we both face the same generation costs, policy on renewables and cost allocations means the RoI will remain a more attractive investment location for manufacturing and other large energy user investments – eg datacentres – the evidence on the ground supports this position – they have attracted both energy intensive manufacturing and high load datacentres while Northern Ireland has attracted very little investment in these areas*
    - *It will remain difficult to attract high electricity users/investors to Northern Ireland until such time as prices have become more competitive*
    - *Even within indigenous companies, particular energy intensive investments may well be located outside of Northern Ireland (many of our medium/larger companies have operations outside NI)*
    - *This narrows the type of industry with scope for development potential in Northern Ireland and thus limits the development of key capabilities, and wider economic benefits from such investment(supply chain, economic multipliers etc) are not realised.*

I hope this is helpful to the Committee

Regards

Nigel Smyth

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A roadmap to lower electricity costs for Large Energy Users

Background

Consistently over the years Northern Ireland has proven an unattractive location for FDI businesses with high energy costs to invest, while the Republic of Ireland (ROI) in particular proving more attractive. Given there is only one all island market for generation of electricity concerns exist that the costing structure for allocation of Transmission and Distribution costs, along with other cost burdens imposed as a result of policies on renewables and energy efficiency, and Public Service Obligation cost are fundamentally at odds with best practice in the rest of Europe.

This view is reinforced by the findings in the recent Utility Regulator's (UR) benchmarking report (March 2013) where NI was found to have some of the highest energy costs in Europe for Large Energy users (LEU's) while the domestic sector has some of the lowest costs in Europe.

Whilst the Executive is committed to growing our private sector, it would appear our energy policies are in direct conflict with this objective with high energy costs not only deterring new inward investment opportunities, but also threatening the on-going viability of existing LEUs in Northern Ireland.

LEUs are also concerned from a security of supply perspective as a result of decommissioning of an existing power station in NI without there being adequate interconnector capacity to enable the shortfall to be met from the most efficient options – from ROI due to the lack of a second North South interconnector and from Great Britain through the restricted capacity on the Moyle interconnector.

This paper seeks to set out areas of concern that give rise to LEU'S uncompetitive energy cost structure. CBI Northern Ireland believes it is essential that DETI/UR sets out a roadmap with regard to how the issue of uncompetitive electricity prices to LEUs in particular will be addressed so as to provide clarity and certainty over the direction of future costs to existing businesses.

We recognise that both short and medium term actions are required. However we also recognise such a review is timely as it will enable alignment of NI policy on cost burdens and cost allocation for Transmission and Distributions to be aligned with the development of the European integrated energy market proposals.

In the paragraphs below we highlight the key issues which need to be addressed.

Single Electricity Market costs:

- **Constraint costs** – Critical infrastructure (such as the proposed second North – South Interconnector) are needed to reduce unnecessary or avoidable costs which contribute to high constraint costs (alongside trading mechanisms on interconnectors with GB to reduce the need to constrain off wind). The strategic importance of the second north/south electricity interconnector and its contribution to improving security of supply and reducing costs for all consumers must be reflected in the planning approval process, and must be supported at the highest political level, north and south. Undergrounding of this second interconnector is not a viable economic option as it would lead to an increase in costs.
  Planning approval required by 2014 – Planning Authorities
- **Capacity charges** – The authorities need to ensure capacity charges do not over-reward generators, or encourage inappropriate new capacity. With some major capacity dropping out in 2015 this might be an opportunity to review the capacity payment pot.
  Review within next 6-12 months – SEM Committee

- Bidding Aggregated Supply side units/ demand side reduction into the pool – One option open to minimise the impact of constraint costs/ and the impending security of supply issues would be to allow Aggregated supply side units (AGUs) to be bid into the pool. Many LEU's have standby generation and incentivising their use may avoid the triggering of constraint costs, reducing costs overall, whilst rewarding LEUs for using the equipment might help reduce their overall energy cost. Clarity is required around how this might more widely achieved - we understand some AGUs do already operate in the market.

  The option could be further extended to bidding demand side reduction into the pool, which is developing in the ROI. Thus aggregated demand side units (DSU) reduction could attract capacity payments for providing the capability to reduce system demand and would also, when called upon to shed load, reduce the overall price of the pool as more expensive peaking plant, used to strike the half hour pool prices, would be called less often – more and better information is required by customers to maximise the potential of demand side units. Current ambiguities around legislative issues must be resolved between DETI/UR – we believe we are unable to proceed with DSU application in Northern Ireland as current arrangements mean a DSU cannot be licensed.

  Clarification required by DETI/UR – within 3 months with aim of having a more active market place by mid 2014. NB Legislation may be required.

Government/Regulation policy:

- **Moyle Interconnector** - Restoration of the Moyle interconnector to full capacity is expected to bring enhanced trading opportunities and should result in the short/medium term a reduction in generating costs and constraint costs – an early assessment of the short term and longer term benefits (and costs) of restoring the interconnector should be undertaken.

  Revi**ew within the next four months - UR**

- Extension of the gas network – the westward extension of the gas network needs to be pursued with urgency by DETI/UR. The NI Executive must manage the risk of increasing transmission charges for all gas consumers, as we recognise that postalisation of new transmission capital expenditure is likely to impact on existing gas users.

  Press ahead with network extension – UR/DETI

- **Public Service Obligation (PSO) charges** – The Regulator (UR) to re-sculpt PSO charges to ensure that the price customer's pay reflect the benefits they receive. It is essential that LEUs in NI are put on an equal footing with their European competitors ie they are not paying for initiatives the benefits of which fall to the domestic sector.

  UR to review with PSO's restructured by August 2014

- **Environmental levies (incl ROCs and CCL)** – these are exceptionally high in NI for LEUs compared with the ROI. In addition LEUs are paying twice to deliver the same outcome. The CCL charge to "encourage energy efficiency" is borne only by the non-domestic sector, whilst also having to bear the cost of ROCs.

  - Renewables must be developed at least cost, with a strategic approach to achieving 2020 targets. DETI need to review current incentives, and we must ensure that LEUs are not paying disproportionately high charges.
  - Government should consider whether it is feasible to give a credit in respect of CCL, to offset the double charging effect of ROCs and CCL.

  Review to be completed within 6 months - DETI

- **Network Charges** - The structure and allocation of Network charges via Transmission and Distribution Use of System tariffs needs to be reviewed urgently by the UR to ensure that they can be aligned with the rest of the EU – this should be done as part of the

development of regional energy markets required under EU directives– a short study must be commissioned to identify how costs are currently identified and allocated in both ROI and NI and assess the implications of any changes – such a study should include a review of other charge/levies and how they are allocated

Target date for commissioning study October 2013 – UR with emerging recommendations implemented no later than September 2014

More detailed evidence to support these recommendations are provided in the CBI NI response to the Utility Regulator's price comparison report published in March 2013.

CBI Northern Ireland

30 September 2013

CBI Response to Utility Regulator

FAO Jim McManus

Jim

I attach a copy of the CBI Northern Ireland submission to the Utility Regulator, following the publication of his benchmarking price report in March

I have separately sent a copy to the Committee Chairman

We would welcome the opportunity of meeting the Committee if that can be accommodated – I would be grateful if you can circulate a copy of this paper to the members of the Committee

Regards

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Creating a more competitive energy market for businesses

Executive Summary

- Electricity costs remain uncompetitive for large industrial/commercial (I+C) users which according to the recent Utility Regulator's price comparison report published in March are among the highest in Europe. Compared to our two nearest markets (in Great Britain and Ireland) prices are typically 20-25% higher in Northern Ireland. The report also indicates that domestic consumers and small businesses have access to competitive prices when compared to Great Britain, Ireland and Europe. We recognise that comparing prices across jurisdictions is prone to difficulties without a complete understanding of those markets. In addition the complex supply chains involved in energy generation and distribution add to the difficulty in pinpointing the issues.
- Whilst comparison with GB is difficult, given the differences in fuel mix, economies of scale, customer type, geographic location and market structure between the GB and NI electricity markets, it would appear that network charges are allocated between domestic and Industrial/Commercial customers on a basis inconsistent with the rest of Europe. However in GB this network cost penalty is more than offset for Large Energy Users (LEUs) by access to lower generation costs, which is not the case in N Ireland.
- A reasonable comparison can however be made with the Ireland which has a common wholesale market and regulatory structure although consideration in any analysis must be given to different customer types/ consumption profiles and economies of scale. Given the island of Ireland operates one generation market with one pool, the 20-25% cost difference noted between N Ireland and Ireland can only arise as a result of network charges, and in particular their allocation between sectors, along with a much lower application of various government levies. In fact it is Irish Government policy to rebalance network tariffs in favour of large energy users, in line with the rest of Europe. This has been stated publically by Ministers and the CER[1]. There are also no direct environmental levies in Ireland that are comparable to the Renewable Obligation and Climate Change Levy. PSO charges are also sculpted in the Ireland to reduce the burden on LEUs.
- Unless action is taken quickly and the competitive disadvantage that LEUs in Northern Ireland face verses the rest of Europe is addressed, future investment, growth and jobs in many of these operations will become unattractive – at present many of these companies are seeking to 'come off the grid' and provide their own electricity - yet these are the very customers which an electricity system should depend on for its core load (any large user exiting the grid will push the costs up for the remaining users). Without continuing investment the future of some of these operations will become more uncertain.
- NIAUR's executive summary puts forward three priority key work areas which they state will directly impact upon the issues raised by their paper. They are: to carry out a review of I+C competition, continue to scrutinise network costs and efficient European market integration. We view the first one as having little impact given suppliers' margins make up only 2-3% of total I+C customers costs and the last two items are part of NIAUR's statutory and ongoing role. We would contend that none of the next steps suggested by NIAUR will address the issue of the costs NI I+C customers pay for network charges and levies and taxes when compared to Ireland and a number of other European countries. We would therefore ask for the following short term actions to be undertaken by NIAUR and the NI Executive:
    - **The Utility Regulator (UR) needs to summarise how the structure of electricity tariffs in Northern Ireland is disadvantaging large industrial users** – this should include

1 CER/10/102, CER/10/206 and http://debates.oireacthas.ie/dail/2009/10/13/00055.asp

generating costs, capacity payments, constraint costs, network charges and PSO charges which are the key cost/price drivers

- **The NI Executive must ensure that energy policy is designed to maintain and attract Large Energy Users** – and learn from experiences in other European regions, including Ireland
- **The structure and allocation of Network charges via Transmission and Distribution Use of System tariffs needs to be reviewed urgently** by the Utility Regulator to ensure that they are cost reflective and in line with best practice within the EU - this needs to be completed within the next few months to influence next year's tariffs (set in August)
- **There must be strong cross-party political support for major infrastructure projects which will benefit all consumers – an explicit statement of support for the second north-south interconnector should be issued by the Executive**
- **Critical infrastructure (such as the proposed North – South Interconnector) needed to reduce unnecessary or avoidable costs, must be prioritised**. The strategic importance of the second north/south electricity interconnector and its contribution to improving security of supply and reducing costs for all consumers must be reflected in the planning approval process.
- **Constraint costs are currently not sculpted to reflect demand and thus are not cost reflective** – this must be addressed by the Regulatory Authorities
- **PSO charges need to be re-sculpted to ensure that the price customer's pay reflect the benefits they receive** – this must be done by August 2013 when new tariffs are set
- **Restoration of the Moyle interconnector to full capacity** is expected to bring enhanced trading opportunities and should result in a reduction in generating costs and constraint costs – an early assessment of the short term and longer term benefits (and costs) of restoring the interconnector should be undertaken with some urgency

A number of other issues arose during consultation with our members which could help to alleviate some of the challenges of high electricity prices. These include:

- **The extension of the gas network to the west needs to be pursued with urgency** – but the NI Executive must manage the risk of increasing transmission charges for all gas consumers
- Demand side management measures should be encouraged through better information and possible regulatory changes in order to alleviate security of supply concerns and potentially reduce the total costs of 'electricity production' through reducing peaking demand and constraint costs – more and better information is required by customers to maximise the potential of demand side management

Introduction – the need to create a more competitive environment for large energy users

1 As Northern Ireland seeks to emerge from a long and deep recession future growth is increasingly dependent on investment and trade. Yet uncompetitive energy prices, notably electricity prices for large industrial and commercial users, who tend to have a greater export tendency, risks undermining these objectives. The policy environment must act to support export orientated companies, rather than act as a cost disadvantage. This paper highlights these concerns and specifically responds to the recently published report from the Utility Regulator on price comparisons and comments on a number of specific issues raised in this report.

2 Northern Ireland businesses (particularly larger ones, with high energy usage) have been disadvantaged by high electricity prices for many years, and for this reason many companies are leading in energy efficiency. But despite their leading edge credentials in energy efficiency many of these energy users are penalised by high electricity costs at a time when they are facing intense global competition, and in some countries,

notably the USA, energy prices have been falling significantly as a result of oil/gas fracking.

3 There are other related factors which also impact on their competitiveness:

- There is no Renewable Heat Incentive for 1MW+ users – they are at a disadvantage to GB counterparts – without a competitive rate the potential to develop a new biomass industry in Northern Ireland will not be realised (we recognise this may encourage LEUs to exit the grid but in some cases these may help retain investment in N Ireland rather than lose it altogether)
- There is uncertainty over the future of ROCs which is undermining investment
- In some rural areas there are particular concerns about network reliability issues and whether there is an appropriate focus on investing in rural electricity networks
- Many industrial/commercial users do not have access to natural gas – we have welcomed the commitment from the NI Executive in January to extend the gas network to the west and provide a £32m subsidy – this project needs to be driven with some urgency while ensuring that gas transmission costs remain competitive
- There is a lack of clarity and understanding on the potential to utilise demand management measures to help reduce energy costs – there is a more active market in Ireland in this area
- Significant administrative costs (both direct and use of consultants etc) for the largest users relating to a range of levies which are now in place

4 The implications of having sustained uncompetitive prices and these other factors is stark:

- Future investment is being put at risk, especially in moderate to large energy intensive users – in some cases the future viability of operations and retention of current workforces is being called into question
- Northern Ireland will be unable to attract FDI where energy is a key cost – this includes manufacturing and extends to areas such as data centres, which could take advantage of Northern Ireland's leading telecommunications infrastructure – this is in sharp contrast to Ireland, supplied by the same generating pool, which has continued to attract significant LEUs in both manufacturing and services
- Many larger electricity users are considering coming off the grid (to self-generate) – yet these are the 24X7 customers we need to keep on the grid – as large users leave the grid the unit costs for other customers will rise (part of the rise in electricity prices in recent years is as a result of lower demand largely caused by the economic downturn) while also impacting on the efficient utilisation of the grid and the load factor in generation. This is a vicious circle.
- As companies automate, invest in capital and drive up productivity the price of energy becomes more important – some of the most high value added companies in Northern Ireland are large energy users – and face falling unit prices as they compete globally while energy costs are increasing
- Structurally one of Northern Ireland's biggest weaknesses is a lack of large companies - we have approximately 40% less large (employing more than 250 people) companies than the rest of the UK, and other countries, yet these companies are key economic drivers and deliver widespread spillover benefits – the 100 Large Energy Users (LEUs) in Northern Ireland, have extensive supply chains supporting many smaller companies, in addition to the tens of thousands of people they employ directly.

5 At the same time there is an impending security of supply issue rapidly approaching which has the potential to add a further cost burden to industry. This is being driven

by EU emissions regulations which will result in the closure of Ballylumford generation capacity, the restricted capacity on the Moyle Interconnector, and the delay in delivering planning consents required for progression of the second north/south Interconnector that is needed in order to access spare generating capacity which exists in Ireland. In Northern Ireland little use is made of demand side management (either through load shedding or self-generation) as an alternative to using expensive peaking plant. The reasons for this remain unclear but appear to be due to 1) lack of information, 2) lack of incentives and 3) uncertainty over what licencing requirements are needed to promote this in N Ireland. This is certainly available to LEUs in Ireland and may help some larger electricity users in N Ireland reduce their costs too. Constraint costs are also likely to be driven higher at peak demand periods yet as currently modelled these are not sculpted to reflect this - this needs to be reviewed.

6 During the course of 2012 the concerns of our members, which highlighted significant price differentials between Northern Ireland and both the Republic of Ireland and Great Britain, were highlighted to the Utility Regulator (UR) and government. Concerns relating to the structure of network charges and how PSO charges were being allocated have been raised, while there has been some surprise in the business community regarding how domestic tariffs appear to be competitive with other countries.

Utility Regulator Report – NI Electricity Prices: data and comparisons

7 The UR report published on 26 March 2013 is self-explanatory. The key findings are:

- Electricity prices for domestic consumers and small industrial/commercial consumers are around the EU average (in the period Jan-June 2012)
- For all other industrial/commercial customers electricity prices were among the highest in Europe – an assessment of the data would suggest prices typically 20-25% higher than average UK prices.

The findings are stark and the reverse of what one might expect when the NI Executive has set the development of the economy as its number one priority. The findings confirm the uncompetitive position most large industrial/commercial energy users are facing. In the following paragraphs we provide our members views on the issues set out in the UR report and our members understanding of what is behind these price differentials, as well as some potential solutions.

Market size/scale, isolation and consumer dispersion

8 CBI members accept that these issues are likely to contribute to higher energy prices in Northern Ireland – there is a general acceptance it will be difficult to deliver prices within the Single Electricity Market (SEM) which will be lower than in Great Britain. What is surprising is that domestic and small industrial/commercial customers are able to access competitive prices in contrast to larger users. For instance

- The UR report (chart on pg 24) highlights that the LEU pays around 60% of the domestic price in Northern Ireland
- In the Republic of Ireland the LEU pays typically around 38% of the domestic price – and this is the same percentage in the EU median spread

9 The evidence we have collected suggests that there are four key contributing factors to help explain this situation:

- In GB larger users appear to be able to access significantly lower generating costs than domestic customers. Overall within the GB market generating costs are lower with a combination of fuel mix and under charging for capacity acting as key contributing factors. We recognise that many Industrial and Commercial consumers in Northern Ireland do have poor load profiles, with a load factor of only 40-45%

- In Ireland LEUs pay around 32% less for their network/Use of System charges which creates a more competitive overall price (they do pay the same generating costs, capacity costs and constraint costs as NI LEUs) – many of the largest LEUs in Ireland do not pay Distribution charges as they link directly into the Transmission network
- Larger consumers are paying disproportionately high PSO charges eg some large companies are paying in tens of thousands of pounds for PSO charges for 'services' which they do not benefit from. We note that in Ireland the LEUs only picks up around 30% of what a domestic pays – and the payment is structured differently being based on a capacity related basis rather than on a KWh basis
- A lower supply margin appears to be a contributor to helping domestic consumers in Northern Ireland – an uneconomically low regulated supply margin in the domestic sector is not good for businesses and is likely to create a further imbalance between the domestic and business sectors

Wholesale energy costs and fuel mix

10 There is an acknowledgement that the SEM has a high dependence on generation using natural gas (approx. 70%) while the SEM also has a capacity charge which currently does not exist explicitly in the GB market (though it is under discussion) – it is also likely that the gas will become a much greater percentage of the GB wholesale market over the next 5-6 years as coal stations close. We would expect prices in the SEM to be higher than the GB market for all customers. We understand that prices in the SEM are around 15% higher than GB market prices (including the Capacity charge payments). Over the next few years as the Carbon Floor Price takes effect in Great Britain this will drive generation prices up (at least in fossil fuel plants). However to help improve confidence the Utility Regulator could try to provide more transparency between the SEM and GB prices.

11 However an assessment of generation prices (including capacity charges, imperfection charges and market operator charges) from October 2012, which has been shared with us, suggests that SEM prices can be as much as 30% higher than in GB – this is a very significant difference. The SEM price is based on a Short Run Marginal Cost (SRMC) with a capacity charge based on the cheapest plant available on the market at that time, while in GB the price is derived from bids by generators and typically reflects a Short Run Marginal Cost without a capacity charge.

12 Interconnection should be an opportunity to help reduce price differentials and ensure power flows from the lower priced market (in this case GB) to the higher price. This is happening, though both physical restrictions, the costs of interconnection (which can be around 10% of the generating cost) and significant operational risks may prevent the maximisation of trading potential. The regulatory bodies could review how the risks associated with trading could be reduced in order to benefit consumers more – this will form part of the EU Market Integration project but some early solutions would be helpful.

13 The capacity payment is explicitly included as a charge in SEM and implicitly included in the unit price in Betta (the GB market). However, a number of market analysts suggest that the 'implicit' capacity price in GB does not fully remunerate generators. This has been recognised by ESRI and the fact that GB government and regulators are currently investigating a capacity payment mechanism. This tends to mean that the Betta price is lower but more peaky than the total SEM price (commodity + capacity) as the low load factor units attempt to try to recover their full costs during the peak times when they run whereas in SEM these units are rewarded on a more consistent and predictable basis through the capacity payments. We would welcome clarification that the capacity payment within the SEM is sculpted to reflect usage.

14 In the SEM LEUs appear to be able to access generating prices up to 15% less than domestic consumers, reflecting their load profile whereas in GB large electricity users appear to access generation prices at around 20% less than domestic customers. This appears to be due to a flatter generation price (energy and capacity), seasonality and diurnally, in the SEM compared to GB. Greater liquidity in the GB market might also explain part of the difference while there may also be a lag factor at play to help explain the scale of the current difference. This is an area where further investigation is necessary:

- Greater clarity/transparency around this area would be helpful
- It may be that increased price signalling in wholesale prices (eg more sculpting) could encourage improved utilisation of assets and in turn benefit high load factor customers, and hence minimise their desire to exit the network
- LEUs with a fairly constant 24x7 demand will create relatively low constraint costs, especially compared to domestic consumers – we do not believe the current allocation of costs reflect this and LEUs may be paying disproportionately high constraint costs. Likewise are the same LEUs being charged a disproportionate amount for peaking plant while it is not the cause of it?
- There is also merit in reviewing network losses for large users

15 It is critical that downward pressure is maintained on imperfection charges (which largely reflect constraints/bottlenecks in the system) – in the current 2012/13 year these are currently estimated at €154.9m across the SEM (all-island) – this equates to an annual cost of around £32m to Northern Ireland consumers (and is about 5% of LEUs electricity costs). As we have highlighted above the Regulator needs to review how these costs are sculpted to ensure they are cost reflective.

16 With higher wholesale costs in the SEM this does little to explain how domestic consumers and small industrial/consumers can have prices which are broadly the same as in GB, as the reverse should be expected. It suggests that other costs are significantly lower. There is evidence to suggest a lower supplier margin exists in Northern Ireland[2] (where tariffs are largely regulated) with regard to the domestic sector and small I/C consumers which may help contribute to the more favourable position they are in.

17 Finally while Northern Ireland consumers are contributing towards an explicit Capacity Charge (to ensure sufficient generation capacity is available) we now appear to be facing a security of supply situation in 2016 when the supply margin is expected to reduce to around 200MW. A consultation on this issue is expected shortly from the UR – customers are asking how despite paying an explicit capacity charge they could now be potentially facing additional costs.

Energy policy, taxation and regulation

18 A number of issues are raised here:

- Policies aimed at delivering efficiency and protecting customers within the electricity cost-chain

The SEM Committee has a clear responsibility to ensure that the wholesale market on the island of Ireland is working effectively. A number of issues need to be considered:

- **Generation profitability** is likely to fluctuate over time – we look forward to the publication of the SEMC report on this issue. Clearly generators need to have an adequate return to encourage investment and reflect the risks of operating within

2 ESRI Working paper No 372, Goldilocks and the Three Electricity Prices: Are Irish Prices "Just Right"? - authored by John Fitzgerald and others, 2011

the SEM – consumers would welcome more transparency on this issue by the Regulator(s).

- We need to ensure the **capacity payment** does not over-reward new generation – this should be closely monitored by the SEMC – capacity charges are significant and in the current year cost consumers across the SEM €535m (equivalent to an annual cost of £110-115m to NI consumers, and equating to c 15% of a LEU's electricity costs) – though NI consumers may face additional costs in advance of a supply squeeze expected in 2016 (we understand a consultation paper from the UR is imminent)
- **Measures to improve market liquidity** should also be promoted including the need to promote more day to day trading – we understand this forms part of the EU market integration project. It may be possible to encourage ESB (who have excess generation capacity) to improve market liquidity
- **Reducing imperfection charges** - some 92% of these charges relate to constraint payments - there needs to be a stronger determination (and political support) to press ahead with key infrastructure which can help reduce these costs –
- **The second North/South interconnector** is essential to strengthen the all-island grid, facilitate the development of the SEM and reduce 'constraint payments' and bring benefits to all customers – these have been estimated at around €30m per annum for all consumers – this is a high priority project which needs strong political support – the NI Executive, together with the Irish government should issue a statement confirming their support for this strategic investment. With wind becoming an increasingly larger part of the generating mix there are increasing periods when wind is 'constrained off' – a significant challenge is to identify effective storage of electrical energy which can utilise this power.

19 We believe the issue of **network charges** does need to be reviewed – whilst costs in NI appear to be competitive with GB there is compelling evidence that in Ireland (and indeed the rest of Europe) authorities have allocated their network charges in a different manner which is more favourable to the largest energy users – indeed network charges for these customers appear to be as much as 40% lower than LEUs based in NI, though domestic consumers do pay proportionately more. This contributes to more competitive electricity prices making Ireland more attractive for current and potential new energy intensive users – including in manufacturing and datacentres. Total network charges (Use of System Charges) are £214.4m for Northern Ireland in 2012/13.

20 The difference in electricity prices between Northern Ireland and Ireland for Industrial and Commercial consumers are explained in Table1 below (based on a sample of NI customers whose profiles were subsequently benchmarked via RoI prices).

Table 1 Price comparisons between Northern Ireland and Ireland*

	Northern Ireland	Ireland
SMP	54.22	54.22
Capacity	13.78	13.78
Network and SSS charges	13.33	8.04
Imperfection Charges	4.72	4.44
PSO	3.60	1.68
ROC	2.98	0
Other incl CAIR and MO	1.06	0.59

	Northern Ireland	Ireland
CCL/electricity tax -indicative only	2.30	0.43
Total	**96.0**	**83.18**

*Prices are in £/MWh for 2012 – and exclude the LEU rebate of 4.05 for Irish LEUs, and excludes supplier costs/margin (which are similar in both constituencies) -

21 Network charges consist of both Transmission Use of System charges and Distribution Use of System charges – both of which are regulated. We need to review how the costs are allocated compared with other regions (though we understand the sculpting of Distribution charges is based on the GB model) and the weighting of the charges across the year/ day/ week. In the GB Betta market all of the Transmission charges are collected from demand during the 3 peak half hour periods whereas in SEM they are profiled across the whole year – this can lead to a dramatic redistribution of charges between different load shape customers, and needs close investigation.

22 With regards to supply competition for larger users there has been a noticeable improvement in competition in recent years. However while this has been welcomed most users who have comparable sites in GB would suggest that the level of competition is not as intense in Northern Ireland as it is in GB – there are seven active suppliers and 10 or more consultancy/advisors operating in the NI market. There is some evidence to suggest that supply margins are slightly higher in NI (and ROI) compared to GB (perhaps reflecting the lower levels of competition and the scale of operations). With regard to the effectiveness of supply competition we welcome the review the UR is planning for 2013/14, though we do not believe this is a key driver of the current price differential facing LEUs. We have previously supported the provision of a published tariff for larger electricity users (using some typical user profiles) to act as a benchmark – this approach is not without risk as a regulated tariff approach could set the benchmark too high (therefore increasing margins) or too low (and driving out supply businesses). Finally an uneconomically low regulated supply margin in the domestic sector is not good for businesses and is likely to create a further imbalance between the domestic and business sectors.

23 A particular area of concern related to retail competition relates to the Public Service Obligation (PSO) charges. We believe large energy users are paying disproportionately high PSO charges for activities from which they do not benefit. The total PSO charge for 2012/13 is £22.3m – but two key elements of the charges do not benefit larger users, notably:

- £11.5m towards Retail Market IT system (to facilitate retail competition particularly in domestic and small I/C customers) and
- £9.6m for the NI Sustainable Energy Programme (NISEP) – an energy efficiency programme focused at vulnerable (domestic) customers

24 These two costs are almost entirely to the benefit of the domestic and small I/C customers – yet this is costing LEUs tens of thousands of pounds, while a typical domestic customer is paying around £8.25 per annum as the PSO is based on a set unit charge of 0.25p/KwH. It is highly questionable whether these charges are 'cost reflective' as they are currently applied. We believe these cost allocations need to be urgently reviewed. In Ireland the LEUs pay a PSO charge which is approximately one third of what domestic consumers pay and it is based on maximum KvA demand rather than on a per unit basis - we do recognise that the make-up of the PSO may be different and that should reflect how costs are allocated.

Relative policies towards renewables

25 While we have not identified any issues which may explain the price differentials the key message from CBI members is the need to develop renewables at least cost – this needs a strategic approach to achieving the 2020 targets. This in turn requires a joinedup approach between DETI/DoE and the UR to ensure an integrated and coherent policy to investment plans exist. The CBI supports the movement towards a low carbon economy, and LEUs are a key part of this but it is essential that all policies are designed with them in mind.

Taxation; supplier obligations

26 While clearly there are different tax and supplier obligations across Europe within the UK these differences are not considered significant in terms of explaining the price differentials between NI and GB. The Climate Change Levy and Renewable Obligation Costs are probably the most significant additional charges facing industrial and commercial consumers in NI (and GB) relative to Ireland, and partially contribute to the price differential which exist – these levies add 5-8% to a NI based LEU compared with a similar energy user in Ireland. However care will need to be taken with regard to changes to existing levies, or the introduction of new levies (Feed-in-tariffs, Supplier Obligations etc), and their impact on the competitiveness of LEUs in particular. As a matter of principle it is essential that ROCs and other incentives are designed in a manner with delivers environmental benefits at least cost.

27 We have supported and welcomed the exclusion of Northern Ireland from the Carbon Floor Price introduced on 1 April 2013 in Great Britain – without this derogation all NI consumers would have been faced with a further rise in electricity prices (of an estimated 10-15% over the next few years) and increased security of supply issues.

28 While many Northern Ireland based companies are already exemplars in energy efficiency we believe that incentives should be given to help companies reduce their energy usage, and reduce their carbon. We need to ensure that support for investment in energy efficiency is maximised within the EU state aid rules which is a key constraint. We acknowledge that EU rules limit the provision of support for energy efficiency measures – this makes it even more important that a competitive RHI product is available in Northern Ireland.

29 Demand side management measures should be encouraged through better information (and potential regulatory changes), in order to alleviate security of supply concerns facing us with the closure of Ballylumford coal fired plant and delays in delivering the second North-South interconnector. Furthermore, bidding a demand reduction into the pool may, (through avoiding more expensive peaking plant setting the pool price), potentially reduce the total costs of 'electricity production' for that half hour through reducing peaking demand and constraint costs. Clarity is required around the necessity for changes in legislation or other technical constraints that prevent industry from doing this. We understand plans are well advanced in the south to bid demand reduction into the pool.

30 Additional support could be considered by DETI/DFP to help offset high energy costs. In 2009 CBI proposed that the NI Executive should agree to a long-term incentive to encourage more organisations to reduce their carbon footprint through reducing their energy usage and improving their energy efficiency by providing a discount on the regional rate if the 'Carbon Trust Standard' is achieved and maintained. We continue to believe there is merit in this proposal as it will:

- Incentivise and reward investment in energy conservation, energy efficiency, renewables and the reduction in carbon

- contribute directly to achieving the Executive's goal of reducing greenhouse gases – in particularly it will create significant momentum in the industrial/commercial sectors and in supply chains
- be particularly beneficial to energy intensive users, helping to offset Northern Ireland's high energy costs
- will position Northern Ireland at the front of the drive to reduce carbon emissions in the industrial/commercial sectors and provide a valuable promotional tool for Northern Ireland

Other Energy Issues

31 During our consultations with members other ideas emerged which could help to reduce energy prices in the medium/longer term to all consumers:

- **Restoration in capacity of the Moyle interconnector** – CBI believes that the loss of 50% interconnector capacity has increased prices to all Northern Ireland consumers alone by around £28m pa while reserve costs have been around £8m pa higher – these are indicative figures only and more in-depth analysis is required. However they do suggest that the restoring the Moyle to full capacity could help bring generating costs down by around 2-4%. Though the new East-West interconnector (between Wales and Dublin) is now in operation the capacity constraints on the existing north-south interconnector would suggest that restoration of Moyle to full capacity will still be beneficial, even though prices in GB are expected to rise in the coming years (partly as a result of the new Carbon Floor Price Levy[3], an increasing reliance on gas (from the current 33% to 60-70% by the end of the decade) but also as the GB market itself faces tightening supply situation – the head of Ofgem stated back in February that *"reserve margins for generation capacity were set to fall from 14% to just 5% within three years"*. The costs of repairing the Moyle interconnector is likely to be met initially by consumers in Northern Ireland though the benefits may be more widespread - it will be important to ensure that other consumers who benefit contribute to the costs. **An early assessment of the short term and longer term benefits (and costs) of restoring the interconnector should be undertaken as a matter of urgency**.
- **Overcoming short-term security of supply threat** – The NI Executive need to explore the possibility of securing a derogation on the closing of conventional generation units 4, 5, 6 at Ballylumford to give some breathing space in advance of a supply/demand margin squeeze around 2016
- **Gas storage** – to help improve security of supply in Northern Ireland we support the development of a major gas storage facility – this should be built on a commercial basis, and will need the co-operation of regulators in Belfast, London and Dublin to ensure it can service the whole region
- Potential scope has been identified for using existing transmission pipelines for storage – purchasing cheaper gas at weekends and releasing it during the week. We believe this '**inventory product**' should be further investigated and trials undertaken (some work /trials were done on this previously but not completed).
- **Promoting the take-up of gas by all public sector buildings/estates** needs to be encouraged – as consumption increases the unit costs fall for all consumers. With domestic sector
- **Fracking** – with potential fracking sites identified in Co Fermanagh we believe the Executive should provide support and encouragement to facilitate the further exploration and assessment of these potential gas deposits. Clearly the

3 In Great Britain with a CFP of £18.08 by 2015/16 this will increase CCGT costs by £6.78/MWh and coal plants by £16.27/MWh.

development of any viable fracking sites will need to be adequately regulated from an environmental perspective. But the scope for developing an indigenous energy resource could have considerable economic and social benefits within Northern Ireland over the longer term

- **Infrastructure investment** – while views are divided there is increasing concern that increased regulatory risk and uncertainty will undermine investment and lead to higher financing costs. There is a clear need to balance the need to keep costs down in the short-term while ensuring that we undertake sufficient investment to support long-term goals, including inward investment, maintain network reliability, and increase security of supply through completion of the north/south interconnector. Greater clarity on what we are trying to achieve, a more engaging process to determine investment requirements and a higher quality of debate and discussion (and better communications) between utilities and consumers are needed.
- **There is considerable scope to develop a biomass industry** – the DARD agri-food strategy should include a review of the potential to develop a sustainable biomass industry in NI
- **Energy efficiency and take-up of gas within the domestic sector** – this should remain a high Executive priority – including initiatives such as the Green New Deal for the domestic sector. Take up of natural gas is approximately 50% within the Belfast area – improved energy efficiency and uptake of gas will help reduce fuel poverty

32 Finally we need to be mindful of proposals for Implementation of the **European Target Model for the SEM**, which carries risks and potential costs. In the longer term a more integrated energy market should be advantageous to consumers on the island of Ireland. It is important that the SEM Committee takes account of the following concerns:

- Any costs incurred with new market arrangements that comply with the Target Model must deliver tangible benefits to business and consumers on the island
- New market arrangements must not jeopardise our energy competitiveness, sustainability goals or energy supply security
- New arrangements ought to be non-discriminatory as between market participants in Ireland and the rest of the EU
- The System Operator should not have discretionary power to impact the commercial position of market participants
- Any transition to new market arrangements should be able to adapt to changing circumstances without requiring piecemeal alterations
- Due to the technical complexity of the proposals we believe the project team needs to take steps to encourage a more active engagement, particularly by industrial energy users, at future stakeholder forums.

Concluding remarks

33 For decades large industrial businesses in Northern Ireland have faced uncompetitive energy costs. More recently, with the global recession and depressed consumer demand multi-national companies are increasingly seeking to close down and relocate those production facilities generating the highest per unit costs of production. With our high energy costs counting against local production facilities, business in Northern Ireland will be all the more vulnerable as a result (even though many are extremely energy efficient).

34 It is now very clear that energy policy in Northern Ireland has resulted in the worst possible outcome for Northern Ireland business, now operating at a significant competitive disadvantage with the two energy markets it straddles, GB and Ireland. Unless action is taken quickly and the NI Executive is committed to supporting the necessary actions necessary to remove the competitive disadvantages arising from policy outcomes and improve the competitiveness of electricity prices for larger users, future investment and employment in many of these export focused operations will become unattractive

35 Indeed the overall costs and levies are now becoming so punitive that at present many of these companies are seeking to 'come off the grid' and provide their own electricity - yet without these are the very customers to share in the costs of running the network which the an electricity system should depends on for its core load. Without determined action Northern Ireland faces a downward spiral of fewer larger users operating in the marketplace, driving up costs for those that remain.

CBI Northern Ireland

21 May 2013

Consumer Council Written Briefing Electricity policy review

Mr Jim McManus
Committee Clerk
Committee Office, Room 375a
Parliament Buildings
Belfast BT4 3XX

26 September 2013

Dear Jim

Committee for Enterprise, Trade and Investment Review of Electricity Policy

Thank you for the invitation to provide evidence to the Committee for Enterprise, Trade and Investment on 3 October 2013 in regard to its Review of Electricity Policy in NI.

The Consumer Council for Northern Ireland (CCNI) welcomes the opportunity to meet with the Committee on this very relevant issue for Northern Ireland consumers. I have attached a brief which provides background and key issues that CCNI will wish to discuss and elaborate on at the evidence session.

The following representatives from CCNI will be in attendance at the session:

- Aodhan O'Donnell, Interim Chief Executive
- Marian Cree, Head of Energy Policy
- Richard Williams, Senior Consumer Affairs Officer, Energy

Yours sincerely

Aodhan O'Donnell
Interim Chief Executive

Submission to the Committee for Enterprise, Trade and Investment's Review of Electricity Policy

Date: 26 September 2013

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Introduction

The Consumer Council for NI has a statutory responsibility to represent energy consumers and handle complaints from consumers and businesses. The Consumer Council's functions, legal duties, and role to represent the interests of energy consumers in Northern Ireland are mainly provided for through the Energy (NI) Order 2003. A significant aspect of our energy work relates to electricity as this affects all domestic and industrial consumers.

In this paper we describe how increasing energy prices impact on consumers and explain the role of the Consumer Council in the electricity market in NI.

The electricity bill of a domestic customer is split into three distinct elements which represent the supply chain from generator to consumer; these are the generation of electricity, the network that transports electricity to the customer and the retail end which sells the electricity to the customer. The broad ratio of each element stays the same but there are variations each year as market factors and policy decisions change. Two additional elements within the tariff are government levies, such as VAT and the 'K factor' mechanism which balances the company's revenue and costs year on year. In the tariff year 2013/14 the following ratios apply:

- Generation (power stations and wind farms) = 58 per cent
- Network costs (NIE) = 25 per cent
- Supply Company costs = 9 per cent
- Government Levies = 6 per cent
- 'K' correction factor[1] = 2 per cent

In this paper we examine the key factors within each of these elements that impact on cost from a consumer perspective. We also consider issues that impact across the whole of the supply chain.

We have also included references to two reports which provide context and support for our policy position. These are 'Energising Northern Ireland', a report undertaken by Lord Whitty at the request of the Consumer Council to look at the current and future energy strategy for NI consumers and businesses, and 'Northern Ireland Electricity Consumers – Orphans in the Energy Storm' by Douglas McIldoon[2]. The 'McIldoon Report' was commissioned in 2008 by the Utility Regulator as a response to the public outrage over the 52 per cent increase in the regulated price of electricity[3]. In January 2012 the Consumer Council published its 'Analysis of the McIldoon Report' which showed how the report's findings and recommendations were still relevant and called for an inquiry to examine the regulatory process and the energy policies that had provided for the unprecedented price increase.

1. Background

Electricity prices in the consumer context

The cost of energy is consistently the biggest concern for consumers and is therefore a priority issue for the work of the Consumer Council. A synopsis of energy price developments in the Northern Ireland energy market in the last decade shows that:

- The regulated electricity price is at its highest since CCNI began its records in 2002;

1 K is a correction factor mechanism used for the regulated electricity supplier (Power NI) only, whereby the supplier will recover from customers any under recovery (loss) from the previous year or will pay back to customers any over recovery (gain) from the previous year's forecast cost.

2 In January 2012, the Consumer Council produced an 'Analysis of the McIldoon Report'.

3 There were two price increases in 2008 – July 14% and Oct 33.3%, cumulatively 52%.

- Power NI has increased its regulated tariff by 61 per cent[4] since November 2007 and the average annual bill has increased by £210 during the same period;
- Since 2009 the average annual price of home heating oil (oil) has increased by 62 per cent;
- Following the 8.7 per cent tariff increase on 1 April 2013, gas bills in the Greater Belfast area have risen by 38 per cent since 2009[5];
- The cost of electricity for large and medium industrial and commercial businesses in the non domestic electricity market in NI is amongst the highest in Europe[6];
- Airtricity, Power NI and Budget announced electricity price increases of up to 17.8 per cent on their tariffs from 1 July 2013[7]. These represent an increase of up to £90 on consumers' annual electricity bills[8]; and
- Following its increase of 17.8 per cent on 1 July 2013, the Power NI standard domestic tariff is five per cent or £30 a year more than GB[9], but is 15 per cent or £92 less than ROI[10].

Meanwhile;

- 70 per cent of consumers surveyed across NI in June 2012 by the Consumer Council to inform our initial response to RP5, stated that the biggest energy priority for them was cost;
- Fuel Poverty levels are currently at 42 per cent in Northern Ireland, the highest levels in the United Kingdom[11]; and
- Consumer Council Research in November 2011 found that 47 per cent of NI consumers were concerned about their ability to make ends meet.

What does the Consumer Council do?

Regulated Price Controls

The Consumer Council's main avenue to influence the distribution and supply price aspects of the bill is through regulated Price Controls and tariff reviews carried out by the Utility Regulator. This process enables CCNI to truly represent consumers' needs and views in shaping pricing structures in the electricity market.

However, even though the generation element represents 58 per cent of the consumer's bill, CCNI has no input into the pricing structure. In the context of the Committee's investigations into electricity prices in NI, CCNI would recommend that consideration be given to the issues that arose as a result of the most recent Price Control for Northern Ireland Electricity – known as RP5 – and its subsequent referral to the Competition Commission (CC) to inform its deliberations on the current issues affecting the pricing of the distribution aspect of consumers' bills.

4 Cumulative standard tariff increase using Table 1. The £210 is the cash difference between the average Power NI bill on 1 November 2007 (£385) and that on 1 July 2013 (£595).

5 Source: CCNI Comparative Domestic Cost of Gas v Oil Report May 2013.

6 NIAUR March 2013: NI Electricity Prices Data and Comparisons Information paper.

7 Electric Ireland has decided to hold its prices until September 2013.

8 Using Power NI standard tariff and average consumptions of 3,300kWh.

9 Source: Consumer Focus Price Comparison Sheet May 2013.

10 Average of Electric Ireland urban and rural bill for €815.19 using standard tariff and 3,300kWh, source: www.bonkers.ie exchange rate of 0.84301, source www.xe.com on 16 May 2013.

11 HECA 2012 report.

Tariff Reviews

The Power NI electricity price increase of 17.8 per cent from 1 July 2013 represents an increase of up to £90 on consumers' annual electricity bills[12]. The Consumer Council publicly stated that it is disappointed that other supply companies did not attempt to build a competitive advantage by minimising increases. During the price increase announcements CCNI encouraged consumers to shop around for the best energy deal as they can save on average up to £108 annually on their energy bill by switching supplier[13]. CCNI provides real time information for consumers via its price comparison sheets, website, Switch On leaflets and consumer support team.

Consumer complaints

Following the introduction of competition in electricity in 2010, the Consumer Council has seen an increase in the number of complaints received from consumers which appear mainly to relate to the 'switching' process. See appendix 1 for a breakdown of complaints.

In the year 2012/13 the Consumer Council received 249 complaints, 1,328 enquiries and achieved financial outcomes amounting to £166,016 for electricity customers in NI.

2. Generation

In 2005 generation costs accounted for 48 per cent of the final tariff; currently it accounts for 58 per cent. The McIldoon Report of 2008 is very clear that generators in the SEM are over rewarded and that a reduction in generation prices offers the best route to significantly reduce the price consumers pay.

Furthermore, it is worth noting that Lord Whitty recommended an independent investigation into the rewards to generators through the capital and financing aspects of the regulatory framework in his Energising Northern Ireland report.

Generator profits within the Single Electricity Market

A recent report by the regulatory authorities in Ireland shows that the average gross profits of all generators in the SEM between 2008 and 2011 was 49 per cent. This compares to a regulated profit margin for all companies in NI of three per cent.

Following the announcement of the Power NI price increase of 17.8 per cent, Shane Lynch, the NI Utility Regulator stated that "we have influence on all three parts of the supply chain: generation, network and supply. We regulate the SEM and have control over that price". Given that generation makes up the majority of the final cost of electricity it is essential that industry processes and practices are transparent and that the rewards for generators are proportionate to the risk. This is an area that we recommend the Committee looks at in depth, in particular the role of the regulatory authorities in both the UK and ROI.

Capacity Payments

The SEM provides electricity generators with a capacity payment. This is a fee paid to all generators that are ready and able to generate electricity if needed due to increases in demand and compensates them for the times when they are not called to generate. Capacity payments provide a form of insurance to the electricity network by ensuring that the "lights are kept on" as there is enough generation capacity for the network to cope with peak or intermittent demand and in turn the generator is guaranteed a rate of return on its assets for providing that assurance. The McIldoon Report however questions the need for capacity payments within the SEM and whether they are rewarding generators on a fair and equitable

12 Using Power NI standard tariffs and average consumption of 3,300kWh.

13 The cheapest available tariff is Electric Ireland Direct Debit Online tariff which gives an annual bill of £487 compared to the Power NI and Airtricity standard tariff annual bill £595 using the rates effective from 1 July 2013.

basis and that consumers are paying more than they need for this. The Report questions whether consumers are paying more than they need for this assurance because many of the older plants are fully depreciated having been fully paid off as nationalised assets.

More recently the debate within Europe on dealing with generation adequacy has included a discussion on whether capacity payments are an efficient way of achieving this[14]. Furthermore, McIldoon has concerns about the capacity payment mechanism over rewarding wind generation, as generation can only occur if the wind is blowing and therefore it does not have the ability or flexibility to meet rises in demand as compared to other less intermittent forms of generation.

Renewables

Wind generators make the biggest profit out of the SEM. According to Manufacturing Northern Ireland (MNI) the SEM report into generator profitability in the SEM shows that in 2011 wind generators in Ireland made a gross profit of 79 per cent[15].

McIldoon stated that there is an inherent flaw in the SEM as it fails to provide consumers with the benefits they should expect to see from renewable generation. This is because the price of electricity within the SEM is set by the most expensive fossil fuel generator needed to meet demand on the system. The fossil fuel generators in developing their prices must include the cost of carbon and the fossil fuel (gas, coal, oil, peat) that is needed to generate their electricity. However, a renewable generator does not produce carbon nor use fossil fuel to generate its electricity and therefore it could be seen that it is being over-rewarded for the generation that it produces and the consumer is not seeing the full financial benefits that renewable generation could be providing. McIldoon believes for consumers to maximise their benefit of moving to more renewable generation there is merit in exploring how the price of electricity from renewable sources can be delinked from the price of electricity from fossil fuel generators.

Cost of Capital

The cost of capital for new investment is higher than it needs to be as the market perceives the risks of investment to be high and the SEM rewards generators for that risk. However, as the SEM is fully regulated the underlying risk of the market already lies with the consumer. This ultimately causes the consumer to pay a higher cost for electricity than is necessary as the cost of capital reflects a non-regulated fully competitive market where consumers would have full choice to choose which product they wish to purchase. However the truth is, the electricity market is regulated, and the actual risks within it are fully borne by the final consumer. Therefore investments should attract lower returns and capital costs allowing for cheaper electricity costs to consumers.

3. Network

The NIE RP5 Price Control and the information gap

The current RP5 Price Control for NIE is significant for NI consumers as it contains proposals for a significant increase to spending on the network both to maintain performance and to increase further the amount of renewable energy on the system. The cost of this will be paid for by consumers and in a time of economic downturn and rising household prices the need to balance the maintenance and enhancement of the network against the increase in costs is vitally important. The Consumer Council undertook research in 2012 into consumers' priorities for their electricity supply.

14 European Commission Consultation Paper on generation adequacy, capacity mechanisms and the internal market in electricity. November 2012.

15 MNI website 22 August 2013.

The table below shows the results:

	1st priority	2nd priority
The lowest possible price	69%	20%
A highly reliable supply with the lowest possible number of power cuts	19%	52%
That as much electricity as possible is generated by renewable means, i.e. from sustainable sources such as wind power	7%	18%
Don't know	5%	10%

Early in the RP5 process the Consumer Council identified that the issue at the heart of the Price Control was the lack of information and transparency on how NIE runs and plans its business. The huge difference in the assessment of the cost requirements for the company between the Regulator and NIE has led to the matter being referred to the Competition Commission.

The submissions from both the Regulator and NIE to the Competition Commission reveal the extent to which they both felt that the lack of information has damaged confidence in the price control process. The Regulator commented on the 'level of transparency and accountability in NIE T&D's operations', saying 'It creates opportunities for NIE T&D to profit at customers' expense'.

Meanwhile, NIE sees the responsibility for the information gap sitting with the Regulator because it claims the Regulator 'has not recognised the need to specify appropriate output measures at the beginning of RP5 and clearly define in advance the associated reporting requirements[16].

This lack of confidence in the regulatory process and information systems, puts consumers in a difficult position as they are being asked to pay the cost of electricity by taking, what is essentially, a 'leap of faith'.

It would appear that previous and current Price Controls have failed to provide a regulatory framework in which NIE was required, or felt it necessary to systematically assess the quality and performance of its network and make decisions that aspired to the most efficient outcome.

We would ask the Committee to consider to what extent consumers should be required to pay for the cost of a regulatory system that does not provide sufficient and appropriate information on which decisions can be made that have a significant cost impact on consumers.

4. Supply

Choice and Competition in the electricity supply market

Competition in electricity is developing steadily and NI consumers are already seeing benefits in the choice of tariffs. For many years domestic customers in NI had no choice of electricity suppliers as the only supplier in the domestic sector was Power NI. Now there are:

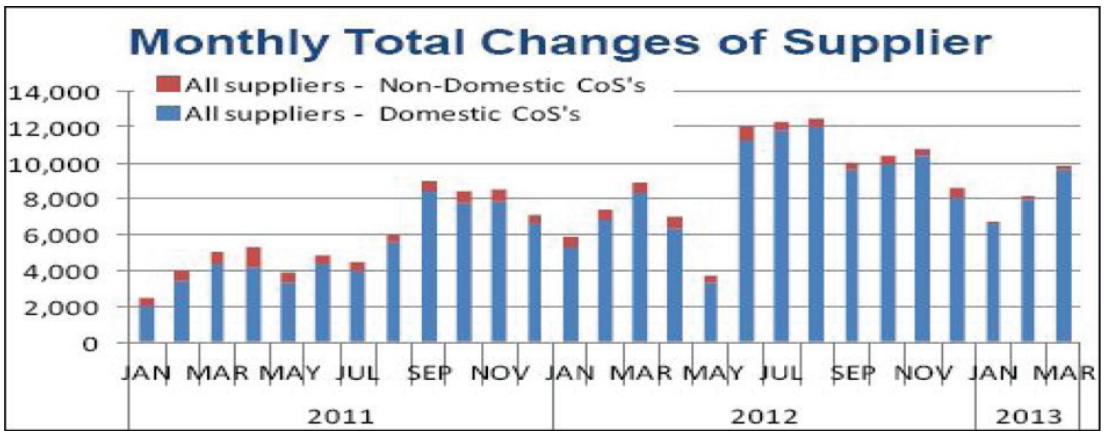
- Power NI (previously known as NIE and then NIE Energy);
- Airtricity (owned by SSE and entered NI market in June 2010);
- Budget Energy; and

16 Letter from Joe O'Mahony (NIE Managing Director) to the Competition Commission Inquiry Manager, 10 May 2013.

- Electric Ireland.

Today there are 28 different tariffs with a range of payment and billing methods and contractual periods. The difference between the lowest and highest tariff is 18 per cent which at the average NI consumption gives an annual saving of £108.

The ability to switch supplier is important as it offers consumers choice and provides an incentive for suppliers to drive down cost and improve service. Consumers continue to shop around and switch supplier in significant numbers as outlined in the table below.



Source: NIAUR Quarterly Transparency Report May 2013

The arrival of competition has created greater choice for consumers and the potential to save on their electricity bills. CCNI research on consumers' views and experiences of 'switching' in 2012 which informed our 'Power to Switch' report identified that:

- 96 per cent of electricity customers and 86 per cent of natural gas customers know they can switch;
- 28 per cent of electricity customers and 20 per cent of natural gas customers have switched their supplier;
- 97 per cent of those who had switched thought switching was easy;
- 67 per cent of those who have never switched have never even considered it;
- 67 per cent of oil customers always buy from the same supplier; and
- Social Class group ABC1 is more likely to have switched electricity or gas supplier, obtained a competitive quote for oil, finds it easy to compare oil prices and has used internet oil price comparison sites.

We can therefore see that competition is developing steadily and has delivered savings for those consumers who are willing to switch.

However, the Committee may wish to consider:

- Is competition bringing the saving to the consumer that was envisaged? When in May 2013, Power NI increased its regulated tariff by 17.8 per cent, two of its three competitors immediately followed suit. It is expected that the third will do so in September;
- Is the NI market large enough to allow for effective and sustained competitive pricing that will allow for the eventual deregulation of the whole electricity market?; and
- Is it in the interests of consumers that Power NI, as the dominant regulated domestic electricity supplier in NI, can pass through to its customers all of its costs to purchase electricity from the SEM?

5. Policy issues/ Security of Supply

CCNI must also consider the wider public interest in carrying out its statutory functions. Our stated policy position is that Northern Ireland should have an electricity network that is both safe and reliable and that this is provided at the lowest possible cost to consumers. These core objectives and further public interest objectives, such as sustainability, will be achieved if the network also delivers the NI Government objectives defined in the 2010 Strategic Energy Framework as:

- building competitive markets;
- ensuring security of supply;
- enhancing sustainability; and
- developing our energy infrastructure.

It is important for the Committee to be aware of significant issues that are both adding to the current cost of electricity and have the potential to both threaten 'security of supply' and increase the cost of electricity in the future:

- The delay in delivering a planned second North/South Interconnector, for which a planning application was initially submitted in December 2009. It is estimated that the absence of the interconnector is adding £25m to the cost of electricity for NI consumers[17];
- The requirement to comply with EU Emissions Directives from 2016 will result in the withdrawal of some generation capacity at Ballylumford and place restrictions on generation at the Kilroot plant; and
- A fault on the Moyle Interconnector, the capacity of which has been halved, is unlikely to be permanently restored to full capacity using additional cables until 2017.

Further costs to come for consumers

The threat to NI's security of electricity will require further investment that will drive up the cost of electricity to consumers even further:

- The North/South Interconnector is currently estimated to cost £90m[18]. However, the costs may escalate over time and ultimately both the cost of failing to build it and the cost of eventually building it will add to the consumer's electricity bill;
- It will cost at least £60m[19] to fix the Moyle Interconnector – consumers will have to pay for this;
- With the absence of the North/South Interconnector and the capacity issue with Moyle Interconnector there is an urgent need to ensure security of supply from 2016 onwards. The urgency of this issue leaves consumers at the mercy of investors with regard to cost. Furthermore it is likely that the problem will have a medium to short term solution if the delays to the North/South Interconnector and the Moyle Interconnector faults can be resolved. In this case it may be that extra generation built at a high cost may become redundant in a relatively short period. In the current market structure it will be consumers that will be expected to pay for such a wasted cost;
- It has been estimated that domestic consumers may have to pay between £49 and £83 extra on their electricity bill to attain DETI's target of 40 per cent renewable electricity by 2020[20];

17 BelfastTelegraph.co.uk. 'Concern amid electricity plan delay' May 2013.

18 'Security of Electricity Supply in Northern Ireland An information paper prepared by the Utility Regulator and the Department of Enterprise, Trade and Investment' June 2013.

19 As footnote 17.

20 At 2010 prices - Strategic Energy Framework. DETI September 2010.

- NI businesses have enjoyed an exemption from the EU Carbon Floor Levy (CFL). However this will come to end in October 2013 and it is estimated that the CFL will add three per cent to commercial gas costs[21];
- The EU has mandated the roll out of Smart meters in all member states by 2020. Northern Ireland has made little progress to date and the costs to meet the requirement are estimated to be between £220m and £294m[22]. Whilst both consumers and the energy industry will benefit from smart meters it is important that the costs and risks are allocated fairly.

6. Energy Efficiency

The Consumer Council has undertaken research into energy efficiency initiatives in Northern Ireland in the context of fuel poverty. The subsequent report which will be published in October 2013 identifies some positive outcomes. However, the research and analysis also identified some issues of concern, specifically on the accountability and impact of the existing energy efficiency schemes. The report shows that despite significant Government funding on energy efficiency in the last decade consumer awareness of energy efficiency still remains low. Our research also shows:

- Only 40 per cent of those surveyed were aware of energy efficiency advice available in NI which dropped to 28 per cent awareness amongst the lower socio economic groups;
- Over 50 per cent of consumers surveyed stated that they had taken no measures to improve the energy efficiency of their own homes in the past four years;
- 38 per cent of consumers surveyed stated that they were unaware they could get help to improve their home to be more energy efficient;
- A lack of consistency and transparency in the reporting requirements for each of the energy efficiency schemes in operation by the scheme providers or administrators; and
- A wide range of government departments and agencies have responsibility for energy efficiency in Northern Ireland causing confusion and a disjointed approach to addressing energy efficiency.

  Whilst awareness levels among consumers remains low at 40 per cent the trend is positive as awareness has increased from 29 per cent in 2008. However, only 38 per cent of consumers cited energy companies as their main source of providing awareness of energy efficiency measures compared to 66 per cent in 2008.

7. Conclusion

Today domestic consumers are once again facing significant increases in energy costs. Currently an average consumer in Northern Ireland using electricity and heating oil to heat and power their home will have an annual energy bill of £2,341[23].

The Consumer Council believes that the Committee for Enterprise, Trade and Investment should consider whether:

- Energy policy in Northern Ireland coherently balances the competing issues of energy affordability, security of supply and sustainability;
- Electricity generators are overpaid within the SEM and that all possible pressure is being placed on them to ensure electricity is produced at the lowest possible cost for consumers;

21 Manufacturing NI 23 August 2013.

22 Smart Meter Roll Out Policy- Regulatory Assessment. DETI July 2012.

23 Source: CCNI Comparative Domestic Cost of Gas v Oil Report May 2013 and Power NI.

- The 'K' factor within the current supply regulatory model, that allows the regulated supplier (Power NI) to recover all fluctuations in the cost of its purchases of wholesale electricity from the SEM, provides an equitable distribution of risk between energy consumers and industry shareholders; and
- All possible policy and regulatory instruments are used to tackle the growing levels of fuel poverty in Northern Ireland.

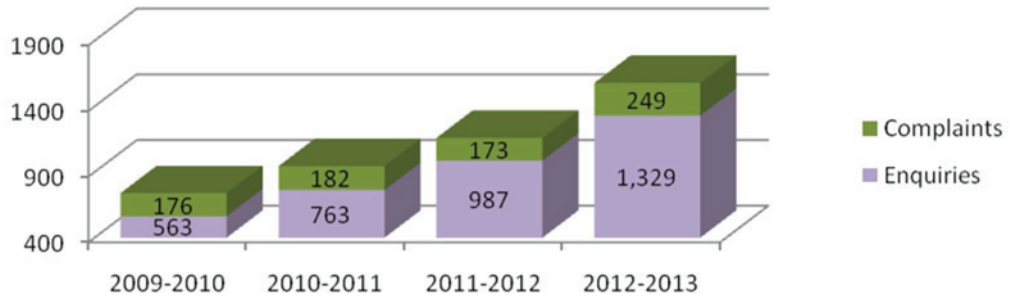
Appendix 1

Consumer Complaints regarding electricity 2009-2013

Looking specifically at electricity complaints, chart 1 shows clearly that consumers' issues and queries around electricity matters have increased considerably and consistently since 2009. Unsurprisingly, the increase has coincided with a period of instability of electricity prices with seven regulatory tariff changes between July 2008 and July 2013.

The arrival of competition in the domestic market in 2010 has also contributed to the increase. Subsequently consumer contacts around billing, marketing and sales activities and general requests for electricity information make up the majority of CCNI's complaints and enquiries, particularly during 2011-2012 and 2012-2013.

Chart 1. CCNI electricity complaints and enquiries by year (2009-2013)



CCNI examines and analyses all relevant information pertaining to complaints to inform our policy work, including key issues such as pricing. We also make every effort to obtain fair and realistic outcomes for the consumers who contact us as highlighted in the annual financial outcomes resulting from our investigation of complaints that is shown in table 1 below. This has resulted in consumer satisfaction levels that have consistently exceeded our 90 per cent satisfaction target.

Table 1. CCNI Consumer Support financial outcomes (2009-2013)

Year	Electricity complaints	Overall complaints
2009-2010	£42,021	£130,060
2010-2011	£85,345	£225,522
2011-2012	£134,071	£237,887
2012-2013 (to date)	£166,016	£300,099

The Consumer Council

Making the consumer voice heard and making it count

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Consumer Council Northern Ireland

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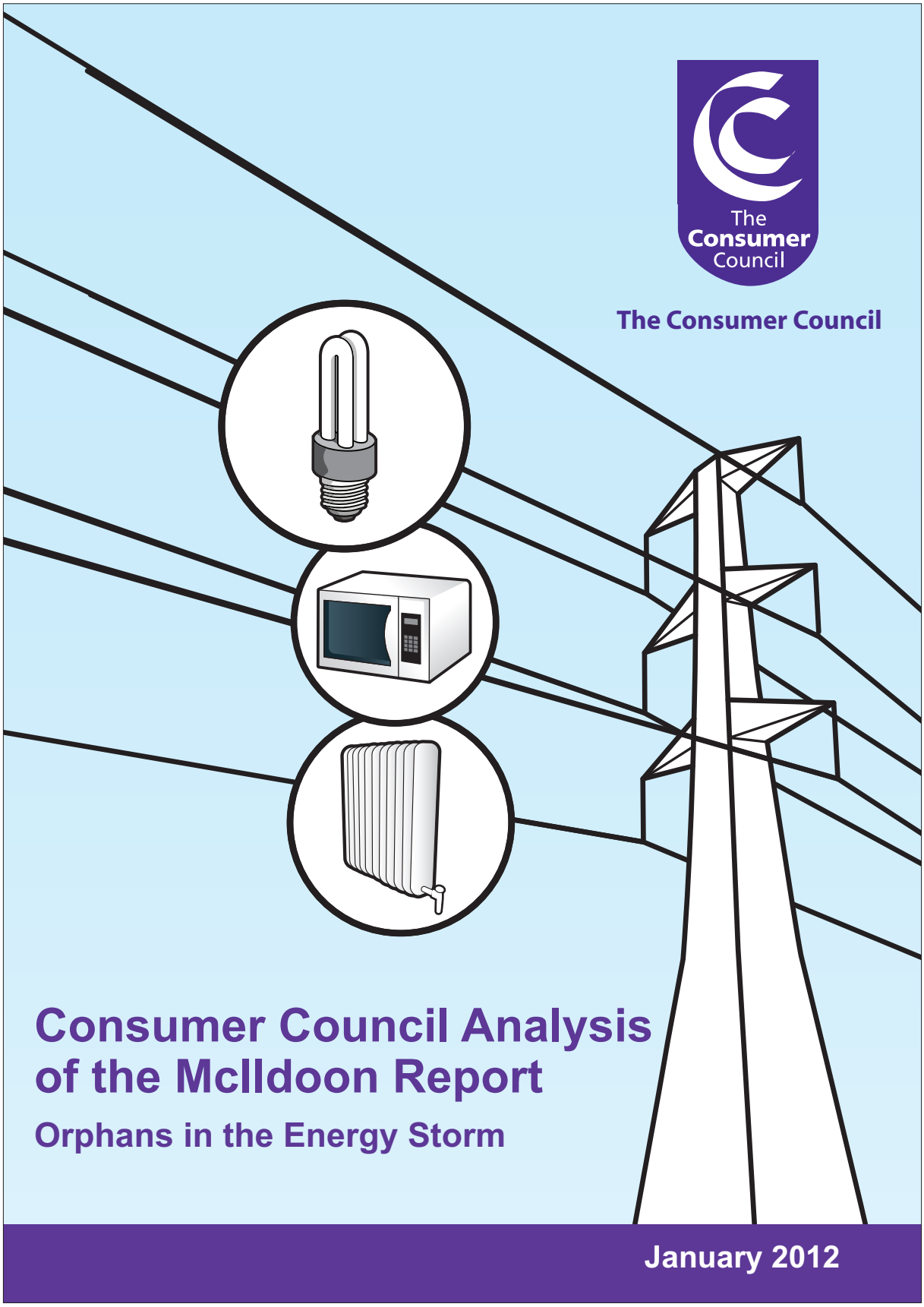
Consumer Council McIldoon Report



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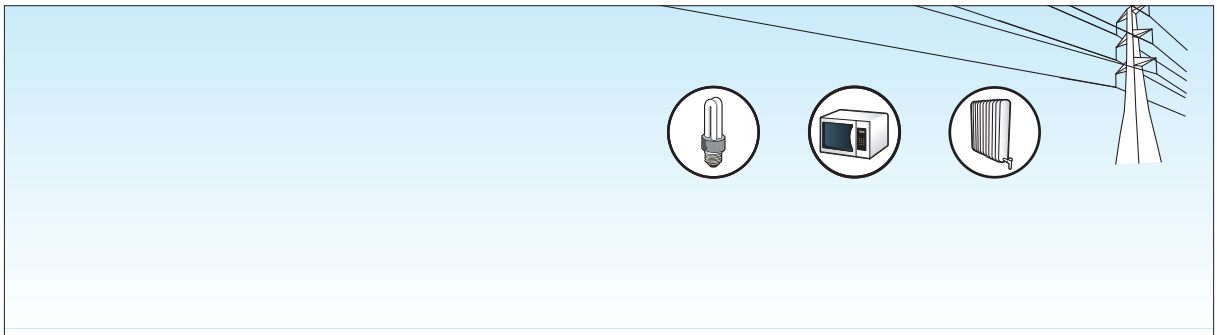

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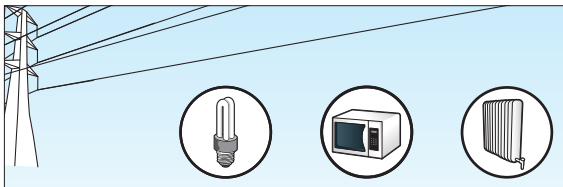

Preface

Every recent increase in the price of electricity has been blamed on a rise in the wholesale price of gas.

So ask yourself this question: why does the price of electricity produced by wind turbines – which neither use gas nor emit carbon dioxide - rise when the price of gas rises? Answer: It's the market, stupid!

Three years ago I suggested that our electricity market structure was flawed and that energy policy was confused and contradictory; today the Consumer Council has produced the evidence.

Today, as in the past, Government sets out its energy policies and the objectives which those policies are meant to deliver. However, whereas in the past Government both set the ends and willed the means, today it only sets the ends but leaves the market to deliver the means.

And here is the fundamental flaw in the policy. Competitive markets are supposed to protect customers by driving down costs to the lowest possible. But no sustainable market can drive prices below the cost of production. In the electricity market new costs which did not exist in the past have been quite unnecessarily injected by Government policy into the cost of producing electricity. The cost of electricity is unnecessarily high because public policy has injected a perception of risk into a captive market and obliges the consumer to pay for that risk through unnecessarily high energy prices.

Three years ago I raised these questions. I made no claim then and I make no claim now to have all or any of the answers. But I hoped and believed that there would be an intelligent debate on changes which would bring down electricity costs because as everyone recognises, getting our energy policy right is the key to success in many other policy areas.

No one who has ever discussed these issues with Assembly members can be in any doubt about the horror that MLAs of all parties feel about the slow agony of fuel poverty or their anxiety about the long term crippling effect of energy costs on our industrial competitiveness. It only needs them to put their concern into pressure for change and we can begin to make progress.

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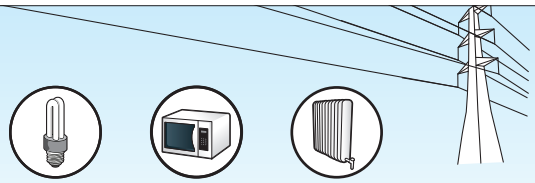

But let us not deceive ourselves: unless there is a serious and committed effort to formulating an energy policy whose priority is first and foremost to defend the interests of the businesses and households of Northern Ireland things will only get worse.

Douglas McIldoon, January 2012.

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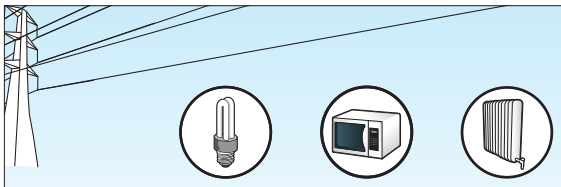


Foreword – Antoinette McKeown

The rising cost of energy in Northern Ireland continues to have a significant effect on households here. The latest official government statistics show that in 2009[1], 44 per cent of households in Northern Ireland were in fuel poverty. Since then households have experienced two of the coldest winters on record, significant increases in energy prices and reductions in household incomes, all contributing to considerable strain on people's ability to heat and light their homes.

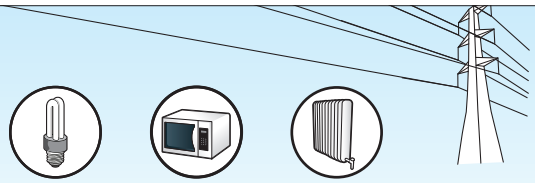
Given the impact on Northern Ireland consumers, and the Consumer Council's statutory remit to represent and protect the interests of energy consumers, the Council has taken an in-depth look at energy prices and fuel poverty here and what can be done to support households at this time.

Northern Ireland has the highest energy bills in the United Kingdom and recent statistics from the Department of Energy and Climate Change in Westminster show the highest average energy GB bill is around £1,000 cheaper than the average combined oil and electricity bill in Northern Ireland[2].

Fuel Poverty levels in Northern Ireland are significantly higher than in Great Britain (GB) and the Republic of Ireland. One of the UK Government's accepted indicators of fuel poverty is the number of people who die in winter from cold related diseases such as heart attacks, strokes and respiratory diseases. Last winter there were 740[3] excess winter deaths in Northern Ireland, this compares to a level of 589 excess winter deaths in 2000/01.

As well as jointly establishing the Fuel Poverty Coalition for Northern Ireland[4], the Consumer Council also reviewed earlier analysis of energy prices offered by the Douglas McIldoon' 2008 report, "*Northern Ireland Electricity Consumers - Orphans in the Energy Storm*". This report, some three years on from McIldoon's initial report highlights in our view that electricity regulation and energy policy is not working as well as it could for consumers here.

1 2009 Northern Ireland House Conditions Survey, Northern Ireland Housing Executive
2 Department of Energy and Climate Change (DECC) 2011 report showed that the highest energy bill in GB was in Cardiff where the average dual fuel bill was £1100pa. This compares to the majority of households in Northern Ireland having an average energy bill as at 16 December 2011 of £2310. The majority of households in Northern Ireland (67 per cent of households here (82 per cent in rural areas) use oil to heat their homes, whereas 87 per cent of GB households use gas.
3 Statistical Bulletin: Excess Winter Mortality in Northern Ireland 2010/11 – Northern Ireland Statistics and Research Agency, 29 November 2011.
4 The Northern Ireland Fuel Poverty Coalition is a coalition of over 150 organisations, MLAs and individuals. Its aim is to drive forward the fuel poverty agenda in Northern Ireland and has called on the Northern Ireland Executive to include within the Programme for Government a commitment to:
1) Develop a detailed and costed action-plan setting out how and when fuel poverty will ber eradicated in Northern Ireland.
2) Provide continued support to households in severe fuel poverty to stay warm until fuel poverty is eradicated.
Further details can be found at the Coalition's website – www.fuelpovertycoalition.org.uk



With some generators making profit margins of between 20 and 50 per cent, the Consumer Council is questioning whether the cost structure within the industry could work better for consumers - especially as overall the Top 100 companies in Northern Ireland have seen average profit margins of between 1 and 6 per cent over a similar period.

The Consumer Council's role to represent and protect the interests of consumers dictates the focus of our work and the views we reach; consumers continually call on us to "*do something*" about the rising cost of energy. But we cannot act alone; we simply don't have the powers to reduce energy prices and we see this report as part of our contribution to the energy price debate; on behalf of energy consumers.

With almost one in two households in Northern Ireland in fuel poverty, the Consumer Council invites the key stakeholders in setting energy policy and prices to engage in this debate and make the necessary changes to protect consumers or provide evidenced based assurances that consumers are getting the fairest deal possible. With energy prices at an unaffordable level for so many households here, surely we owe consumers that much at least?

Antoinette McKeown

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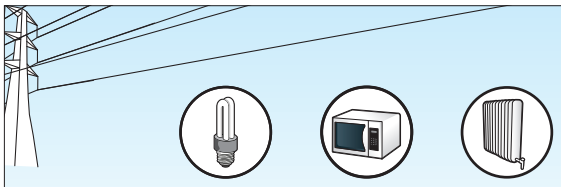


Executive Summary

In 2008 domestic electricity customers in Northern Ireland endured a 53 per cent increase in the price of electricity. At this time the Consumer Council called for an inquiry to examine the regulatory process and the underlying energy policies that had allowed such an unprecedented price increase to occur. The Utility Regulator then commissioned Douglas McIldoon, the former Utility Regulator, to undertake this work.

Today domestic consumers are once again facing significant increases in energy costs. Currently an average consumer in Northern Ireland using electricity and heating oil to heat and power their home will have an annual energy bill of £2,310[5].

In October 2011 the UK's Department of Energy and Climate Change reported[6] the highest dual fuel bill in GB was in Cardiff where consumers pay between £1,073 and £1,175 per year for their energy[7].

As consumers in Northern Ireland are asked to pay more for energy it is increasingly important that the regulatory structures and policy frameworks are designed in a manner that they receive the best possible price.

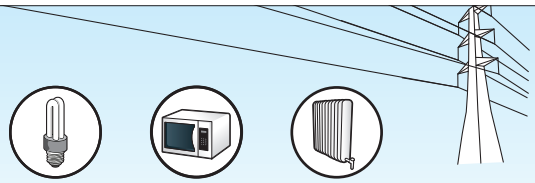
In his report Douglas McIldoon set out that Northern Ireland has the potential to create a well regulated electricity market which could deliver lower costs to customers and manage the transition to a low carbon electricity infrastructure. However, he concluded that electricity prices were higher than they need to be because energy policy is "confused and contradictory".

In light of recent price increases the Consumer Council has revisited Douglas McIldoon's 2008 report to see if the situation for energy consumers in Northern Ireland has improved and if any further improvements could still be made to provide lower electricity costs to consumers.

Following this examination the Consumer Council still believes that more needs to be done to empower energy consumers and place them at the centre of energy policy in Northern Ireland.

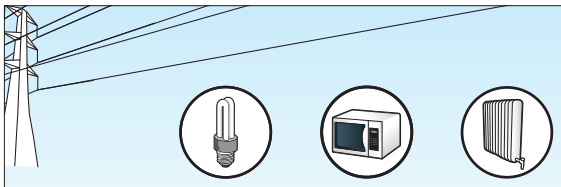
Northern Ireland needs a clear and detailed energy policy which works in the interests of all consumers and looks proactively and constructively to tackle fairly the priority issues of affordability, energy security and climate change. Its primary aim is to protect both the current and future consumer and provide extra support for the most vulnerable in our society.

5 As of 5 January 2012 – an average consumer in Northern Ireland would use five and a half 500 litre fills per year at an average cost of £1,722 and an average Power NI electricity bill is £588 per annum.
6 http://www.decc.gov.uk/en/content/cms/statistics/publications/dukes/dukes.aspx
7 87 per cent of households in GB use natural gas to heat their homes. 68 per cent of households use heating oil to heat their homes in Northern Ireland. The average electricity bill in GB is £530pa, compared to £588pa in NI.



The Consumer Council believes that the Northern Ireland Executive and the Utility Regulator need to ensure that:

1. Energy policy in Northern Ireland coherently examines the issues of energy affordability, security of supply and sustainability;
2. Current market structures provide an equitable distribution of risk between energy consumers and industry shareholders;
3. Electricity generators are not overpaid within the Single Electricity Market (SEM) and that all possible pressure is placed on them to ensure electricity is produced at the lowest possible cost for consumers;
4. The level of investment risk within the regulated energy markets is correct and that consumers are not paying for a higher than necessary cost of capital within energy infrastructure projects;
5. Mechanisms are put in place that will provider greater incentives/penalties to supply energy consumers at the optimum price;
6. Energy consumers are empowered and provided with price tariff structures that meet their needs so that they could influence the type of energy they use and how and when they consume; and
7. All possible policy and regulatory instruments are used to tackle the growing levels of fuel poverty in Northern Ireland.



Introduction

Energy is at the heart of modern life in Northern Ireland. It powers our industry and lights and heats our homes.

Whilst not the coldest region in the UK, households in Northern Ireland spend on average significantly[8] more per year on energy than the average UK household and in terms of heating alone, a household in Northern Ireland spends approximately two-thirds more on heating fuel than a household in England and around 50 per cent more than Scotland or Wales.

The increasing cost of energy is affecting nearly everyone in our society. Around 302,000 households[9] in Northern Ireland are struggling to heat their homes to an adequate level[10]. Households here already suffer from the highest levels of fuel poverty in the UK[11].

Figure 1: Fuel Poverty Levels in Northern Ireland, GB and the Republic of Ireland

	% of households in Fuel Poverty	% of households in Extreme Fuel Poverty
Northern Ireland[12]	44	13
GB	13	4
Republic of Ireland[13]	19	Not Available

As a responsible society we need affordable energy prices. However, within energy a real dichotomy exists, as significant investment in our energy infrastructure is needed so that Northern Ireland can fairly meet the near and long-term challenges and goals it faces of having more reliable and sustainable forms of energy supply. With rising energy prices and increasing levels of fuel poverty in Northern Ireland, it remains important that the energy markets are focused on providing consumers with energy at the best possible price.

In 2008 domestic electricity customers in Northern Ireland endured a 53 per cent increase in the price of electricity. At this time the Consumer Council called for an inquiry to examine the regulatory process and the underlying energy policies that had

8 Family Expenditure Survey, 2010.
9 Housing Conditions Survey 2009, Northern Ireland Housing Executive 2010.
10 The World Health Organisation defines a satisfactory heating regime as 21oC in the living room and 18oC in other areas.
11 Department of Energy and Climate Change 2011 (www.decc.gov.uk).
12 2009 Northern Ireland House Condition Survey, Northern Ireland Executive. Since 2009, households in Northern Ireland have suffered two of the coldest winters on record and significant increases in energy prices.
13 Scott, S et al. Fuel Poverty in Ireland, ESRI, October 2008.

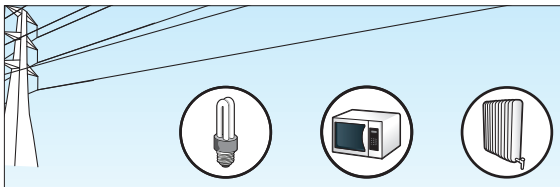
allowed such an unprecedented price increase to occur. The Utility Regulator then commissioned Douglas McIldoon, the former Utility Regulator, to undertake this work. The resulting report, "*Northern Ireland Electricity Consumers - Orphans in the Energy Storm*", looked at the regulatory process and policy structure in Northern Ireland and whether any improvements could be made which would benefit the final consumer.

Nearly three years on, with energy prices once again increasing (see Figure 2) and the highest levels of fuel poverty in the United Kingdom, the Consumer Council has revisited this report to see if the situation has improved for energy consumers in Northern Ireland and if any further improvements could be made.

Figure 2: Energy Price Increase in Northern Ireland in 2011

Electricity	
power ni The new name for NIE Energy	Increased by 18.6 per cent.
Airtricity energy made better	Increased by 18.6 per cent.
budgetenergy	Increased by between 16 and 23 per cent.
Gas	
PHOENIX NATURAL GAS SUPPLY	Increased by 39.1 per cent.
taking natural gas further firmus energy	Belfast – Increased by 35 per cent. Ten Towns – Increased by 28.4 per cent
Home Heating Oil	
	Average prices have increased by 31 per cent over the last year.[14]

14 Consumer Council Heating Oil Survey comparison between 24th November 2011 and 25th November 2010.



McIldoon in delivering his report set out that Northern Ireland has the potential to create a well regulated electricity market which could deliver lower costs to customers and manage the transition to a low carbon electricity infrastructure. However, he concluded that whilst the regulatory process that agreed the increase on the cost of electricity was correct, electricity prices were higher than they need to be because energy policy is "confused and contradictory".

The Cost of Electricity

Electricity is a manufactured product, and within an electricity bill consumers are being asked to pay for:

- The power station that produced the electricity;
- The fuel used by the power station;
- The staff costs (wages, pensions etc.) of the workforce in the electricity industry;
- The wires that bring the electricity from the power station to homes or businesses;
- The cost of a meter, billing and collecting payments for customers; and
- The excess capacity in power stations, the wires etc. that are needed to cope with breakdowns, safety margins etc.

Electricity differs from other forms of energy as currently there is no economic way to store significant amounts of it. Therefore supply has to meet demand.

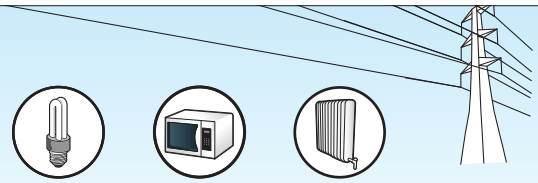
Current Electricity Policy in Northern Ireland

Fundamentally, overarching energy policy is about balancing the three key drivers of reliability, sustainability and affordability. In order that consumers get the best possible deal, policy makers must consider the most economically efficient route to achieve each policy driver.

In 2010 the Department of Enterprise, Trade and Investment (DETI) published its Strategic Energy Framework (SEF)[15], which sets out the direction of travel for Northern Ireland's energy policy over the next ten years. The Framework's aim is to develop a "more secure and sustainable energy system" for Northern Ireland and in doing so sets a target of ensuring 40 per cent of Northern Ireland's electricity consumption will come from renewable sources by 2020.

Northern Ireland is currently dependent on imported fossil fuels for 98 per cent of its energy and spends around ten per cent of its Gross Domestic Product on importing fossil fuels. This dependency on fossil fuels and exposure to international fuel prices has been acutely highlighted over the last few years with large fluctuations in the price Northern Ireland's consumers have had to pay for electricity, gas and oil.

15 A Strategic Framework for Northern Ireland, September 2010, Department of Enterprise, Trade and Investment.



The SEF signals a move away from imported fossil fuels to a generation system based on indigenous renewable energy generation which in turn will reduce carbon emissions.

The SEF sets out four key energy goals of:

• Building competitive markets;

• Ensuring security of supply;

• Enhancing sustainability; and

• Developing Northern Ireland's energy infrastructure.

The SEF sets out that building competitive markets and promoting competition are central to driving down the cost of electricity to consumers. The SEF sees that ongoing development of the Single Electricity Market (SEM) and further regional market integration along with retail competition are a key means of ensuring energy prices are as competitive as possible.

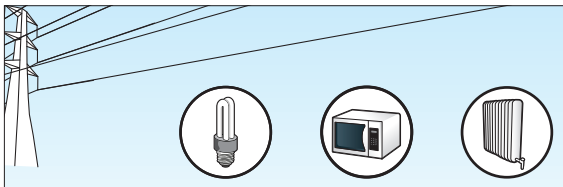
Guaranteeing a secure energy mix is fundamental to the SEF. As previously mentioned, Northern Ireland is dependent on imported fossil fuel for the majority of its power generation; a position that has been increasingly exposed with the fluctuating nature of wholesale energy prices. To counterbalance this position, DETI through the SEF is looking to support a range of renewable technologies to ensure a reliable mix of generation which maximises Northern Ireland's own indigenous sustainable energy resources.

Cost to Consumers

It is clear that there will be a cost to consumers in moving to a more sustainable energy infrastructure. Northern Ireland Electricity (NIE) estimates that around £1 billion of grid investment is likely to be required to support a target of 40 per cent renewable electricity[16] DETI estimates that this combined with the cost of renewable electricity installations could mean between a £49 and £83 per household[17] (9.9 per cent to 16.7 per cent) increase on electricity prices on an annual basis based on electricity prices as at September 2010.

The costs of inaction will be far greater, however, households in Northern Ireland are already struggling to afford their energy needs. Research in 2008, from Save the Children[18] showed that in Northern Ireland for every one per cent increase in domestic energy prices, an additional 2,800 households become fuel poor. Therefore, without any further policy intervention, nearly a further 50,000 households could become fuel poor to meet the targets within the SEF. The Department for

16 Strategic Energy Framework, DETI, September 2010.
17 Based on an annual electricity bill of £496.00.
18 The impact of Fuel Poverty on Children, Save the Children, December 2008.



Social Development's (DSD) latest fuel poverty strategy[19] commits itself to a society where fuel poverty is eradicated and in doing so identifies fuel prices as one of the key factors that needs to be addressed.

The McIldoon Report suggests that these two policies of increasing renewables and eradicating fuel poverty are conflicting and need to be addressed head on by Government in order to create a coherent energy policy for Northern Ireland. Unfortunately the Report believes the current market structure provides greater protection to the electricity industry and its shareholders than consumers, as much of the market risk is being borne by electricity consumers.

Energy Ownership

The McIldoon Report is sceptical whether effective competition can be delivered in Northern Ireland, due to the limited size of the market (800,000 customers). He is also unconvinced as to whether competition can deliver all the requirements of a coherent energy policy – affordability, sustainability and reliability. He believes further consideration needs to be given as to how consumers could take more control of their electricity supply and suggests new models of ownership for energy assets may offer consumers a cheaper route to secure new, diverse sources of generation for the future; such as:

- Mutualisation, whereby the company has no shareholders but it is owned by the customer base and operated entirely for their benefit. An example of this ownership model already exists in Northern Ireland with Mutual Energy; and
- An energy company that allows customers to buy into projects as equity holders.

19 "Warmer Healthier Homes – A New Fuel Poverty Strategy For Northern Ireland, DSD, March 2011.

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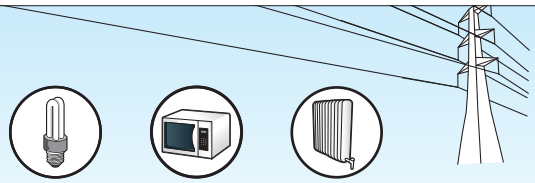


The Single Electricity Market (SEM)

The SEM was launched in 2007. Its aim was to bring together the electricity markets of Northern Ireland and the Republic of Ireland to create a single electricity market for the Island of Ireland. The intention of combining these two markets into one larger market was to develop economies of scale which could promote greater competition, reduced energy costs and efficiency benefits to all consumers.

McIldoon considers the creation of the SEM is, *"the most creative approach which Northern Ireland has taken in the last 40 years to its chronic situation of energy dependency but it needs to be developed*."

The McIldoon Report however believes that the evolution of the SEM need to be carefully thought through to ensure it is capable of delivering competition and cost reflective prices to consumers and at the same time it needs to deliver on the energy policy objectives of sustainability and reducing fuel poverty.

The Report sets out that the extravagant way in which the SEM procures and rewards generation and the lack of transparency and genuine competition in the market will neither drive down prices nor deliver the desired transition to a more secure, less fossil fuel dependent electricity supply industry.

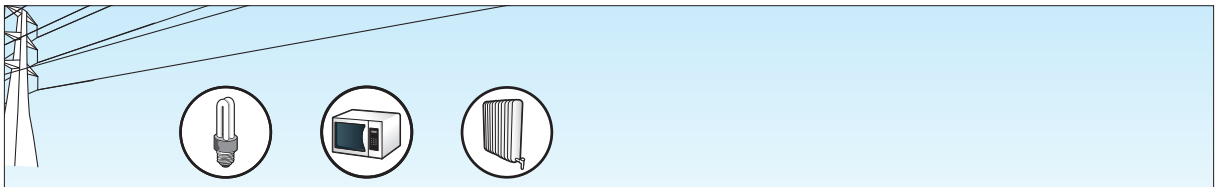
Electricity Generation in SEM

McIldoon is very clear that the way generation is rewarded gives consumers the worst possible outcome. In 2005, generation costs accounted for 48 per cent[20] of the final tariff; currently it accounts for around 60 per cent[21]. This means that a reduction in generation prices or energy cost offers the best route to significantly reduce the price consumers pay.

The SEM is "a gross mandatory pool market" into which all electricity generated on or imported on to the Island of Ireland must be sold and from which all wholesale electricity for consumption on or exported from the Island of Ireland must be purchased.

McIldoon believes that electricity power generators are overpaid by this system. He suggests that the returns on previously nationalised power plant with fully depreciated generation assets are too high and that these plants receive a disproportionate amount of money through the SEM.

20 NIE press release 12 December 2005.
21 NIE Energy Presentation, 2011.



Redressing the Imbalance

A key question for policy makers is how the current system can provide an incentive to generators to build new plant without over rewarding them to the detriment of consumers. In the SEM, the most expensive plant that runs sets the price that is paid to all generators that run. Those plants which are generating within the SEM below that price are being paid above their operating costs and are therefore receiving additional profit to that which they need to operate in the market. McIldoon sees this as a kind of 'super-profit' for generators.

The Report sets out that the least cost system for the consumer would be one where:

- Generation is secured by competitive tender under contract;
- All electricity is sold through the pool but without the contracts that currently exist between generators and suppliers;
- Suppliers compete by the value they add, in the form of other services, and the electricity they sell;
- Arrangements for collectively purchasing wholesale fuels (oil, gas, coal, etc.) for generators would be explored to reduce the market's risk of exposure to wholesale costs; and
- Power stations whose generation cost was below the system's marginal price in any half hour would continue to receive the surplus (known as infra marginal rent (IMR)) and this would be set against the price of their contract or reimbursed to consumers.

Capacity Payments

The SEM provides electricity generators with a capacity payment. This is a fee paid to all generators that are ready and able to generate electricity if needed due to increases in demand and compensates them for the times when they are not called to generate. Capacity payments provide a form of insurance to the electricity network by ensuring that the "lights are kept on" as there is enough generation capacity for the network to cope with peak or intermittent demand and in turn the generator is guaranteed a rate of return on its assets for providing that assurance.

The McIldoon Report however questions the need for capacity payments within the SEM and whether they are rewarding generators on a fair and equitable basis and that consumers are paying more than they need for this. The Report questions whether consumers are paying more than they need for this assurance because many of the older plants are fully depreciated having been fully paid off as nationalised assets.

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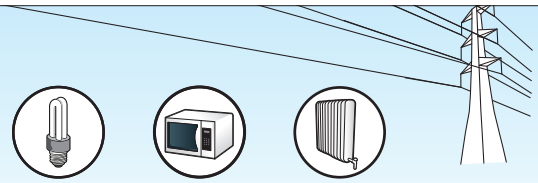


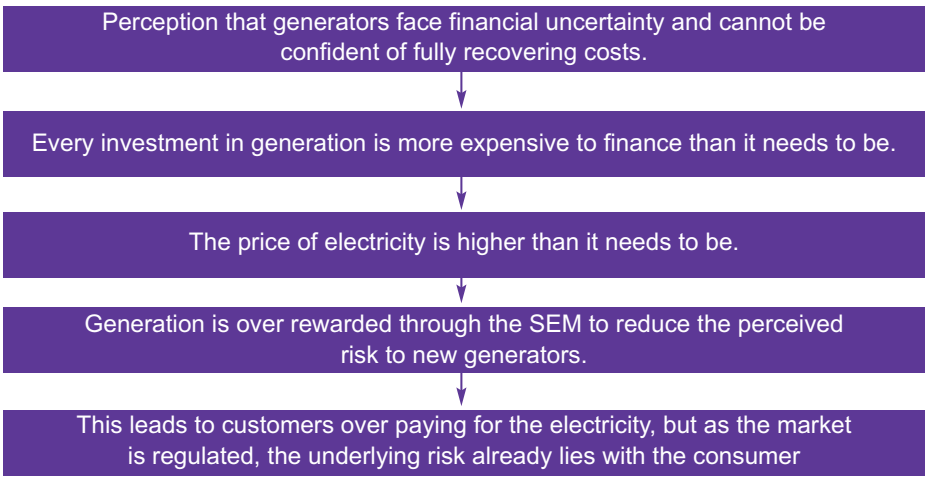
In addition, McIldoon has concerns about the capacity payment mechanism over rewarding wind generation, as generation from wind can only occur if the wind is blowing and therefore it does not have the ability or flexibility to meet rises in demand as compared to other less intermittent forms of generation.

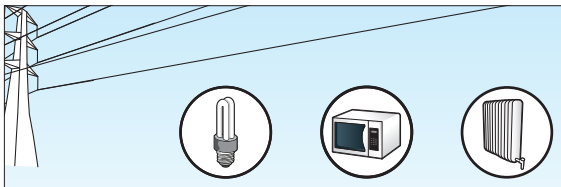
Cost of Capital

Throughout his report, McIldoon argues that consumers are paying a higher rate for their electricity than is actually necessary. One of the main reasons for this conclusion is the high cost of capital that is needed to develop electricity plant and infrastructure. His Report sets out that this is higher than it needs to be because an unclear understanding of the actual risk within the electricity market.

Figure 3 shows the current system of incentivising generators to build new energy infrastructure ultimately leads to consumers over paying for the electricity that they use. The cost of capital for new investment is higher than it needs to be as the market perceives the risks of investment to be high and the SEM rewards generators for that risk. However, as the SEM is fully regulated the underlying risk of the market already lies with the consumer. This ultimately causes the consumer to pay a higher cost for electricity than is necessary as the cost of capital reflects a non-regulated fully competitive market where consumers would have full choice to choose which product they wish to purchase. However, the truth is, the electricity market is regulated, and the actual risks within it are fully borne by the final consumer. Therefore investments should attract lower returns and capital costs allowing for cheaper electricity costs to consumers.

Figure 3: How Consumers in the SEM Pay Too Much for their Electricity





The cost of building a power station is very expensive, for example recently in December 2010, Bord Gáis opened a new Combined Cycle Gas Turbine (CCGT) power station at Whitegate, County Cork at a cost of €400m (£342m). A power station normally has a lifespan of around 20 - 40 years and it is normal practice for energy companies to borrow money to pay for the capital cost. The most critical factor affecting a power station costs are therefore the rate of interest at which this capital has been borrowed.

The average cost of capital to the energy industry is around 7.5 to 8.5 per cent. However, Mutual Energy, through a recognition that the investment risk is ultimately borne by the consumer has been able to secure finance at between 2.2 and 5.5 per cent[22]. On a power station asset worth £400m, this difference of on average around 4 per cent would make a difference of around £16m per year to consumers' bills.

Dieter Helm's report on Utility Regulation, the RAB (Regulated Asset Base) and the cost of capital[23] reinforces the findings within the McIldoon Report. Helm explains how important it is for regulators and policy makers to define correctly the level of risk within the electricity industry as an incorrectly assessed cost of capital can have "large implications for customers' bills".

Profitability of Electricity Companies in Northern Ireland

Based on a recent report by Dun and Bradstreet for Ulster Business[24], the electricity companies in Northern Ireland are amongst the most profitable companies in Northern Ireland.

Figure 4: Turnover and Profit for Northern Ireland's Electricity Companies 2011 (Source: Ulster Business 2011)[25]

Company	Turnover (£M)	Profit (£M)	Profit Margin
AES Ballylumford/Premier Power (Unregulated Profit)	166	43	26%
AES Kilroot (Unregulated Profit)	131	37	28%
Coolkeeragh ESB Ltd (Unregulated Profit)	192	58	30%
Scottish Power Renewables(Unregulated Profit)	183	89	49%
Airtricity Energy Supply (NI) Ltd (Unregulated Profit)	74	10	14%
Total of Electricity with Companies with an Unregulated Profit.	**746**	**237**	**32%**
Northern Ireland Electricity Ltd (Regulated Profit)	229	24	11%
SONI Ltd (Regulated Profit)	88	4	4%
Viridian Group (Regulated Profit)	1,865	29	2%
Total of Electricity Companies with a Regulated Profit	**2,182**	**57**	**3%**
Overall Total Profit of all Electricity Companies	**2,928**	**294**	**10%**

22 Mutual Energy, Annual Report and Accounts 2011.
23 "Utility Regulation, the RAB and the cost of capital", Dieter Helm, University of Oxford, 6th May 2009.
24 Ulster Business, August 2011.
25 A date of 30th June 2011 was used as the cut off for inclusion within the Ulster Business Top 100 Companies, 2011.

Figure 5 shows that according to Ulster Business's Northern Ireland's Top 100 Companies report, electricity companies in Northern Ireland, based on local sales, have had the following profit margins over the last four years.

Figure 5: Profit Margins of Northern Ireland's Electricity Companies since 2008[26]

	Profit Margin			
Company	**2011**	**2010**	**2009**	**2008**
AES Ballylumford/Premier Power (Unregulated Profit)	26%	14%	14%	12%
AES Kilroot (Unregulated Profit)	28%	21%	36%	27%
Coolkeeragh ESB Ltd (Unregulated Profit)	30%	5%	(16%)	Not Available
Scottish Power Renewables (Unregulated Profit)	49%	48%	Not Available	Not Available
Airtricity Energy Supply (NI) Ltd (Unregulated Profit)	14%	Not Available	Not Available	Not Available
Average NI Electricity Company Unregulated Profit	**29%**	**22%**	**11.3%**	**20%**
Northern Ireland Electricity Ltd (Regulated Profit)	11%	Not Available	Not Available	Not Available
SONI Ltd (Regulated Profit)	4%	4%	Not Available	Not Available
Viridian Group (Regulated Profit)	2%	1%	(8%)	10%
Average NI Electricity Company Regulated Profit	**6%**	**2.5%**	**(8%)**	**10%**
Overall Average NI Electricity Company Profit Margin	**21%**	**15.5%**	**6.5%**	**16.3%**
Average Northern Ireland Top 100 Company	**4%**	**3.8%**	**1.44%**	**5.8%**

26 A date of 30th June 2011 was used as the cut off for inclusion within the Ulster Business Top 100 Companies.

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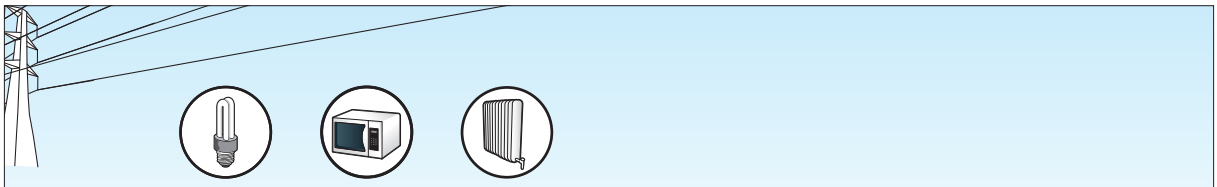

McIldoon in his report questioned whether the current market structure was providing companies with excess profits. On the back of the research undertaken by Dun and Bradstreet, the Consumer Council has questioned whether electricity customers in Northern Ireland are getting the best possible deal with the majority of electricity companies in Northern Ireland earning profits significantly higher than the Northern Ireland average.

Renewable Electricity Generation

As previously mentioned the SEF sets out a target that 40 per cent of Northern Ireland's electricity consumption will come from renewable sources by 2020.

The McIldoon Report sets out that in order to increase the amount of generation from renewable sources, Northern Ireland policy makers should ensure that they provide developers with the right level of incentives to build a new renewable plant, without over rewarding them to the detriment of consumers. McIldoon believes that there is an inherent flaw in the SEM as it fails to provide consumers with the benefits they should expect to see from renewable generation. This is because the price of electricity within the SEM is set by the most expensive fossil fuel generator needed to meet demand on the system.

The fossil fuel generators in developing their prices must include the cost of carbon and the fossil fuel (gas, coal, oil, peat) that is needed to generate their electricity. However, a renewable generator does not produce carbon nor use fossil fuel to generate its electricity and therefore it could be seen that it is being over-rewarded for the generation that it produces and the consumer is not seeing the full financial benefits that renewable generation could be providing.

McIldoon believes for consumers to maximise their benefit of moving to more renewable generation there is merit in exploring how the price of electricity from renewable sources can be delinked from the price of electricity from fossil fuel generators. He argues that current electricity tariffs could be restructured to provide consumers with cheaper electricity and stimulate investment in renewable generation. Through feed-in tariffs, whereby consumers would be paid for generating their own electricity or by "Deep Green" tariffs, where consumers would have direct contracts with renewable generators and pay the actual cost of renewable generation, consumers would be able to gain direct benefit from increasing levels of renewable generation within Northern Ireland.

The McIldoon Report also highlights that subsidies for wind generation vary between Northern Ireland and the Republic of Ireland. This disparity means that wind generators will not necessarily locate in the optimum geographical location for the network. This could limit the trading of wind energy and lead to higher prices for renewable energy for consumers. The Report makes it clear that if the market is to meet its potential policy incentives and penalties that encourage renewable energy will need to be aligned between the two jurisdictions.

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Electricity Transmission

Currently, the all-Ireland grid has physical and technical constraints that restrict which power stations can be run at any given time. This has increasing significance as the grid is being required to deliver more renewable energy, which is more disparate in location.

Failure to access the grid presents a risk to investors and is a hindrance to competition. To compensate generators and reduce their risk, constraint payments are made. In the long term the constraints need to be reduced by reinforcing the grid. Work undertaken through Eirgrid, as part of its Grid 25[27] Report estimates the cost of doing this in Northern Ireland alone to be in the region of £1B.

It is estimated that the limited interconnection between Northern Ireland and the Republic of Ireland is costing consumers in excess of £18M per year because of the need to call on less efficient generating plant within the SEM. It is believed that this position will continue to worsen until the planned second North-South interconnector is approved and built[28].

To manage the impact of these constraints in the short term, McIldoon suggests that only those consumers from the jurisdiction that created the constraint should pay the cost of it. He believes that this is an equitable way to apportion costs and was used before the creation of the SEM.

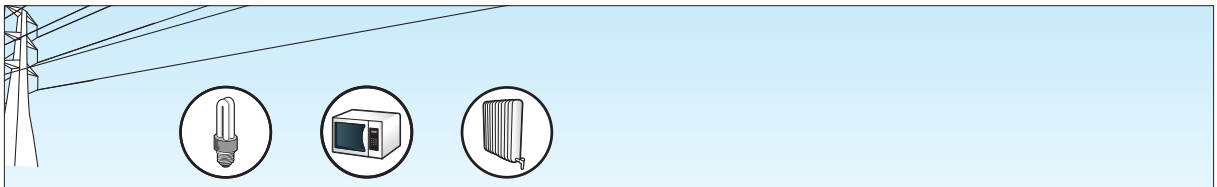
Electricity Supply

Domestic competition in the Northern Ireland electricity market began in June 2010. It is the position of the Consumer Council that competition, if designed correctly, can be a key mechanism in delivering lower prices and choice to consumers. However, to be viable competition must improve the customer experience for all consumers, no customer should be worse off as a result of competition and the price of energy must not increase due to measures taken to introduce competition.

McIldoon believes that the small size of the Northern Ireland market will ultimately be a barrier to full competition and that the Utility Regulator, through price and tariff controls, must act as a proxy for competition to ensure the consumer gets the best possible deal.

However, McIldoon suggests that this is not fully happening in Northern Ireland, as the incumbent electricity supplier, Power NI is able to minimise the risk to its shareholders by fully passing through its energy procurement costs to customers and by recovering any shortfall in its annual revenue from customers by using the 'k' factor mechanism[29]. He believes that this is an inequitable distribution of risk between consumers and its shareholders.

27 GRID25. Strategy for the Development of Ireland's electricity Grid for a Sustainable and Competitive Future. EirGrid, October 2008.
28 Response to HM Treasury and HMR&C Consultation Carbon Price Floor: Support and Certainty for Low Carbon Investment, Department of Enterprise, Trade and Investment, 11 February 2011.
29 In any given year, the revenues that the licensees earn from tariffs that they have to set in advance may differ from the allowable revenues. The k factor is a term in the price control formula that allows compensation for any under-recovery or over-recovery in any given year to be applied in the following year.



The McIldoon Report suggests that in the absence of true competition, further mechanisms need to be put in place with Power NI's price control. This will provide greater incentives/penalties to supply energy to consumers at the optimum price and the business risk of the company should be at the very least shared between customers and shareholders.

The Electricity Consumer

The basis of the McIldoon Report is that the balance of risk and reward between electricity generators and customers needs to be reviewed. It is clear that this relationship is unbalanced, with far too much risk sitting with the consumer. McIldoon believes more work needs to be done to empower the consumer through changing the ownership, contracting and purchasing relationships to reduce the overall cost of electricity.

McIldoon suggests that whilst cost will always be the major driver for most consumers, greater choice should be given to consumers so that they can have more influence over how their electricity is generated, which could encourage the use of more renewables or micro generation.

The Report sets out that consumers who are on the regulated tariff are totally exposed to risks of the market, which are not fairly applied to the regulated supply company (Power NI). He also suggests that whilst domestic customers need affordable energy, price stability is more important than achieving the lowest possible price in any particular year.

McIldoon suggests the balance of risk and reward between generators and customers needs to be reviewed. He believes that involving consumers more directly in the ownership of electricity infrastructure (through mutualised companies or by becoming equity holders) and giving them greater choice over how electricity is purchased would in turn empower consumers so that they have greater control over their electricity supply and use of their electricity. Generation costs account for around 60 per cent of an electricity bill and therefore measures to control generation would have the greatest effect on cost of consumer electricity bills.

Electricity supply companies should be encouraged to compete in areas other than price. This could, as the McIldoon Report suggests encourage new companies which are already established in other sectors to offer more innovative products and services alongside the sale of electricity. For example, supermarkets and banks could offer reward schemes and equity unlocking programmes to help lower income households purchase energy efficiency measures, such as loft and cavity wall insulation, to help reduce their overall energy bills.

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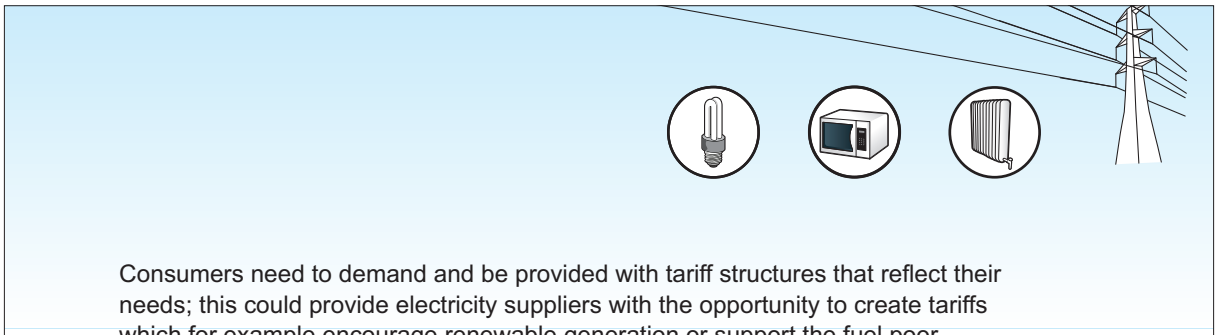


Consumers need to demand and be provided with tariff structures that reflect their needs; this could provide electricity suppliers with the opportunity to create tariffs which for example encourage renewable generation or support the fuel poor. If customers had a greater choice of products provided by suppliers they could then start to have more influence over the type of energy they use and how and when they consume.

Fuel Poverty

The current Government definition of fuel poverty is when a household, in order to maintain an acceptable level of temperature in their home would have to spend more than 10 per cent of its income on all household fuel use[30].

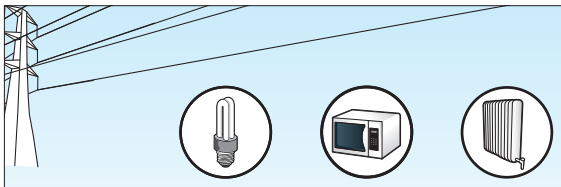
The latest House Conditions Survey[31] showed that in 2009, 44 per cent of households (302,000) in Northern Ireland were in fuel poverty. This is the highest level in the UK - twice that of GB.

The European Parliament has stated that access to affordable power and heat is a basic human right. However, McIldoon believes that eliminating fuel poverty in Northern Ireland is mathematically impossible as long as energy prices are too high for those on very low incomes. He suggests that the Government therefore needs to consider wider policy instruments to tackle fuel poverty.

McIldoon throughout his report reiterates his belief that policy makers and regulators need to place greater pressure on electricity generators to ensure electricity is produced at the lowest possible cost for consumers.

In addition, he suggests that the current electricity tariff structure offers little to address either the issue of energy efficiency or fuel poverty. He proposes that a system of “block tariffs” could be introduced. This is when the first block of a household’s electricity consumption is offered at a low rate, with subsequent blocks costing progressively more. McIldoon believes that 63 per cent of customers in Northern Ireland would be better off under such a tariff structure. The report suggests that a block tariff could be structured in a way that it encourages the uptake of micro/household renewables, thus increasing householders’ control of the electricity they produce and use.

30 Warmer Healthier Homes – A New Fuel Poverty Strategy for Northern Ireland, Department for Social Development, March 2011.
31 House Conditions Survey 2009, Northern Ireland Housing Executive, 2010.



Conclusion

The McIldoon Report was written after unprecedented increases in electricity prices in Northern Ireland. Today, with rising wholesale fuel costs, energy prices have once again increased to levels that are causing some households, especially those on low incomes to struggle to afford all their heat and power needs.

Douglas McIldoon in his report sets out three main points for consumers:

- **Electricity prices are higher than they need to be because energy policy is confused and contradictory;**
- **The way electricity in generation is rewarded through the SEM gives consumers the worst possible outcome; and,**
- **There is an inequitable distribution of risk between electricity consumers and the shareholders of electricity companies; with far too much risk sitting with the consumer.**

The Consumer Council believes that more needs to be done to empower energy consumers and place them at the centre of energy policy in Northern Ireland.

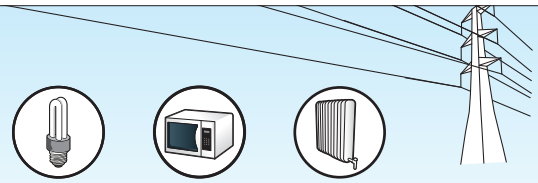
Ofgem (the GB energy regulator), in 2010[32] updated its scenarios for the GB Energy Market for the period up to 2020. It estimated that energy prices over this time could rise between 13 and 52 per cent. However, households in Northern Ireland already spend more than twice as much of their disposable income on energy than households in London and around 60 per cent more than the UK average[33].

On the back of an 18.6 per cent increase in Power NI's regulated electricity prices, it is vital that the Northern Ireland Executive and the Utility Regulator provide a duty of care to consumers and re-examine Douglas McIldoon's report; the practical changes that he suggests to both energy policy and regulation require exploration now in order that they give consumers in Northern Ireland the best possible outcome.

With such high levels of fuel poverty in Northern Ireland, it is essential that both energy policy and regulation are urgently examined to ensure every possible opportunity has been taken to drive out costs and provide consumers with the best possible price.

Northern Ireland needs a clear and detailed energy policy which works in the interests of all consumers and looks proactively and constructively to tackle fairly, the priority issues of affordability, energy security and climate change. Its primary aim is

32 Project Discovery - Options for delivering secure and sustainable energy supplies, Ofgem, March 2010.
33 Department of Enterprise, Trade and Investment, February 2011.



to protect both the current and future consumer and provide extra support for the most vulnerable in our society.

The McIldoon Report provides a starting point for this change and the Consumer Council calls on Government, the Utility Regulator and the energy industry to re-examine the points raised within it to ensure the market is operating in the best interests of consumers in Northern Ireland.

Principles

The Consumer Council is calling on the Northern Ireland Assembly and Executive to re-examine the findings of the McIldoon Report in light of the recent increases in energy prices at a time when household incomes are falling and the infrastructure and renewables "price tag" is looming large.

The Consumer Council considers that following this report, the Northern Ireland Executive and the Utility Regulator should ensure that:

1. **Energy policy in Northern Ireland coherently examines the issues of energy affordability, security of supply and sustainability;**
2. **Current market structures provide an equitable distribution of risk between energy consumers and industry shareholders;**
3. **Electricity generators are not overpaid within the SEM and that all possible pressure is placed on them to ensure electricity is produced at the lowest possible cost for consumers;**
4. **The level of investment risk within the regulated energy markets is correct and that consumers are not paying for a higher than necessary cost of capital within energy infrastructure projects;**
5. **Mechanisms are put in place that will provider greater incentives/penalties to supply energy consumers at the optimum price;**
6. **Energy consumers are empowered and provided with price tariff structures that meet their needs so that they could influence the type of energy they use and how and when they consume; and**
7. **All possible policy and regulatory instruments are used to tackle the growing levels of fuel poverty in Northern Ireland.**

Notes

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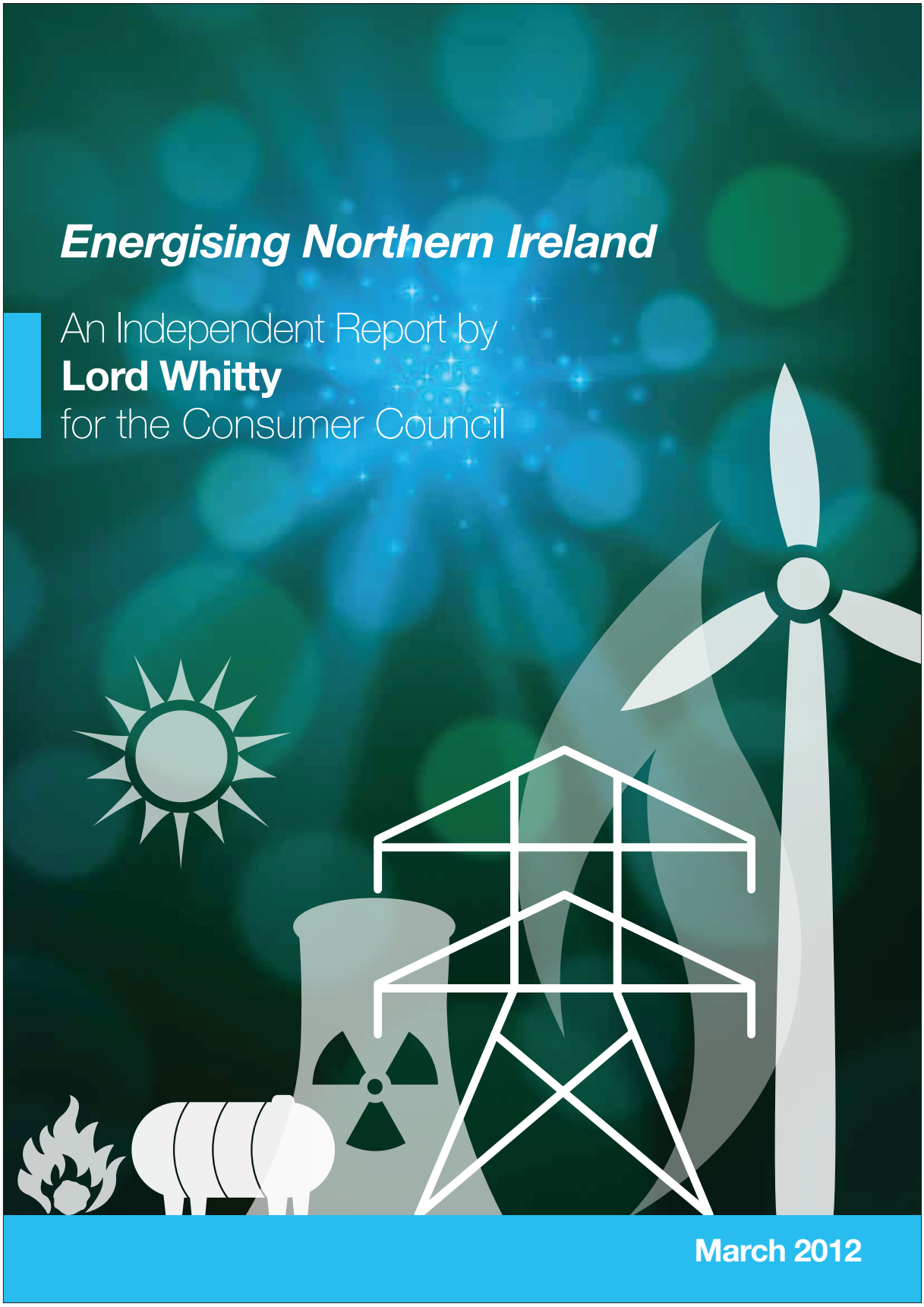
ConsumerCouncil

Lord Whitty Report Energising Northern Ireland



Energising Northern Ireland

An Independent Report by
Lord Whitty
for the Consumer Council

An Independent Report by
Lord Whitty

Contents

Foreword

I was asked by the Consumer Council for Northern Ireland (CCNI) to do a review of energy policy in Northern Ireland (NI). My qualifications for undertaking the task may not be obvious. Until a year ago I was Chair of Consumer Focus – the statutory consumer body covering the GB energy market; and until 2005 I was for several years a Minister in the UK Government with responsibility for energy efficiency, fuel poverty and climate change aspects of energy policy. I am also a Board member of the Environment Agency for England and Wales which covers environmental aspects of energy regulation. So I do have form (or baggage) and I have learnt from both successes and mistakes in energy policy at GB and UK level.

Obviously the genesis of that request from the CCNI was widespread consumer concern at the impact of high and rising prices on consumers, the high and rising levels of fuel poverty and complaints from consumers about energy companies in all sectors. However, the Consumer Council's concern – and the remit of this report – go beyond the serious problems facing today's consumers: the need to decarbonise the energy mix in the face of climate change and issues of security of supply will be of concern to NI's future consumers and decisions needed now or in the near future will determine the supply, cost, environmental and social impact of the energy market in NI. Hence the report covers all these aspects of energy policy and assesses the long term as well as short term policy choices.

In working on the Report I have been greatly helped by the willingness to engage of a wide range of people in industry, government and consumer and environmental organisations in NI with huge experience of different aspects of the energy scene in NI. My profound thanks to them for sharing their knowledge and creative ideas with me.

My thanks also to the Consumer Council for supporting and informing my efforts.

However, the contents and recommendations in this Report are entirely mine and no other person or organisation is committed to the analysis or the recommendations. I submit it to the Consumer Council and to any other individuals and parties who may find it useful – or not – in formulating future energy strategy in NI.

LARRY WHITTY
March 2012

1 Introduction and Overview

1.1 This report was proposed by the Consumer Council for NI to look at energy strategy from the point of view of the domestic energy consumer - not just today's consumer but also of consumers well into the future. It therefore looks at a sustainable strategy in terms of cost but also of social and environmental impacts.

1.2 Although written primarily from a domestic consumer viewpoint the Report recognises that NI's many thousands of small businesses face similar problems to those of domestic consumers; and also that it is not in NI consumers' long term interest to advocate a strategy that damaged NI's business community.

1.3 NI consumers and small businesses at present pay significantly more for their energy than is the case in the rest of the UK. This is largely due to different mix of fuels, with heating oil predominating in NI and gas only being available in some areas. This is also partly due to costs and prices of electricity being significantly higher than in Great Britain and the price of gas being higher for most of the last decade.

1.4 There are inevitably multiple objectives of energy policy – affordability, security, cost and social justice. There are also demanding targets for different forms of expensive infrastructure and for switching significant sourcing of energy to renewables and away from carbon based fuels. High and rising prices in all sectors underline the need for a major campaign for energy efficiency – both in housing and other buildings and in industrial processes and transport. There will be little prospect of direct exchequer resources investing in energy efficiency or infrastructure. Hence the cost of both will almost exclusively fall on domestic and business consumers. It is important that policy, regulation and industrial strategy maximise the synergies and minimise the duplication and conflict between the objectives.

1.5 At present the strategy is piecemeal and insufficiently coordinated; this is compounded by the multiplicity of government departments and agencies involved.

1.6 The NI market is small; the scope for competition is limited; and it is subject to influences from outside its border in the UK, the RoI and the EU as well as global energy prices and supply issues.

1.7 On the other hand most powers relating to energy are devolved in NI (unlike Scotland and Wales) and it is a sufficiently compact market for the NI Executive and Utility Regulator for NI (UR) to operate in a longer term, more strategic way.

1.8 The key themes of this Report are:

- It needs to be squarely recognised that, whilst there will be short term fluctuations up and down, relatively high and rising prices are likely to continue whatever the regulatory structure. But this can be significantly cushioned by new and intensified interventions by the Government and the Regulator – and different choices by consumers;
- Reduction in fuel poverty and decarbonisation of energy supply need to be considered as being equally important policy objectives as cost and security of supply;
- A far more substantial programme on energy efficiency is needed in NI; that programme should be treated as a priority part of infrastructure strategy and consolidated in its funding and coordinated in its delivery;
- A key strategic aim should be the radical reduction of dependency on home heating oil;
- In the interim heating oil should be included in the remit of the UR;
- Priority should be given to the consolidation of connections to the existing gas networks rather than major new projects;
- Development of renewable fired electricity generation (for heating) and networks should be focussed on the south and west of NI where natural gas networks will not be economically viable and may never reach;
- All forms of renewable, low carbon and decentralised energy should be encouraged but within a consistent and long term framework of incentive and support;
- Although there are good arguments for significant parts of the required investment into changing energy infrastructure to be financed by the state it has to be recognised that in the present economic and political climate there is unlikely to be a significant increase in net state spending on energy investment in NI and that hence the costs of such investment will need to be met largely from revenue i.e. from domestic and business consumers;
- The UR should continue to encourage competition but recognise there are limits in a small market; price controls should remain; tariff structures should be developed that help reduce fuel poverty and reduce the use of energy;
- Government and regulatory structures need to be reviewed to give a clearer driver for energy policy formulation and regulation;
- The island of Ireland dimension for wholesale energy needs to be developed in gas as well as electricity; and
- The UR role should not be subsumed into Ofgem but NI's voice in energy policy at UK and EU needs to be enhanced.

The Strategic Backdrop

1.9 Before looking at the policy issues it is important to indicate what is the medium to long term backdrop for energy in NI and what the broad-brush energy mix and energy strategy is going to be over the next two decades to about 2032. The following is this Report's best informed assessment as to how NI's energy strategy should, and if the right policies are adopted by the Government, the UR and industry, is likely to develop over the next twenty years:

1. For most of that period natural gas will be the predominant fuel both for electricity generation and for domestic and commercial heating; but it is already a transitional fuel i.e. gas use will grow for most of the period but by the end of the period the balance will already be shifting to renewably sourced electricity;
2. There will be a single island of Ireland market for all forms of energy; and more substantial two way interconnectivity with both Great Britain and the Republic of Ireland (RoI) will play a major part in the energy mix;
3. There will also have been significant progress towards a North West European Supergrid for electricity but probably not completely integrated markets, regulation or control;
4. Heating oil will be reduced to a minimal residual role in providing heat to the domestic and commercial sectors and oil and coal will be entirely eliminated from generation; and
5. Significant improvements in energy efficiency will have been achieved in the domestic and other sectors and thereby reduced aggregate energy demand relative to economic activity.

Possible Alternative Scenarios: Shale Oil and Gas

1.10 There is one possible development in NI which really only emerged in the course of conducting the work for this Report. There may be the possibility of substantial sources of shale oil and gas from fields in Fermanagh and to the south of the border. If this possibility does develop it will be based on straightforward commercial criteria and need neither taxpayers' money nor cross subsidy amongst consumers.

1.11 Likewise - if longer term, there is also a possibility of an Ireland based nuclear power station that too, would have to be financeable on a 'commercial' basis i.e. there will be no direct government subsidy.

1.12 This Report does return to these possibilities briefly under infrastructure development but most recommendations are based on neither happening, at least in the short/medium term.

Possible Alternative Scenarios: Public Finances

1.13 In a different vein there is also an alternative scenario in relation to funding. In this Report it is specifically assumed that there is unlikely to be a significant net increase in public spending to finance changes designed to deliver wider energy policy objectives; and hence that all financing will have to come from industry and consumers in one way or another – whether directly through prices, levies or cross subsidy. It is arguable that one should take an even wider perspective of energy policy such as is being taken by the Fuel Policy Advisory Group (FPAG) in England: namely that other interventions in energy in terms of EU Trading Scheme, the introduction of a carbon price floor, contracts for difference and subsidy to renewable energy generators will lead to very substantial increases in taxation income to the state which should be available to help achieve energy policy objectives. The FPAG estimates the total tax take arising from those policies at around £5bn per annum. Not all the provisions included in these calculations apply in NI but most do. On a pro rata basis the tax increase from NI reflecting these interventions would be over £100m per year - or £1bn over ten years. If that state expenditure were, as the FPAG argues, directed at alleviating fuel poverty, that would make a significant difference to the argument about state resources. The probability of this happening is however regrettably low.

2 Summary of Findings and Proposals

1 KEY THEMES

2.1 The key themes of this Report are:

- It needs to be squarely recognised that, whilst there will be short term fluctuations up and down, relatively high and rising prices are likely to continue whatever the regulatory structure. But this can be significantly cushioned by new and intensified interventions by the Government and the Regulator – and different choices by consumers;
- Reduction in fuel poverty and decarbonisation of energy supply need to be considered as being equally important policy objectives as cost and security of supply;
- A far more substantial programme on energy efficiency is needed in NI; that programme should be treated as a priority part of infrastructure strategy and consolidated in its funding and coordinated in its delivery;
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- In the interim home heating oil should be included in the remit of the UR;
- Priority should be given to the consolidation of connections to the existing gas networks rather than major new projects;
- Development of renewable fired electricity generation (for heating) and networks should be focussed on the south and west of NI where natural gas networks will not be economically viable and may never reach;
- All forms of renewable, low carbon and decentralised energy should be encouraged but within a consistent and long term framework of incentive and support; and
- Although there are good arguments for significant parts of the required investment into changing energy infrastructure to be financed by the state it has to be recognised that in the present economic and political climate there is unlikely to be a significant increase in net state spending on energy investment in NI and that hence the costs of such investment will need to be met largely from revenue i.e. from domestic and business consumers.

- The UR should continue to encourage competition but recognise there are limits in a small market; price controls should remain; tariff structures should be developed that help reduce fuel poverty and reduce the use of energy.
- Government and regulatory structures need to be reviewed to give a clearer driver for energy policy formulation and regulation;
- The island of Ireland dimension for wholesale energy needs to be developed in gas as well as electricity; and
- The UR role should not be subsumed into Ofgem but NI's voice in energy policy at UK and EU needs to be enhanced.

2 THE BROAD BACKGROUND

2.2 The following is this Report's best informed assessment as to how NI should and if the right policies are adopted by the Government, the UR and industry is likely to develop over the next twenty years:

1. For most of that period natural gas will be the predominant fuel both for electricity generation and for domestic and commercial heating; but it is already a transitional fuel i.e. gas use will grow for most of the period but by the end of the period the balance will already be shifting to renewably sourced electricity;
2. There will be a single island of Ireland market for all forms of energy; and more substantial two way interconnectivity with both Great Britain and the RoI will play a major part in the energy mix;
3. There will also have been significant progress towards a North West European Supergrid for electricity but probably not completely integrated markets, regulation or control;
4. Heating oil will be reduced to a minimal residual role in providing heat to the domestic and commercial sectors and oil will be entirely eliminated from generation; and
5. Significant improvements in energy efficiency will have been achieved in the domestic and other sectors and thereby reduce aggregate energy demand relative to economic activity.

2.3 It is possible that there could be major changes that will alter these scenarios, for example, successful exploitation of shale gas and oil in Fermanagh; or a decision for an Irish nuclear plant; or an increase in state funding available for investment in energy and alleviation of fuel poverty. However this Report assumes none of those will happen. If any of them did so it would make significant changes to the recommendations.

2.4 The following sets out a summary of detailed recommendations under the various heads, identifying wherever practicable in each case:

- Strategic objectives;
- Immediate Measures (next 18 months);
- Short Term Measures (next three years); and
- Medium Term measures (next 10 years)

3 THE MARKETS

Heating Oil

Strategic Objective

The strategic objective should be to replace heating oil (and coal) as a feedstock and substitute pipelined natural gas or electricity as far as possible from renewable or low carbon sources

Immediate

In view of the failure of the Office of Fair Trading (OFT) Report on off-grid energy markets to differentiate the NI market effectively, DETI should conduct a new review of pricing, consumer protection and competition in the supply of heating oil in the NI market.

In parallel Trading Standards NI should be asked to actively investigate allegations of mis-selling and calibration distortions in the supply of heating oil to domestic consumers.

The supply of heating oil to domestic and business consumers should be included in the mandate of the UR to ensure adequate customer service and genuine competition in the sector.

In parallel the role of the Consumer Council to investigate complaints which operates in the gas and electricity sectors should be extended to the heating oil sector.

Short Term

The NI Executive should legislate a universally available system of saving for purchase of heating oil across NI; this could either subsume or complement existing schemes and be available throughout NI - administered either by local authorities or under contract via the Post Offices and its local outlets and through Credit Unions.

A pilot pay-as-you-go (PAYG) scheme for heating oil is due to take place in 2012 in NI. Given the reliance on emergency oil drums for many fuel poor households this is a welcome step as it should aim to reduce the price per litre paid by consumers. However, it is important this scheme identifies potential issues of ownership, theft and liability. At installation of a PAYG meter at the household, a full energy audit and benefit check could help further assist and identify fuel poor households.

In addition more local authorities, local businesses and local community groups could themselves set up as energy brokers in the oil sector – and potentially also for gas and electricity – using the larger market power to obtain better deals, which also gives the suppliers greater certainty of market demand.

The UR should be required to introduce a licensing system for supply of heating oil to ensure compliance with minimum standards of price transparency and customer service and a system for dealing with complaints.

One of the requirements of the licence should be a levy on sales so as to ensure the heating oil suppliers made an equivalent contribution to energy efficiency and alleviation of fuel poverty, as is made by the gas and electricity sectors.

The UR should also have reserved powers of price control in the heating oil sector.

Medium Term

It should be a clear strategic objective of policy and regulation over the medium/longer term to reduce radically the dependency of NI consumers and businesses on oil for heating purposes.

The strategy should be to reduce as far as possible heating oil dependence.

This should also be aimed at eliminating use of coal and peat for regular domestic (or commercial) heating.

Electricity

Strategic Objective

The electricity network should be modernised and decarbonised as far as practicable using renewable sources in Ireland, supplemented by increasingly low carbon energy imported from GB and RoI via the interconnectors.

Immediate

Price controls on retail electricity should, in principle, remain in place.

However there should be an urgent review of the way in which capital expenditure and the cost of capital is allowed for and charged with a view to shifting the burden of risk from consumers to the generators.

In view of the queries and allegations set out by Mr McIdoon and the Consumer Council there should be an independent investigation into the rewards to generators through the capital and financing aspects of the regulatory framework.

Short Term

The duration of overall price controls in electricity should, in principle, be extended to five year duration but there should be a change in the tariff structure.

There should be no change in the balance of costs between domestic and industrial/commercial.

The capacity for switching electricity suppliers should be increased and the ease of switching improved; switching should be costless to the consumer.

Medium Term

A Service Obligation (SO) element – similar to the new ECO in GB - should be introduced in NI to raise from domestic and small business consumers their contribution to social, environmental and energy security objectives – subsuming current arrangements such as NISEP.

This Social Obligation/ECO should be clearly identified and applied in proportion to energy use above a minimum threshold; users below that threshold should not have to pay the SO/ECO; the cost to consumers of the social and environmental expenditure should therefore be proportional to use and hence the tariff would become more socially progressive and incentivise energy saving.

Tariff structures should be further developed to encourage energy saving and energy conservation.

There should be no significant change in the balance between costs passed on to the domestic sector and the business sectors.

Natural Gas

Strategic Objective

Gas should be seen as the key transitional energy source for the next thirty years. The priority should be to consolidate as many households (and small businesses and public sector users) as possible onto the existing network and thereafter to extend the network and provide storage facilities only where it is clearly cost effective to do so.

Immediate

The top priority should be on the maximising of the number of connections to the existing networks in Greater Belfast and Larne and the Ten Towns. Incentives on both networks should be based on the number of connections.

Short Term

There should be further efforts to revive the stalled Common Arrangement on Gas (CAG) process of movement to an island of Ireland wholesale gas market.

Medium Term

Any extensions of the pipelines should be based on rigorous cost benefit; at present neither the western extension nor the major gas storage facility seem to be justifiable.

The cost benefit of a major facility for gas storage remains to be proven.

Gas and Electricity Tariffs and Methods of Purchase

Strategic Objective

A structure of tariffs in gas and electricity that reflects the policy objectives of affordability, reduction of fuel poverty, decarbonisation and energy security.

Short Term

Price controls on Phoenix Natural Gas (PNG) infrastructure and tariff reviews for Phoenix Supply Limited (PSL) retail gas prices remain in place but for the latter the review period should be extended to five years.

There should be no move to complexity in the range of tariff choice and tariff structures and no significant discrimination between ways of payment.

There should be encouragement of schemes for collective purchase of gas and electricity by communities.

Prior to radical restructuring of tariff structures there should be a mandatory requirement on supply companies in electricity and gas to provide a social tariff for those on defined means tested benefits.

Medium Term

Tariff structures should be developed beyond the current price review period that reflects the objectives of energy conservation and alleviation of fuel poverty. This requires a radical restructuring; as, for example, a first tranche at low non premium rate; and thereafter add surcharges proportionate to usage to contribute towards infrastructure, decarbonisation and social objectives.

4 THE STRATEGIC ISSUES

Affordability and Fuel Poverty

Strategic Objective

Fuel prices for consumers in NI are likely to continue to rise in the medium term: this needs to be offset by major changes in regulatory structures, substantial changes in fuel mix – particularly the elimination of dependency on heating oil – and substantial investment in energy efficiency in the home and in the supply of energy itself.

The aim remains the elimination of fuel poverty in NI. But there is now no chance of the 2016 target for the elimination of fuel poverty being reached; new targets and timescales need to be defined and set.

Immediate: (a) Definitional Issues

The inexorable rise of the numbers of households in fuel poverty to 44 per cent in NI and 19 per cent in England has led both governments to seek

a redefinition of fuel poverty. That is the wrong response. We should be concentrating more on better identification and more effective action for the key groups who make up the fuel poor.

The current definition of fuel poverty has been an accepted definition for some time. The reason for it now being queried is essentially political rather than scientific: the numbers are rising and large and targets unattainable so there is pressure to redefine the problem.

The misuse by the Department for Social Development NI (DSD) of Christine Liddell's very useful detailed work in NI to attempt a redefinition of Fuel Poverty in NI by focussing on those in the severest fuel poverty – 13 per cent in Christine Liddell's calculation – who would have to spend over 18 per cent of their income, cannot be seen as a redefinition of fuel poverty.

It is difficult to translate John Hills' formula for redefinition to the NI situation but it is unlikely that it would alter the figures quite so dramatically as in England (or the UK in total) because of the higher general fuel costs in NI and the lower incomes. Decisions on changed definitions will not alter the reality: fuel poverty is widespread and rising and it is worse in NI than elsewhere in the UK.

For the moment the conventional definition should be retained in NI; it provides historic continuity and an ability to compare across all four UK nations.

Immediate (b) Priority Action

Rather than attempting to redefine fuel poverty, policy and delivery should focus rapidly on those sub groups of the fuel poor who are: identifiable by location; are in a position where specific intervention can help or are in the severest household difficulty. These 'subsets' include:

By socio economic group:

- Those living in the areas with the highest percentage levels of fuel poverty on the current definition;
- Those who will always be off the gas network; and
- Those in the wards with the highest levels of multiple deprivation.

By household characteristic:

- Those in the severest fuel poverty;
- Those in houses with the lowest Standard Assistance Procedure (SAP) ratings (below 60); and
- Those with households members over 70.

Short and Medium Term

Strategies and programmes proposed below on energy efficiency, and on tariff structures should be prioritised on the above sub groups.

The measures outlined under energy efficiency should be geared towards the fuel poor in those sub groups.

Whatever the definition, all measures that involve direct contact with households likely to be fuel poor should also offer a full benefits check.

In the longer run it may be sensible to seek a new definition but that redefinition should be agreed at UK level and if possible at EU level.

Climate Change

The UK targets for reduction of Greenhouse gases (GHGs) and NI targets for the decarbonisation of electricity supply (40 per cent renewables by 2020) need to be reaffirmed as objectives of NI energy policy: this means reinforced efforts on energy efficiency and on renewables.

There is a strong imperative for industry in all sectors in NI and bodies like Invest NI and Enterprise NI to encourage research, development and investment in energy efficiency and renewable energy.

Energy Efficiency

Strategic Objective

A coherent and sustained intervention on energy efficiency delivering substantial reductions in energy use (per unit of GDP) by 2025

Immediate

In immediate terms the Boiler Replacement Scheme should be extended in timescale and scope and the ceiling raised (partly to allow for conversion from oil within near proximity to gas mains).

Similarly the Warm Homes Scheme should allow for full conversion where close to gas mains.

Short Term

Funding for existing interventions on energy efficiency of buildings and heating systems should be consolidated into one scheme set up by DETI and probably run by the UR.

There needs to be a major campaign to shift, where possible, households

away from heating oil and onto natural gas networks. For households who are beside the existing gas network the most important energy efficiency improvement would be connection to that network (or to renewable heat schemes).

Much of the delivery of an enhanced energy efficiency strategy will need to be delivered on area based interventions which should be identified and prioritised on the basis of the interaction between SAP rating and income.

The financing of the energy efficiency schemes should be derived from a combination of the levy on gas and electricity suppliers and a new levy on the heating oil distributers – the latter raised either on each distributing firm via a licence industry system or from the importer; and partly from the cross subsidy element of the tariff structure.

Medium Term

Energy efficiency should be seen as a major part of the infrastructure programme and judged on similar criteria for long term cost saving and carbon saving. That would result in a major shift from larger infrastructure to energy efficiency improvements.

On Smart Meters: DETI and the UR should require the matching of the GB commitment gas and electricity companies to install Smart Meters in all domestic users by 2020 (or other specified date), specifying a single model or at least single technical specifications for the smart meter.

However because of the unique nature of the NI market there would need to be a pilot trial before the full programme is rolled out.

A full Smart Meter programme would also provide the opportunity prior to installation for a complete audit of every household for energy efficiency - identifying problems of insulation, structure or heating systems or of use in each household. This would both form the basis of identification of Warm Homes or boiler replacement opportunities and other energy efficiency interventions; and also for householder financed improvements.

NI Departments should, in say two year's time, review the implementation and take up by consumers in GB of the Green Deal scheme there, and consider whether a similar loan based scheme - repayable via future energy bills and administered via financial institutions - would work for owner occupiers and landlords in NI.

Renewables and Decentralised Energy

Strategic Objective

Substantial decarbonisation by 2030 of the energy system in NI in both supply and use on track for near complete decarbonisation by 2050.

Immediate

The forty per cent target for 2020 for renewable consumption of electricity is ambitious for NI (and more ambitious than most in Europe) but it is achievable and should be explicitly reaffirmed.

Short Term

NI needs an urgent and full review of all incentives applicable for low carbon. All subsidies or cross subsidies need to relate back to a consistent price for carbon or carbon equivalent saved over time – probably related to the trajectory for a floor price of carbon (£16/tce and rising) already announced by the UK Government.

Decentralised energy should also be an arm of energy strategy and carbon savings and cost savings can be achieved with lower carbon technologies based on gas and electricity as well as renewables - in particular in relation to the provision of heat to both households and businesses.

Encouragement of Combined Heat and Power (CHP) and District Heating schemes should be a significant part of the mix. Planning permission for new residential or commercial estates requiring CHP/District Heating to be the first and preferred option. In some cases - particularly at the point of connecting existing estates to the gas grid – retrofitting should also be considered.

Medium Term

Up to 2020 the renewables' contribution will consist largely of onshore and offshore wind generation. The cross subsidy incentive for wind energy (mainly ROs) needs to be renewed beyond 2013: the whole subsidy/cross subsidy system for wind and other non carbon and low carbon technologies needs to be consistent and in place for a substantial period.

Foremost amongst other renewable to be encouraged are those that can use feedstock - mainly waste - from the province's substantial agricultural food and forestry sectors such as Biogas and Anaerobic Digestion - plus those that can utilise wave and tidal power which the island has in abundance.

Consideration should be given to developing a heat strategy, incorporating

some features of the Renewable Heat Incentive (RHI) but applying it also to low carbon technologies.

The island of Ireland is in a good position to be a leader in renewable technology – particularly related to wind and wave power; this should be a priority for NI's universities and industrial research budgets and in cross border cooperation.

Infrastructure Priorities

Strategic Objective

A central task of Government and the UR will be to continue to ensure resources for the appropriate infrastructure investment and maintenance.

The electricity network needs to be significantly modernised and upgraded and adapted to renewable sources. The gas network needs to be consolidated in the areas it serves. This means that the Greater Belfast and Larne area and the ten towns should have virtually all households on the gas network.

The north and west of NI would be served by increasingly decarbonised electricity and renewable energy also contributing in the east – requiring both west/east grid enhancement and greater interconnector capacity.

Short/Medium Term

A central task of Government and the UR will be to continue to ensure adequate resources for the appropriate infrastructure investment and maintenance. This infrastructure development and financing has to have a clear strategy and a narrative that is understood by consumers, business and local communities.

The most rational strategy in terms of economic cost effectiveness and environmental and social return would be to prioritise:

- Investment in energy efficiency;
- Consolidation of the existing gas networks in Greater Belfast and Larne and the ten towns (and thereby facilitating a switch out of oil) by connecting all domestic and commercial users within close proximity of the network;

- Clearing the financing and planning issues to speed up the North South Interconnector and planning new interconnectors with Great Britain and the RoI - with a view to moving to a North West European Supergrid; and
- Developing renewable resources for the electricity network to serve primarily the west and south of NI.

This would mean the down prioritising of the western extension of the gas pipeline.

Medium/Longer Term

Gas needs to be seen as the predominant fuel for the areas it serves probably for the next thirty years but it is a transitional fuel; in the long run there needs to be a move to non carbon sources of electricity for the whole of NI.

Decisions will be needed within a few years on whether there is to be any development of the potential shale gas fields (to which there are considerable environmental and carbon emissions objections); and likewise whether there should be a nuclear plant somewhere in Ireland. This Report assumes for the moment a negative answer to both - but a positive answer on either shale gas or nuclear would transform the supply situation; in the case of shale gas also endangering decarbonisation targets.

Regulation and the UR

Strategic Objective

A strong UR with responsibility for delivery of all aspects of energy policy and a coherent and clear long term framework

Immediate

The UR's remit should be extended to cover the supply of heating oil to both business and domestic consumers. Powers in this sector should cover competition and choice, transparency, customer service, the ability to impose mandatory Codes of Practice and an energy efficiency levy, and reserve powers of price control.

The remit also needs to be extended to incorporate more explicitly the environmental and social dimensions of policy (as well as energy efficiency) rather than them being seen as constraints on an essentially economic UR.

Short Term

There should continue to be a focus on competition and the encouragement of new entrants. But that has to be tempered with the recognition that in a market of this size there is a limit – admittedly not defined - on how much further competition can be developed.

Price regulation should therefore be maintained for gas and electricity and the UR should have powers to regulate heating oil prices.

However the time limits for price regulation should be extended to five years to provide certainty both to investors and consumers.

There needs to be a stronger role for the Consumer Council in the process of price determination and the UR's overall strategy.

Medium Term

Price regulation needs to move away from specific cost reflectivity in setting tariff structures and towards a tariff system which directs the market to policy objectives. The UR should devise and require tariff structures for the medium term that move broadly to a rising marginal cost per unit consumed, and not the reverse.

This is probably the most radical proposal in this Report but it is central to the strategy outlined; a start should be made by making the first tranche of usage exempt from payment towards cross subsidy and subsequently to make the cross subsidy element directly reflect usage above that level i.e. the more you use the more you pay.

5 MACHINERY OF GOVERNMENT

Strategic Objective

A clear coherent structure of government and regulation to drive all objectives of energy policy and provide the framework for long term investment and consumer expectations.

NI Departments

Strategic Objective

Energy Policy to be more focussed, coherent and authoritative - preferably under a single NI Department of Energy

Immediate

Consideration should be given to the creation of a single Energy Department for NI (or if that is not practicable all brought under DETI).

Short Term

The parliamentary oversight of energy policy in the Assembly may be most effectively served by having a single focussed Energy Select Committee.

UK, All Ireland and EU Dimensions

The all Ireland SEM should be developed further and progress made on CAG.

This Report does not support the subsuming of the NI UR into Ofgem

However NI Departments and the UR need to reinforce efforts to ensure that NI interests in energy are recognised by Department of Energy and Climate Change (DECC) and Ofgem and taken into account at EU Ministerial Council, European Parliament, EU Commission and Agency for the Cooperation of Energy Regulators (ACER) levels.

3 Northern Ireland's Energy Markets & Policy Framework

Market Features

3.1 NI is one of Europe's smallest energy markets. To an outsider used to the GB market and familiar with some continental markets it does appear to have a number of unique problems, complexities and peculiarities. Amongst these are:

Fuel poverty, by the usual definition, is the highest in the UK at 44 per cent of all households and rising;

For domestic users there is an overwhelming and nowadays unusual dependence on oil for heating – around 68 per cent and 82 per cent in rural areas; this is both expensive and high in carbon content;

Energy prices have usually been substantially higher for electricity than in GB and higher than the EU average; for most of the last decade this has also been true of gas;

Except for renewables, almost all energy feedstock is imported - at a cost equivalent to 10 per cent of NI's GDP;

The gas network is very underdeveloped serving only 15 per cent of households;

There is a relatively low level of competition and of switching by domestic consumers between fuels or between companies; and

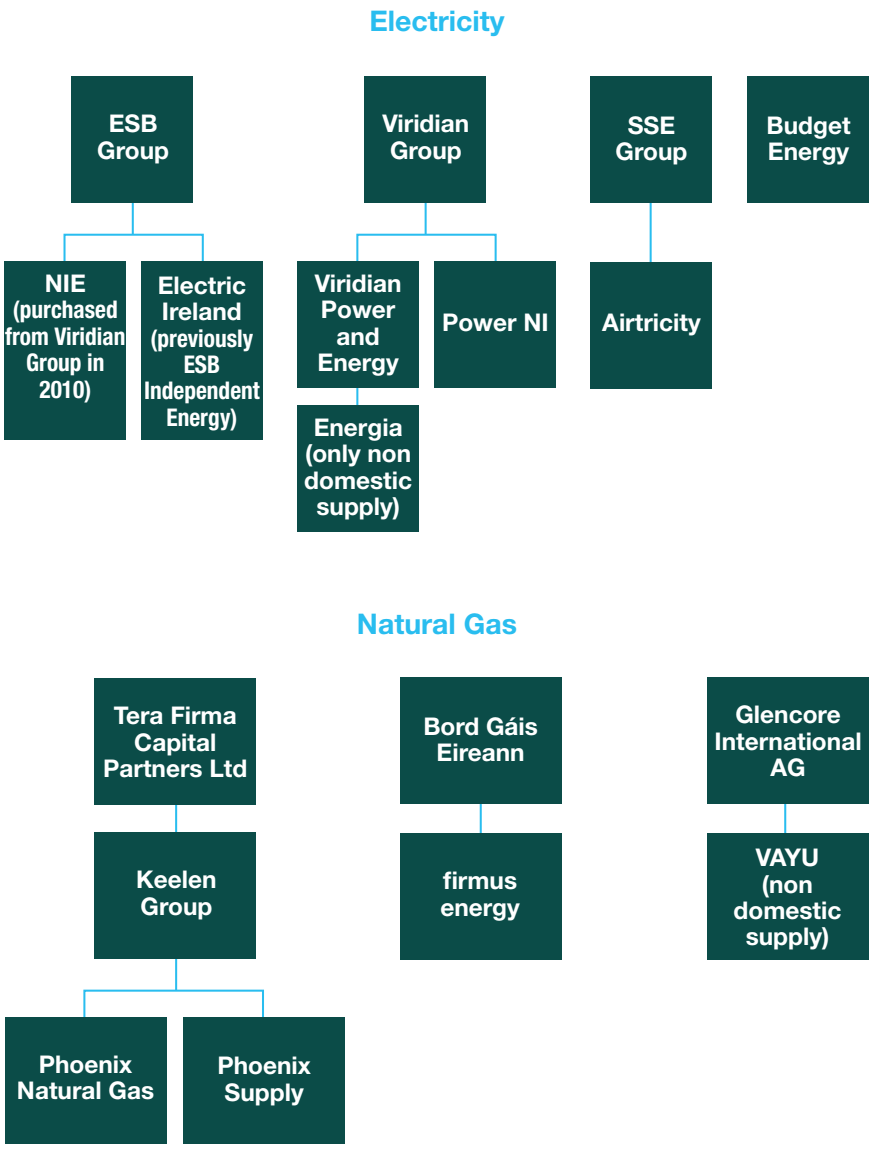
The potential for renewables - wind, biomass, wave and tidal - and the medium term policy targets set by the NI Executive (40 per cent of generation to be renewable by 2020) are significantly higher than for the UK as a whole or most EU economies.

3.2 There are also of course several features that are common to the NI and GB and other markets, amongst these being:

- There is widespread lack of consumer trust in energy suppliers in all markets and high levels of complaint;
- The target for renewables is very challenging and the cost of decarbonisation is being almost exclusively born by domestic and business consumers.

3.3 The ownership of energy companies is complex and almost all of the key industry players are owned outside NI.

CHART I
Structure and Ownership of Main NI Energy Companies



The Policy Framework

3.4 Energy policy in all countries has multiple objectives; principle amongst these are:

Security of Supply (i.e. the lights must not go out hence the system of supply must be resilient and the sources of feedstock secure);

Affordability and Equity (i.e. competitive prices for the commercial user and reasonable prices for the average domestic consumer whilst protecting as far as possible the most vulnerable or 'fuel poor'); and

Greening the Energy System (i.e. reducing the carbon/Greenhouse Gas content of energy both by switching to low carbon feedstocks and by increasing energy efficiency in production, distribution and use).

3.5 Often there is a clash or trade off between objectives and also the balance between these varies over time as market and political priorities change. The report makes some radical proposals about using regulation and price controls - and other interventions - to achieve the above objectives.

3.6 The UR for NI covers only gas and electricity in the energy field and hence not the largest domestic sector fuel – heating oil. In addition there is a single Island market for wholesale electricity, Single Electricity Market (SEM) with the RoI, with discussions also started on the prospect for an island of Ireland approach to gas development and regulation (CAG).

3.7 Energy policy is almost entirely devolved to the NI Executive with economic regulation provided by the UR, unlike in Scotland and Wales. However the market is also covered by EU Regulation and hugely influenced by GB markets and regulatory approaches but NI authorities are not directly represented at either level. NI is also affected by the energy market and by key players based in the RoI, most of whom also operate in the NI context.

3.8 The market is also influenced by many of the broader UK and EU policies, targets and regulations on climate change – principally those designed to decarbonise the energy sector. Moreover there is physical interconnection with the GB market and the RoI market. NI is therefore significantly dependent on policies and market conditions without much of an influence. These wider aspects mean that energy policy is not completely determined within NI and they have to be born in mind when considering the options for strategy: they represent both constraints and opportunities for new policy options.

3.9 There is a multiplicity of Government Departments plus the UR impinging on energy policy. Whilst Department for Enterprise, Trade and Investment (DETI) has

primary responsibility, in total there are eight NI Departments involved to some extent in energy policy formulation. This complexity exists in many countries but in a small market like NI it makes energy policy over complex. In Whitehall most – though not all - of the policy issues have, since 2008, been consolidated into one Department – DECC. That is not the case in NI.

3.10 Because of that multiplicity of Departments there is no single statement of energy policy covering all the objectives. The key ones referred to in this Report are :

- Energy: a Strategic Framework for NI: DETI publication in September 2010;
- Warm Healthier Homes: a New Fuel Poverty Strategy for NI: DSD March 2011; and
- NI Greenhouse Gas Reduction Plan DOE Feb 2011

All of this makes policy making somewhat complex and often piecemeal. There are some conclusions below on machinery of government and the remit of the UR at the end of this Report.

On the other hand NI is a sufficiently compact market and the number of players sufficiently limited to allow for the opportunity to establish a strategic long term policy; this Report is a contribution to that process.

4 The Markets

Prices and Fuel Mix

4.1 Over the past decade energy expenditure in NI has been higher in absolute terms and has risen at a significantly faster pace than in GB.

Table A
Heating Fuel Bills: NI and GB

	Average bill 2001	Average bill 2011	% increase 2001 - 2011
Northern Ireland	£768.55	£2,368.71	208%
Great Britain	£541.33	£1,258.09	132%
Difference	£227.22	£1,110.62	389%

Source: DECC, CCNI, Sutherland tables, Consumer Focus, Power NI, Phoenix Supply Limited, firmus energy

4.2 This differential in costs is long standing. But it is growing: according to Christine Liddell (in her recent excellent 2011 report on Defining Fuel Poverty in NI) in the sixties the differential was around 15 per cent: by 2003 it was 40 per cent; by 2008 it was 60 per cent. Thus consumers in NI – who on average have lower incomes than in Great Britain – have been paying more than in the rest of the UK (and slightly more than the western European average) for their annual fuel bills.

4.3 By far the most important reason for the higher figure in NI is the much heavier reliance on oil for space and water heating whereas the majority of households in the UK use natural gas for heating. The average expenditure on oil in NI is over twenty times the average in England whereas that on gas is less than one fifth. The disadvantage of that dependence on oil for heating and its effect on annual energy bills as compared to natural gas heating is illustrated in table below.

Table B
Relative Household Expenditure on Different Fuels
England = 100

	England	Wales	Scotland	Northern Ireland
Electricity	100	106	106	110
Natural gas	100	93	99	22
Oil	100	203	98	1,420
Solid fuel	100	769	588	2,458

Source: Christine Lidell, Defining Fuel Poverty in NI, a Preliminary Review, 2011

4.4 More recent rises in the price of gas, electricity and heating oil have continued that trend.

Table C
Recent NI Price Rises 2011

	Price rises 2011
Power NI regulated electricity price	+18.6%
firmus energy regulated gas price	+28.4%
Phoenix Supply regulated gas price	+39.0%
Heating oil average price (year)	+35.0%

Source: CCNI, Power NI, Phoenix Supply Limited, firmus energy

According to the Consumer Council's latest calculations incorporating the latest figures and the DECC statistics the average expenditure for an oil dependant NI household will be £2,365 pa compared to the highest dual fuel consumer in Great Britain (in Cardiff) of £1,175 i.e. twice as much. Only a small part of this could be said to reflect colder outdoor temperatures in NI.

4.5 This continued secular upward trend is due to a combination of global pressures, NI's logistic costs and relative lack of competition or choice of fuel, the short term cost of decarbonisation policies and the need to finance substantial new infrastructure. Over the last three years the pound price of a barrel of crude oil has risen by 152 per cent.

It needs to be squarely recognised that - whatever the short term fluctuations – the secular trend is that relatively high prices are likely to continue whatever the regulatory structure; however this trend can be significantly modified and cushioned by new and intensified interventions by the Government and the UR.

4.6 Just over two thirds (69 per cent) of consumers in NI are in the domestic sector, the rest from the industrial and commercial sectors. The make up of the fuels supplying that domestic demand is very different from that in the rest of the United Kingdom (UK) (oil -v- gas).

Table D
Breakdown of Expenditure on Fuel
Domestic Sector (2008)

	England	Wales	Scotland	Northern Ireland
Electricity	49	52	48	39
Gas	46	43	42	7
Oil	4	7	1	40
Solid fuel	1	7	5	14

Source: DECC Energy Statistics 2011

And in that domestic market the comparison of total expenditure between NI and the rest of the UK is stark.

4.7 This far greater dependence of consumers in NI on oil (and to an extent coal) for their heating needs is a major factor in the high rate of fuel poverty. This largely reflects the late arrival of natural gas in NI in 1996 – twenty years after coal gas disappeared.

4.8 There is also – usually though not always - a disadvantageous differential in the prices for electricity and often for natural gas in NI and GB. NI electricity prices have been generally higher for most users than in GB; however that depends significantly on the method of payment: direct debit and standard credit customers pay significantly more in NI but prepayment meter ('keypad') customers pay less than in GB – a reflection of the problem in GB where until recently – and still to some extent – prepayment meter users pay higher charges than others whereas in NI the opposite is true. Since there is a high concentration of lower income households using prepayment methods on both sides of the Irish Sea the NI position is more socially progressive. Nevertheless on average NI consumers pay more for electricity than in GB. For most of the last ten years the same was true for gas, although from 2009 until the latest 2011 NI regulated gas price rises in

NI, gas consumers in both the Greater Belfast and Larne and ten towns areas did enjoy slightly lower prices.

4.9 Under the devolved energy policy in NI the gas retail market and the electricity retail market are regulated, including on price, by the UR. Oil and coal are not regulated except in relation to general consumer, competition and safety law. High and rising prices in all sectors underline the need for a major campaign for energy efficiency – both in housing and other buildings and in industrial processes and transport.

Heating Oil

The Problems of Heating Oil

4.10 Heating – space heating and water heating - accounts for two thirds of domestic and about a half of industrial and commercial energy use. In NI, the fuel used for heating is predominantly heating oil – in contrast to the situation in GB (and most of western Europe). The lower figure for industry and commerce is simply because of the substantial concentration of enterprises in the Greater Belfast area close to the existing gas pipeline.

Table E
Heating by Fuel

	%
Domestic	**69%**
Oil	87%
Natural gas	9%
Electricity	2%
Coal	2%
Industrial and Commercial	**31%**
Oil	60%
Natural gas	29%
Electricity	2%
Coal	8%
Other	2%

Source: DETI Consultation on Gas Extension 2011

Not only is heating oil the most frequently used fuel in NI by domestic consumers – and indeed by the majority of business consumers particularly small businesses, agriculture and other rural businesses – but it is also the most problematical. Heating with oil is;

- The most expensive fuel;
- The most damaging for carbon and other emissions;
- The most prone to energy security concerns;
- The least regulated fuel.

4.11 The prime reason for the disproportionate dependence on fuel oil is obviously the lack of connection to the main gas grid in NI compared to GB:

Table F
Proportion of Population Off Gas Grid

	% of population off gas grid
England	12%
Scotland	21%
Wales	19%
Northern Ireland	80%

Source: OFT

4.12 Oil, is of course, also still a feed stock to electricity generation in one of the three power stations (Kilroot – a dual coal and oil station) and in decentralised site energy for industrial and agricultural applications. But this Report is focussing on its domestic and heating use because of its effects on prices and fuel poverty (and indirectly competitiveness) and on carbon emissions.

4.13 Moreover, the supply and pricing of heating oil has been subject to a number of consumer complaints and enquiries from householders and small businesses about price, customer service and competition. This is not surprising when one sees both the relative cost of oil as compared to gas heating and the escalation in that cost (and that differential) over recent years.

Table G
Average Cost of Heating Per Annum by Oil or Gas

	2011 pa	Change 2009/11
Old oil boiler	£1,648	62%
Old gas boiler	£970	-27%
Difference	£678	41%
Combi oil boiler	£1,347	61%
Combi gas boiler	£800	-27%
Difference	£547	41%

Source: Sutherland tables

4.14 Within those figures there is an additional regressive effect. The most cost effective way of buying heating oil is to fill up a medium tank three times a year with a 900 litre delivery. But many households cannot pay that all in one go and resort instead to buying smaller amounts more frequently. As prices have escalated there has been a tendency to scale right down – with the poorest families resorting to buying in 20 litre drums. The aggregate annual price for an average dwelling of these various ways of buying is substantial (and far greater than regularly supplied mains gas or electricity):

Table H
Annual Cost of Heating Oil by Size and Frequency of Fill

	£ per year
900 litres (3 fills)	£1,730
500 litres (5.5 fills)	£1,781
300 litres (9 fills)	£1,909
20 litres (137 fills)	£2,691
Annual natural gas	£595
Annual electricity	£588

Source: CCNI, Power NI, Phoenix Supply Limited, firmus energy

These are substantially higher costs for oil users and this contributes to high levels of fuel poverty in NI. Moreover there is little sign of the delivery companies helping their customers to manage their expenditure; a Consumer Council report found that only 63 of nearly 300 suppliers offered any form of budget plan.

4.15 Almost all heating oil in NI is delivered to three depots in Belfast and one in Derry with 70 per cent coming direct via the British Petroleum (BP) terminal. However it is distributed by around 200 different companies varying from one person/one tanker operations to large companies, the largest of which is DCC; and about seventy of which belong to the NI Oil Federation. On the face of it, although the import is a near monopoly the distribution looks highly competitive.

4.16 However, the Consumer Council has long been in receipt of complaints not only about the price but also about differential pricing, failure to stick to the price agreed and poor customer services. For example the price in Belfast (with large scale market and apparently substantial competition) appeared to be higher than in the countryside with fewer suppliers and more costly logistics. There was a price spike last year just at the point where customers were most vulnerable. Nor is customer service good. Attempts to set up an agreed voluntary code of practice for the sector have eventually started to progress but as yet have not been finalised.

4.17 Even more seriously were allegations about the calibration at delivery of a product that varies in volume according to temperature. In October, the Enterprise, Trade and Investment (ETI) Select Committee in Stormont expressed their concern about some of these alleged practices.

4.18 Largely because of these allegations varying from price fixing collusion, mis-selling to calibration irregularities the Consumer Council referred the heating oil sector to the OFT. In this they were supported by similar pressure from Consumer Focus on the off grid fuel market in the whole of GB as well as NI.

4.19 In hindsight it might have been better if the reference had been NI only. The OFT conducted a substantial inquiry which reported in October 2011. Broadly its conclusions were that there was some evidence of misinformation, non compliance with regulations and poor customer service but not of serious anti competitive behaviour. Gross profit margins were not found to be unreasonable. Nor did they advocate price regulation.

4.20 Unfortunately although some of the OFT analysis differentiated between the GB and the NI markets their conclusions did not. The CCNI have several criticisms of the OFT Report as it relates to NI. Only two of the 180 odd suppliers identified by OFT replied to the questionnaire. OFT wrongly asserted that there were 10 suppliers in all post code areas of NI, whereas there are far fewer in many districts and only one in one district council area. And they were unable to identify why substantially different prices occurred in different places. The logic appears to be that there is wide competition in NI and slightly lower prices generally than in

GB – that is to be expected with a dominance of oil in the market in NI (whereas the market in England is sparse and almost entirely rural); but by the same token prices should therefore have been better, collusion not suspected because of competition and customer service better for the same reason. None of that appears to be the case.

In view of the failure of the OFT Report to differentiate the situation in the NI market effectively, DETI should conduct a new review of pricing and competition in the supply of oil heating in the NI market including the oil supply chain.

In parallel, Trading Standards NI should be asked to actively investigate allegations of mis-selling and calibration distortions in the supply of heating oil to domestic consumers.

4.21 There have been a number of initiatives, starting with self help groups, charities and churches, to try to help households manage their accounts by saving through stamps or voucher schemes and similar arrangements. In about half of local authority areas there are now such schemes operating. But the take-up has not been high and there are anxieties about energy security. There has been little attempt to extend this cooperation to collective purchasing contracts. More support from the NI Executive and from local authorities is needed.

The NI Executive should legislate a universally available system of saving for purchase of heating oil across NI; this could either subsume or complement existing schemes and be available throughout NI - administered either by local authorities or under contract via the Post Offices and its local outlets and through credit unions.

A pilot pay-as-you-go (PAYG) scheme for heating oil is due to take place in 2012 in NI. Given the reliance on emergency oil drums for many fuel poor households this is a welcome step as it should aim to reduce the price per litre paid by consumers. However, it is important this scheme identifies potential issues of ownership, theft and liability. At installation of a PAYG meter at the household a full energy audit and benefit check could help further assist and identify fuel poor households.

Some concerns have been raised that consumers using the PAYG heating oil scheme will have to pay more per litre for oil - than if they bought larger fills - to offset the investment and risk factors. In NI consumers using PAYG for natural gas and electricity receive a discounted tariff. With the high reliance on heating oil and high levels of fuel poverty here a discounted PAYG tariff for home heating oil could be seen, in part, as a contribution to reducing fuel poverty by the oil industry.

In addition more local authorities, local businesses and local community groups could themselves set up as energy brokers in the oil sector – and potentially also for gas and electricity – using the larger market power to obtain better deals which also give the suppliers greater certainty of market demand.

Heating Oil Regulation

4.22 More fundamentally than issues of market abuse there is the anomaly of the largest single sector of energy for heating being outside the scope of the UR and outside the effects of policies designed to reduce carbon and improve energy efficiency and reduced fuel poverty. So far the UK, NI and RoI Governments have resisted economic regulation of the oil sector – although the 2011 DSD report on A New Fuel Poverty Strategy for NI does support regulation and levy for the oil sector (para 1.18). The OFT Report itself did at least recognise that 'it is an oddity of the NI market that the most common household fuel, heating oil, is unregulated...' whereas much less used natural gas is regulated.

The supply of heating oil to domestic and business consumers should be included in the mandate of the UR to ensure adequate customer service and genuine competition in the sector, and to ensure that the sector is treated in the equivalent way to gas and electricity so that it contributes to objectives of public policy including alleviation of fuel poverty and reduction of carbon emissions.

The UR should be required to introduce a licensing system for supply of heating oil to ensure compliance with minimum standards of price transparency and customer service and a system for dealing with complaints.

One of the requirements of the licence should be a levy on sales and/or importers so as to ensure the heating oil suppliers and importers make an equivalent contribution to energy efficiency and alleviation of fuel poverty as is made by the gas and electricity sectors.

The UR should also have reserved powers to introduce price controls in the heating oil sector if it is clear that competition is not delivering the best prices and customer service.

4.23 Over the medium term a sustainable energy framework needs the radical reduction of dependency on heating oil to be the aim for social, economic and environmental reasons – the reduction of fuel poverty, and of fuel prices generally, the competitiveness of industry in NI and the contribution to the reduction of GHGs. This is a long term programme – probably over fifteen years - but it needs to be made clear that is the direction and for it to be started now.

It should be a clear strategic objective of policy and regulation over the medium/ longer term to reduce radically the dependency of NI consumers and businesses on oil for heating purposes.

4.24 There will be some rural locations where alternatives to oil heating even over that timescale will not be achievable, although even in the most rural areas where no gas pipeline or renewable source is ever going to reach it would be beneficial in both cost and carbon terms to use liquid gas rather than kerosene or other heating oil. There would of course be some remoter rural locations where

neither pipeline nor renewable electricity would reach – but even there it would be better in carbon, safety and cost terms to use LPG cylinders, or biomass or wood pellets for heating purposes rather than oil.

The strategic objective should be to replace heating oil (and coal) as a feedstock and substitute pipelined gas or renewable sources.

Coal and Peat

4.25 The use of coal in domestic heating has remained quite high in rural areas particularly but also in central Belfast. It had been gradually diminishing but with rising oil prices there has been some reversion to use of coal (and to some extent peat) in both rural and urban areas. From the point of view of carbon reduction coal is as undesirable as heating oil – both in terms of carbon content and other emissions. In a medium term strategy it should be possible to eliminate coal for all regular use. A coal fire at Christmas might survive but not regular use. In rural areas various forms of biomass would be preferable and usually in the medium term cheaper than either coal or peat.

The strategy to reduce as far as possible heating oil dependence should also be aimed at eliminating use of coal and peat for continuous domestic (or commercial) heating.

Electricity

Electricity Supply

4.26 The wholesale electricity market is operated on an all island basis by the SEMO mechanism jointly between NI and the RoI URs. Generators above 10 MW and the Interconnector operate under SEM licence. The Systems Operator for NI (SONI) is also regulated under licence.

4.27 There are three NI based power stations:

Table I
NI's Power Stations

Generator	Size	Fuel source	Owned by
Ballylumford	1.2 MW	Natural Gas	AES (US)
Coolkeragh	0.5 MW	Natural Gas	ESBIE (RoI)
Kilroot	0.6 MW	Coal or Oil	AES (US)

Electricity is also imported via the Moyle Interconnector to Scotland operated by Mutual Energy (a cooperative) importing up to 500 MW (and exporting up to 80 MW); there is also an Interconnector with the RoI which is part of the SEM system, plus two small balancing standby interconnectors between NI and the RoI allowing NI Electricity (NIE) and Electricity Supply Board (ESB) to provide emergency assistance. There are smaller generators using renewable sources – wind, biomass and hydro. In total just over nine per cent of electricity is currently supplied from renewable sources and CHP, of which four fifths is from wind. It is the Government's target for renewable sources to reach 40 per cent by 2020, mostly through onshore wind generation.

4.28 The grid is operated by SONI and the transmission and distribution assets are owned by NIE (ultimate owners: previously Viridian, now ESB).

4.29 There are about 825,000 users of electricity from the grid of whom 92 per cent are domestic consumers. However, by consumption domestic households only account for 36 per cent, with small industrial and commercial users accounting for a further 42 per cent. The retail market is also dominated by the previous incumbent Power NI - then Viridian owned and formerly called NIE Energy and now Power NI. Until recently there was no competition in the domestic electricity market and only a small amount in the industrial market from Energia (also Viridian owned). However competition has now opened for domestic consumers with Airtricity (owned by Scottish and Southern) entering the market in 2010 and Budget Energy and Electric Ireland in 2011.

Electricity Prices and Bills

4.30 The average annual domestic electricity bill in NI is now £588 per annum (based on Power NI's average consumption and standard credit tariff). However, this average figure is misleading since it ranges from households who are virtually totally dependent on electricity and it also covers the majority of households - who use heating oil for all heating and some cooking purposes, and dual natural gas/ electricity households. Domestic consumers pay in a number of ways:

- Standard Credit;
- Direct Debit; and
- Key Pad/Prepayment meter

But for regulation purposes the market is simply divided into domestic credit and domestic key pad. About 36 per cent of domestic consumers are in the keypad sector (compared with 20 per cent in GB) and the rates are considerably more favourable for prepayment (keypad) customers relative to other forms of payment

than they are in GB. Whereas prices for direct debit and standard credit are higher than in GB, those for prepayment keypad are lower than in GB.

4.31 Obviously competition and switching are pretty new features of the market and so far over 90 per cent have remained with the previous incumbent Power NI and over three quarters of consumers have never thought of switching between suppliers. The UR just recently has increased the capacity for consumers to switch from 7,500 to 9,000 per month and this should become unlimited later this year under the project Enduring Solution. However, these are early days for open competition in the sector. The market share of domestic consumers in 2011 in terms of numbers was:

Table J
Domestic Electricity Market Shares 2011

	000s	%
Power NI	688	92.0%
Airtricity	56	7.5%
Budget Energy	0.4	0.5%
Electric Ireland	0.2	

Source: Utility Regulator

Electricity Regulation and Competition

4.32 The retail market is operated under a price control tariff review system run by the UR setting Power NI prices every three years; competition has to match those prices. According to the UR the cost breakdown of annual domestic electricity bills in the regulated electricity market averaged over the past ten years:

Table K
Breakdown of Electricity Annual Average Bills 1999/2010

	% of Bill
Generation costs	65%
Use of system	20%
Public service Obligation	2%
System support services	2%
Supply costs	7%
Correction factor (net)	4%

Source: Utility Regulator

Hence nearly two thirds of consumer bills are a return to the generating company.

4.33 The regulation process is a complicated one of checking allowable costs in all areas of the chain and then allowing for a margin. The Consumer Council is consulted on the methodology, although the UR does not have to take the Consumer Council's views into account.

4.34 The formulas used in the UR's calculations are complex and in general are regarded as robust and have not been challenged fundamentally. However, a major dispute is arising over the cost of the largest element – the return to the generators. This is about how the costs and returns to the generators are justified, with questions about historic allowance for capital and for finance and the interplay between them, raising questions of whether the balance of risk is appropriate for domestic and business consumers relative to virtually nil risk for the generators.

4.35 This crucial querying of the process goes back to 2008 when the then UR asked one of his predecessors, Douglas McIldoon, to look at the system following some particularly controversial price rises. As well as commenting on the episodic price allowances, Douglas McIldoon made some general fundamental criticisms about the way the generators are rewarded and pointing to what he saw as fundamental flaws in the process resulting in all consumers paying too much and they have continued to do so. The UR and the industry rejected these assertions. In the intervening period this issue has not been resolved. Over the past few months several parties have urged a fresh look at the McIdoon analysis. In January 2012 the Consumer Council issued a public document (Consumer Council Analysis of the McIldoon Report: Orphans in the Energy Storm) arguing for revisiting the McIdoon thesis and for a new approach.

4.36 The argument is complex and relates back to how the generators' costs are rewarded under the SEM. McIldoon argues that the generators have gained excessively in two main ways: from allowance for the cost of capital in excess of what they, as relatively risk free companies, would in reality have to pay; and because of the capacity payment calculations which are based on a different kind of risk insurance; in a sense consumers are paying twice. In both cases he argues that it is consumers, not the generators, who in reality are taking the risk; the system removes risk from the generators. He also argues that renewable generators benefit even more because they get the price determined by the fossil fuel generation costs without having to incur them; and that consumers in NI are probably unfairly incurring these costs relative to consumers in the same market in RoI.

4.37 These are disturbing assertions and it is difficult to make a retrospective judgement let alone a prospective one. But the relative profit levels of the generators - relative that is both to other directly price regulated companies in the NI electricity system and to the generality of companies based in NI - do seem to suggest that the companies may be getting an over favourable deal - with consumers bearing the bulk of the risk.

Table L
Profit Levels in NI Electricity Companies

Type	Company	Profit margin 2011
Conventional generating companies	AES Ballylumford	26%
	AES Kilroot	28%
	ESB Coolkeeragh	30%
Renewable generating companies	Scottish Power Renewables	49%
	Airtricity	14%
Average generating companies		29%
Other electricity companies (price regulated)	NIE	11%
	SONI	4%
	Viridian Group	2%
Top 100 companies average		4%

Source: Top 100 companies, CCNI

At the very least this suggests that there are prima facie indications of something needing further investigation.

There should be an urgent review of the way in which capital expenditure and the cost of capital is allowed for and charged with a view to shifting the burden of risk from consumers to generators.

In view of the queries and allegations from Mr McIldoon and the Consumer Council there should be an independent investigation into the rewards to the generators through the capital and financing allowances in the regulatory process.

An Island of Ireland Dimension

4.38 Having an island of Ireland wholesale market and regulation should bring significant consumer benefit. However it is not yet clear whether consumers in NI are yet receiving the full benefit, or as great a benefit as those in the RoI.

Eventually a single retail island of Ireland regulatory framework would bring greater benefits – but only if the issues of equity and the appropriate sharing of risk is addressed.

Natural Gas

Gas Supply

4.39 Natural gas is a recent fuel source in NI arriving in 1996. All natural gas both for feedstock for two of NI's electricity generator at Ballylumford and Coolkeragh and for the pipelines connecting to households and business comes via the Scotland and NI Pipeline (SNIP). There is an arrangement for emergency (only) for gas to come via the Scotland Dublin North/South pipeline in emergencies; but there is effectively no storage facility.

4.40 Natural gas ought to provide NI households and businesses with a fuel that is cheaper, cleaner, more fuel efficient, safer and less carbon intensive than the heating oil alternative. As a heating fuel it is also cheaper than electricity. Yet gas is a minority fuel in NI. In GB around 95 per cent of properties are connected to the gas network; in NI the figure is still only about 15 per cent. Compared to over 800,000 domestic electricity customers there are only 136,000 domestic gas customers. There are three main reasons for this:

The relatively small geographical coverage of the two existing networks: the PNG network in Greater Belfast and Larne and the ten towns network run by firmus energy; The high cost of connection of properties to those pipelines and

conversion from oil or coal to gas heating systems – on average around £3,000, and; The legacy of suspicion of gas as a hangover from the coal gas era with memories of poor performance, safety issues, smells and poorly operated district heating systems.

4.41 In Greater Belfast and Larne and in the ten towns there are 118,000 domestic connections and a further 18,000 small businesses. But there are still scores of thousands of properties within a few hundred yards of the existing gas mains network, and about the same within two miles. Even at the present level of connections annually there will still be thousands unconnected in ten years time.

4.42 It is argued below that the first priority for gas infrastructure investment should be the connection of those properties to the existing network and thereby making it economic to convert from oil heating to gas heating. This would also reduce over time the average price of gas to the existing consumers in the medium term as it would allow lower unit network charges as costs are spread across a wider base.

Table M
Potential for Consolidation of Existing Network Areas

Domestic	Phoenix - Greater Belfast and Larne	firmus energy - ten towns
Connected	128,000	10,000
Potential	300,000	90,000
Shortfall	*172,000*	*80,000*

Source: Utility Regulator

This connection programme needs to involve expenditure which will reduce the cost of conversion out of oil for households and businesses. It would not prevent choice but would make it economically crazy to stick with oil. It will also need leadership by example and advocacy from public authorities, medium and large business and the NI Housing Executive (NIHE) and other large residential landlords.

4.43 The potential for more than very limited extensions to the pipeline networks is limited and it would be costly. The cost of the proposed western extension is put at £178m; the cost of consolidating the existing network areas is much less. Even if both consolidation and a western extension were to be completed there are probably 300,000 who could not economically be connected to the network.

4.44 The most difficult decision will be on the proposed major western extension of the gas pipeline from two branches; Portadown to Magherafelt and Enniskillen or Derrylin plus a further extension from the northern branch of the existing pipeline from Derry/Londonderry to Strabane. Also under consideration is an extension to East Down. Ministers are in principle committed to the western extension – at an estimated of cost of £178m. The UR estimates this at about an average 2.3 per cent on annual gas bills. This estimate however excludes the cost to households and businesses in connection charges and costs incurred by the households themselves.

4.45 The reality is that because of the sparseness of population and the distances involved the extension would be within reach of only a small proportion of the dwellings and businesses in the west and north of NI and even of those within a relatively close proximity to the proposed pipeline only 70 per cent are likely to connect. Of the two sets of assumptions in the consultative paper on the western extension (Fig 2 p12), Business Model 1 results in under 8,000 connections and Business Model 2 just over 31,000 (DETI: Consultation on the potential for extending the gas network in NI: 2010).

4.46 This maximum figure of 31,000 compares to a total of over 400,000 not within reach of the existing networks – and virtually all of those are connected to the electricity grid. Moreover, the Net Present Value (NPV) of the western extension project is only positive if taken over a forty year time horizon with favourable discount rates. But natural gas is a transitional fuel. By 2030 it is likely that cost and prices will be equalled by renewable electricity and that demand for natural gas will have turned down. That is not to say that there would not be some advantage to those western consumers connecting in the early years. But their interests are better served with prioritising the western parts of the grid upgrade and its connection with renewable sources of electricity for heating as almost all premises will already be connected to the electricity network.

An Island of Ireland Dimension

4.47 Unlike electricity there is not yet a wholesale island of Ireland natural gas market or regulatory framework. If developed and properly functioning a common market framework should bring down prices over the medium term. Discussions on the Common Agreement on Gas (CAG) seemed to be making little progress and some say have stalled badly. However, the two URs (i.e. the NI UR and the Commission for Energy Regulation from the RoI) issued a joint statement in February recording discussions so far focussing on compliance with the EU Second Package. It also did reintroduce a bit of a sense of urgency but no clarity of clear medium term objective.

Efforts need to be made to accelerate those CAG discussions to move towards common regulatory assumptions and eventually to a common pipeline and interconnector system for wholesale gas.

Security of Supply

4.48 At present all natural gas comes via the SNIP pipeline run by Mutual Energy. It is vulnerable to sudden interruption for whatever reason. If there were a fully operational North South gas pipeline the vulnerability reduces. Because of total dependence on imports of natural gas through the interconnector and concerns about possible disruption of supplies through the interconnector - for whatever reason - the NI Executive in the Framework also identified the need for substantial gas storage and a project costing an estimated £280m is included in the Strategy, again to be paid for through consumer bills.

The cost-benefit of such a large facility for gas storage needs to be proven.

Gas Prices and Bills

4.49 According to the UR's Annual Report on average over the past ten years gas Bills have been made up as follows

Table N
Breakdown of Annual Gas Bill; 1999/2010

	% of Bill
Wholesale gas purchases	56%
Transmission costs	9%
Distribution costs	29%
	94%
Supply operating costs	6%
Margin	1%
Adjustments (net)	2%

Source: Utility Regulator

Apart from the brief period 2009/11 gas prices in NI have been generally higher than in Great Britain. This primarily reflects distance. The majority of gas consumers in both areas (65 per cent in Phoenix; 85 per cent in firmus area) pay via prepayment meters. The terms seem appropriate and provide consumers with convenience for households in managing bills and security of income to the companies.

Gas Regulation

4.50 Irrespective of whether there is substantial extension of the networks there needs to be an assessment of whether the networks should be combined into one and/or provide for the entry of other companies in wider competition at the retail end. At present there is no competition for domestic supply in the ten towns area and only very limited competition for domestic supply in the Greater Belfast and Larne area. There are slightly more competitors for the business market. However, there is little prospect for a major expansion of competition. Even so, there needs to be some investment in a potential switching system for gas consumers.

Payment Methods for Gas and Electricity

4.51 Price and choice should not be distorted by system of payment. The availability of different payment methods to NI consumers and the relative equity between them is better than in GB where – at least until very recently and still to some extent – prepayment meter consumers were at a systematic disadvantage.

In devising more tariff options companies and the UR should not jeopardise the broad equity between payment methods, or should they move to the kind of complex tariff structure that operates in GB.

Allowance also needs to be made for ensuring the financing of the proposed single pot on energy efficiency and built into the forward trajectory.

Allowance for energy efficiency measures and for promoting renewables and otherwise speeding up decarbonisation of energy need also to be separately identified in price control settlements. They also need to be explicitly identified on consumer bills.

A Service Obligation (SO) element – similar to the new ECO in GB - should be introduced in NI to raise from domestic and small business consumers their

contribution to social, environmental and energy security objectives – subsuming current arrangements such as NISEP.

This SO/ECO should be clearly identified and applied in proportion to energy use above a minimum threshold; users below that threshold should not have to pay the SO/ECO; the cost to consumers of the social and environmental expenditure should therefore be proportional to use and hence the tariff would become more socially progressive and incentivise energy saving.

More radical medium term proposals for the role of regulation and the UR are spelt out under the section on Machinery of Government.

5 The Strategic Issues

Key Issues

5.1 The more immediate and medium term problems of the NI energy situation can be divided into three groups broadly in line with the three objectives of energy policy set out previously:

Issues of Affordability: escalating prices for consumers (and business) creates escalating fuel poverty;

Issues of Energy Decarbonisation: greening the energy system to mitigate and adapt to climate change - from generation to energy efficiency and conservation by final users;

Issues of Infrastructure: strategic priorities and funding for investment in gas and electricity networks, alternative energy and supply chains;

Issues of Regulation: how the role of the UR and regulatory framework might change to deliver these wider policy objectives.

Subsequent sections are written so as to differentiate these four strands but in reality they are all cross related and interdependent. It is important that synergies rather than conflict and trade offs are found so that the energy system becomes more sustainable in economic social and environmental dimensions; at the moment it is unsustainable on all three dimensions.

Fuel Poverty Figures

5.2 Changing the fuel mix and measures on energy efficiency will in part offset the likely medium term rise in average energy costs and prices. However there will still be the crucial issue of the distributional impact of fuel prices on the most vulnerable households – those in fuel poverty. NI's level of fuel poverty is by far the worst in any part of UK and Ireland.

Table O
Proportion of Households in Fuel Poverty (Conventional Definition) 2009

	2009
England	13%
Wales	26%
Scotland	33%
Republic of Ireland	19%
Northern Ireland	44%

Source: DECC, NI House Condition Survey 2009, RoI Energy Statistics

5.3 NI does a full assessment of the level of fuel poverty every three years (shortly to be reduced to 2 years but with a less robust sample base in size and detail) so the level and the differential is almost certain to be larger by the 2012 assessment – approaching 50 per cent. Vulnerable groups are most at risk from both fuel poverty and its consequences in terms of health and wellbeing: fuel poverty levels in NI rise to 53 per cent for households with at least one member between 60 and 74; and to 75 per cent for households with a member over 75.

5.4 The effects of fuel poverty on health and wellbeing, particularly on the elderly, children and vulnerable households who cannot afford to heat their homes to a recommended level, have been well documented. In NI in 2009/10 there were over 944 excess deaths ascribable to the cold winter and there are significant effects on the level of respiratory, rheumatic and heart disease.

5.5 As in the other countries of the UK, NI adopted a target to eliminate fuel poverty by 2016, although in NI this was a 'voluntary' target, not a legislative one as in the other countries.

There is now no chance of the 2016 target for the elimination of fuel poverty being reached. New targets need to be defined and set.

The total number of fuel poor needs to be broken down into target groups and realistic targets for policy interventions and reductions in fuel poverty need to be adopted.

5.6 As in GB hitherto the main source of funding for help to the fuel poor, whether via cross subsidy or a charge on supply companies – has directly or indirectly been met by other domestic consumers. NI has an acute problem about who meets the costs of such interventions because any cross subsidy is much more difficult to defend to other consumers when fuel poverty has reached nearly 50 per cent

- as in NI - than it is when only less than one in five are fuel poor as in England. Any direct or indirect cross subsidy has to be met by the other half of consumers – many of whom are only just above fuel poverty levels and all of whom also already face escalating costs.

5.7 Departmental responsibility for tackling fuel poverty rests with DSD rather than DETI. It is therefore seen as part of a social strategy rather than part of an energy strategy. The DSD drew up a consultation paper in March 2010 and, on the basis of that, issued in March 20011 A New Fuel Poverty Strategy for NI. That Strategy groups 18 actions to address fuel poverty under four headings:

1 **Targeting Resources** including a new definition and a severity index for targeting;

2 **Improving Energy Efficiency** including a 15 per cent increase in numbers treated under the Warm Homes Scheme, a Boiler Replacement Scheme, improvements in social housing, and more powers for Local Authorities plus assessments of possible schemes for Energy Performance Certificates, Equity Release, and Smart Meters;

3 **Achieving Affordable Energy** including support for savings and brokerage schemes and evaluation of energy efficient technologies;

4 **Building strong Partnerships** including looking at area based interventions ('the Kirklees model').

Some of these initiatives have been actioned or started and are cited below - but resources have been limited and meanwhile there has been little improvement and overall numbers have gone up further.

Concept and Definitions of Fuel Poverty

5.8 We need to make a lengthy diversion to consider potential changes to definitions of fuel poverty.

5.9 There have been arguments in NI (as in Whitehall) that fuel poverty is simply an aspect of general poverty in the population. This Report rejects that approach. Fuel poverty is indeed about income levels but it is also crucially about energy pricing and housing conditions: it will not be tackled simply by general anti poverty strategies. In NI the DSD commissioned Christine Liddell to look at the definition of fuel poverty. This mirrored what was going on with the Coalition Government in Westminster. The inexorable rise of the numbers of households in fuel poverty to 44 per cent in NI and 16 per cent in England has led both Governments to seek a redefinition of fuel poverty. That is the wrong response.

Rather than attempting to redefine the fuel poor there should be a concentration on cross departmental efforts to establish a better identification of groups of the fuel poor that can be targeted and more effective action to help those groups.

5.10 This is not to say that the current definition is entirely robust. The definition adopted by the UK Government in 1999 and subsequently by the devolved administrations, is based on the earlier definition and defines a household to be in fuel poverty if they would need to spend more than 10 per cent of income on maintaining a satisfactory heating regime. There are assumptions behind this definition which have been queried e.g. what is a satisfactory heating regime (usually defined as 21 degrees in the living room and 18 degrees in the bedroom); it is rightly based on 'required' expenditure not actual expenditure; and 10 per cent (originally based on twice the then level of actual expenditure) may be seen as an arbitrary figure. There are also efforts to draw up a common European definition.

Nevertheless the current definition has been an accepted definition for some time. The reason for it now being queried is essentially political rather than scientific: the numbers are rising, and large and targets unattainable so there is pressure to redefine the problem.

Nor is it to say we could not improve the definition. Both Christine Liddell for DSD in NI and Professor John Hills for DECC have produced forensic analyses of the definition and alternatives to it.

However the misinterpretation by DSD of Christine Liddell's very useful detailed work in NI to attempt a redefinition of Fuel Poverty in NI by focussing on those in the severest fuel poverty – 13 per cent in Christine Liddell's calculation – who would have to spend over 18 per cent of their income cannot logically be accepted as a redefinition of fuel poverty. The high and rising NI figure for fuel poverty simply reflects that prices are higher and average expenditure higher (and ignores the fact that incomes are lower) in NI than in GB. Attempting to redefine fuel poverty will not improve the situation for one single household in NI; nor does it make alleviation measures any easier to implement by attempting to redefine fuel poverty.

5.11 For Whitehall, Professor John Hills' analysis goes through the advantages and disadvantages of the current definition and comes up with an alternative: that alternative is based on a 'low income high costs' analysis which in effect would exclude those who were richer but in low efficiency accommodation and those who were poorer but in energy efficient buildings; there are a number of other changes such as treatment of housing costs. The Hills' alternative definition would reduce the number of households defined as being in fuel poverty in England from 3.9 million to 2.7million. It is still a big number and rising and it still shows little progress since 1996; because it is less sensitive to prices it also shows less of a dip in numbers to 2005 and less of a rapid subsequent rise. As Professor Hills' report shows it still leaves a massive problem in England.

The application of John Hills' formula for redefinition to the NI situation is difficult but it would probably not alter the figures quite so dramatically as in England (or the UK in total) because of the higher general fuel costs in NI and the lower incomes.

5.12 One trouble with both the old definition and the proposed new Hills' formula (or indeed the 13 per cent derived for the severest fuel poor in NI) is that the definition was essentially statistical and difficult to operationalise - i.e. they do not immediately identify those actual households who fell into that category. Instead analogues have been used for policy interventions in NI as elsewhere. Those proxies have mainly been based on entitlement to particular benefits. This is a bit hit and miss – particularly since it includes non means tested benefits like pensions and disablement entitlement – neither of which are necessarily an indication of poverty although they may be an indication of need for warmth.

5.13 An alternative proxy has been to look at the physical state of the dwelling. This would base priority on the standard of energy efficiency of the building - the estimated SAP rating. This makes sense but SAP ratings are generally not available for all individual identified dwellings but a general rating for that age, area and type of architecture. Again a bit hit and miss. Hills does also come up with another form of measure – the Fuel Poverty Gap. This might, with a bit more work, be a more promising concept measuring the depth of fuel poverty in aggregate; and could notionally do so for individual households thus establishing some form of priority.

5.14 Fuel poverty really requires a three dimensional graph with axes on household income, on energy prices and on the energy efficiency of the building. Intervention measures need to tackle all three dimensions. It would be desirable if any new approach could be more easily operationalised to identify actual households or at least terraces or blocks of buildings.

Decisions on changed definitions will not alter the reality: fuel poverty is widespread and rising and it is worse in NI than elsewhere in the UK and Ireland.

For the moment the conventional definition should be retained in NI; it provides historic continuity and an ability to compare across all four nations.

Policy and delivery should focus rapidly on those sub groups of fuel poor who are: identifiable by location; are in a position where specific intervention can help, or, are in the severest household difficultly.

These 'subsets' could be based on socio economic criteria or individual household characteristics. For example:

By socio economic characteristic

- Those districts/wards with the highest percentage of fuel poverty (on the current definition);
- Those in 'severest fuel poverty' i.e. needing to spend over 18 per cent of income on energy to keep warm;
- Those in the most deprived districts/wards base on the index of multiple deprivation;
- Those more than say 20 miles from the gas pipeline.

By household characteristic

- Those with household members over 70;
- Those in dwellings with the lowest SAP ratings (below 60).

See also para 5.23 on energy efficiency schemes.

Strategies and programmes on energy efficiency and on tariff structures should be prioritised on these sub groups.

In the longer run it may be sensible to seek a new definition but that redefinition should be agreed at UK level and if possible at EU level.

Whatever the definition, all measures that involve direct contact with households likely to be fuel poor should also offer a full benefits check.

Some of these issues are dealt with under energy efficiency below.

5.15 General economic improvements and benefit hikes raise total incomes for fuel poor households: one of the most effective measures in fuel poverty interventions has actually been to associate energy efficiency interventions with a benefit entitlement check. That has regrettably now been dropped from the - rapidly diminishing - Warm Front programme in England and shows no sign of re-emerging with Green Deal or the Eco proposals. However, benefit checks are still associated with the Warm Homes initiative in NI and that has made a real difference to many of the low income families involved. Benefit checks need to be retained and also associated with other programmes.

Climate Change and Carbon Saving

5.16 NI is covered by the UK Climate Change Act and indirectly by the UK's commitment on various EU targets for carbon reduction and renewable. The UK target is a reduction on 1990 levels of GHG's by 34 per cent by 2020 and 80 per cent by 2050. As a recent report from the (UK) Climate Change Committee put it: 'It is implicit that NI contributes to the required reductions. However the Act does not require specific targets or carbon budgets for NI'. The EU have also set a target for renewables of meeting 20 per cent of total energy supply for 2020 implying 15 per cent for the UK – which in turn implies a figure of 32 per cent of electricity being supplied by renewable energy sources by 2020.

5.17 In total NI GHG emissions are slightly higher in NI than in the UK as a whole.

Table P
Greenhouse Gas Emissions

	NI as a proportion of UK
GHG Emissions	3.5%
Population	2.0%
GDP	3.0%

Source: Climate Change Committee paper 'The appropriateness of a NI Climiate Change Act Nov 2011

It might therefore be presumed that NI's proportionate 'share' of GHG emissions reductions should if anything be greater than the UK overall target. Moreover, in February 2011, NI's Executive Interdepartmental Committee set GHG reduction targets (as measured before any trading of Emission Unit Allowance (EUA)):

- 30 per cent by 2020; and
- 35 per cent by 2025

thus setting ambitious targets for NI.

5.18 The main sectors compare with the UK as a whole in percentage terms as follows:

Table Q
Sector Contributions to NI and Total UK GHG Emissions (%)

	Northern Ireland	UK
Agriculture	27%	15%
Energy Supply	19%	35%
Transport	22%	22%
Residental	17%	14%
Industrial	9%	15%
Other	6%	-
Total	**100%**	**100%**

Source: Climate Change Committee paper 'The appropriateness of a NI Climiate Change Act Nov 2011

5.19 Clearly to meet overall cuts in GHG or carbon emissions there will need in NI to be action outside of the scope of this Report. It is important to note that overall emissions targets will not be met unless drastic action is also taken in relation to agriculture and transport.

The UK targets for reduction of GHG and NI targets for the decarbonisation of electricity supply (40 per cent renewables by 2020) need to be reaffirmed as objectives of NI energy policy: this means reinforced efforts on energy efficiency and on renewables.

There is a strong imperative for industry in all sectors in NI and bodies such as Invest NI and Enterprise NI to encourage research and investment in energy efficiency and renewable.

5.20 This Report is focussing on residential and energy sector emissions which together constitute 36 per cent of NI GHG emissions. Within the overall target of 30 per cent reduction of GHG's by 2025 the NI Government (DETI: Strategic Energy Framework) has also set an extremely ambitious target (by GB standards) of 40 per cent of electricity generation being from renewables by 2020, with the bulk coming from wind power. Although energy generation constitutes a relatively small proportion of NI's GHG emissions (19 per cent compared to 35 per cent in UK as a whole) that simply reflects that NI imports much of its mostly fossil fuel based energy from GB and beyond.

The residential sector - principally due to heating oil dependence - is therefore an even bigger issue in NI than in GB as regards GHG/carbon reductions.

To achieve the target reductions set by Government requires strongly enhanced action on both energy efficiency and renewable energy.

Energy Efficiency

5.21 Energy efficiency improvements of buildings, domestic heating and insulation will both help reduce carbon emissions and cut ongoing costs to consumers. Modern building standards should meet a SAP standard of around 80. NI homes have a wide range of basic structural energy efficiency largely depending on age of the building and on the form of tenure as the following two tables show.

Table R
NI Dwellings Stock by Age of Building

Housing age	% of total	SAP Rating <40	SAP rating >60
Pre 1919	12.6%	37.9	14.6
Interwar	10.5%	21.4	25.8
1945-64	17.2%	14.1	40.8
1965-80	25.3%	4.8	51.8
Post 80	34.4%	1	78.9

Source: NI House Condition Survey 2009

5.22 There is also a marked difference on average between the main different forms of tenure, although in part this also reflects the age of building with largely NIHE built social housing being on average more recent and with the best average SAP. NI on average has a better energy efficiency of buildings than GB especially in the social housing sector – but nowhere near that achieved in much of northern Europe.

Table S
NI Domestic Dwellings: Average SAP by Tenure

	Average SAP NI	Average SAP GB
Owner occupied	56.43%	48%
Private rented	56.58%	48%
Social housing	63.44%	59%

Source: NI House Condition Survey 2009

5.23 There have been a range of initiatives within NI to tackle energy efficiency in buildings; some have been branded as fuel poverty initiatives and some as energy efficiency. They include:

Table T
Energy Efficiency and Fuel Poverty Interventions

Scheme	Run by	Source of funding	Funding
Warm Homes and Warm Homes Plus	Bryson Energy and H & A Mechanical Services	DSD	£15m pa
Cosy Homes, Energy Saver Homes, Snug Plus, Toasty Homes, Toasty Homes Plus, "21 Degrees", Cosy Homes Biomass Boilers/Insulation/ Solar Water Heating, Free Insulation, Hard to Treat Solid Wall Insulation, Wood Pellet Boiler Scheme and other non priority domestic schemes*	Power NI, housing associations, firmus energy, Bryson Charitable Group, H&A Mechanical Services, Airtricity and Energia	Northern Ireland Sustainable Energy Programme (NISEP) from electricity and gas suppliers.	£7,479,775 (2011-2012); £7,941,946 (2012-2013)
Heating Replacement Scheme	NIHE	DSD	£6.5m in 2009-2010

Pilot Boiler Replacement Scheme (for pensioners and older systems)	NIHE	DSD	£2m (until 31 March 2012)
Double glazing for all Housing Executive properties	NIHE	DSD	TBC
Local Authority Initiatives (now facilitated by transfers of HECA powers to LAs)	Local Authorities	TBC	TBC
Advice Schemes	Energy Savings Trust	EST	Not available in NI from 31 March 2012
Innovation Fund for Increasing Benefit Uptake	Social Security Agency (DSD)	DSD	£375k
Green New Deal (run by broad consortium)	Green New Deal Trust	Green New Deal Trust (mutual company)	Estimated £4m pa for three years

**For full list of additional details, visit http://www.uregni.gov.uk/uploads/publications/NISEP_List_of_Schemes_2011-12.pdf*

5.24 The funding for the Energy Saving Trust advice centre in NI has been withdrawn from 31 March 2012. This was estimated at £500k annually. The existing freephone number will cease to operate as a result.

Energy advice will be available from a range other sources, including the Warm Homes scheme and Bryson Energy. The latter will be launching a new freephone energy advice telephone number in April 2012 with an annual funding of £95,000 provided by the Housing Executive.

5.25 There have also been allocations from the Social Protection Fund such as £12m to NIHE for improvements on double glazing as an exclusive priority; there was also the allocation of additional Winter Fuel payments. Neither of these are easily justified in terms of targeting fuel poverty or of cost effectively reducing carbon emissions.

5.26 Also on the horizon is a NI Smart Meter programme and consideration of a NI version of the Green Deal being introduced this year in GB.

5.27 In total, DSD estimate there is now £31m a year being directly spent on the various energy efficient schemes. The largest of these – the Warm Homes programme has treated over 75,000 households since 2001/2 and in terms of outturn been relatively successful - marginally better than the English Warm Front programme - in targeting and reducing fuel poverty. The funding is received directly from the DSD and has now reduced to running at £16m pa dealing with 9,000 homes per year.

5.28 The recently established temporary Boiler Replacement Scheme is spending up to £1,500 on old boiler (those over 15 years) replacement for pensioner households, though that is coming to an end shortly.

In immediate terms the Boiler Scrappage Scheme should be extended beyond the deadline and in scope beyond pensioner households and the ceiling should be raised.

Similarly the Warm Homes Scheme should allow, in appropriate circumstances, for full conversion where close to the gas pipeline.

5.29 What appeared to be potentially the most ambitious of the NI schemes - Green New Deal - envisaged initiatives for area action under the consortium of private sector, state agencies, Non-Governmental Organisations (NGOs) and charities with a target for treatment of 100,000 dwellings rising to 500,000. Action so far has in practice been limited to pilot schemes in Newry. Regrettably there is now some scepticism that the Green New Deal consortium will work or at least deliver anything like its target.

5.30 There are a range of schemes, therefore, all of which have relatively small resources and little overall coherence. The range of schemes and the different methods of delivery cause both sub optimal efficiency and confusion. The DSD Report talks about consolidation of resources and that needs to happen and there is a need for radical reorganisation of existing and proposed initiatives. Although some of these schemes are funded direct from taxpayers, in practice the bulk of the expenditure is derived directly or indirectly from consumer bills.

Funding for existing and proposed interventions on energy efficiency of buildings and heating systems should be consolidated into one pot with projects and schemes being drawn down on a common basis of return and subject to overall strategic management.

Much of the delivery of enhanced energy efficiency schemes will need to be delivered by area based interventions and prioritised on the basis of the interaction between SAP ratings and household income.

The prioritised areas need to be identified and delivered and area based schemes delivered (as suggested on p73 and Table 5.3 of Christine Liddell's Report Defining Fuel Poverty in NI: A Preliminary Review):

5.31 Although the above should improve efficiency of delivery and raise some further resources for energy efficiency schemes, the total amount mobilised is nowhere near sufficient to meet the size of the problem. Of course the fact that for the majority (68 per cent) of households heating systems based on heating oil are by definition less efficient in terms of cost and carbon emissions than systems based on gas.

There needs to be a major campaign to shift, where possible, households away from heating oil and onto the natural gas networks.

Where households are beside the gas network but not connected to the gas network the most important energy efficiency improvement would be connection to that network or to renewable heat schemes.

5.32 However, this would mean the unit costs of interventions would significantly increase even where the pipeline is already close to the dwelling. Much more money is needed for these programmes. That could be justified and delivered if the Government were to treat energy efficiency as a form of infrastructure investment rather than a lever of social policy. Overall energy efficiency (in business and the public sector as well as dwellings) gives a significantly better return both in terms of cost savings and of carbon saving than most traditional infrastructure investment schemes.

Energy efficiency should be seen as a major part of the infrastructure programme and judged on similar criteria for cost saving and carbon saving. That would result in a significant shift of resources from larger infrastructure to energy efficiency improvements.

There needs to be a significantly higher Government expenditure on energy efficiency measures.

In addition, the financing of the subsidy and cross subsidy elements of energy efficiency schemes should be derived from a combination of the levy on gas and electricity suppliers and a new levy on heating oil and LPG distributers – the latter to be raised either on each distributer via a licence system or from the importer.

This may also require changes in departmental and regulatory responsibilities, probably the widened programme should be set up by DETI and administered under the auspices of the UR.

Smart Meters and GB Green Deal

5.33 Energy saving also requires changes in consumer behaviour. For GB the Government is committed to rolling out a programme of smart meters to all domestic consumers and 'in England' an offer of Green Deal arrangements. A final

go ahead on smart meters is still awaited in NI. Strictly speaking the EU Directive only requires it if there has been a positive cost benefit assessment and that as yet has not formally been conducted and reported.

5.34 NI is therefore a bit behind GB in developing a strategy for smart meters. This may be an advantage. In GB a number of companies have gone ahead with smart meters although the standard specification – and hence the interoperability – will not be enforced until 2014. NI can benefit from that standard specification and still get close to the EU requirement that smart meters should in place by 2020.

5.35 If a similar programme was eventually triggered in NI it should go further than the GB Smart Meters programme and also be used to provide a point for an energy audit for every domestic dwelling in NI for energy efficiency and opportunities to improve. It would be like combining for NI elements of the Smart Meters programme with elements of the Green Deal in England.

DETI and the UR should require the matching of the EU Directive and GB commitment for gas and electricity companies to install Smart Meters in all domestic users by 2020 (or specified alternative later date), specifying a single model or at least single technical specifications for the smart meter.

However, because of the unique nature of NI, particularly the rural dimension, a smart meter programme needs to be preceded by proper pilot trials in different parts of NI.

A full Smart Meter programme should also provide the opportunity prior to installation for a complete audit of every household for energy efficiency - identifying problems of insulation, structure or heating systems of use in each household. This would both form the basis identification of Warm Homes or boiler replacement opportunities or other energy efficiency interventions under the single pot proposed above; and also for householder financed improvements along the lines of the Green Deal in GB.

GB Green Deal

5.36 In Great Britain there is the prospect of a massive programme of improved energy efficiency through 'Green Deal' financing arrangements – the details of which have yet to be finalised. The UK Government is also introducing for England the Green Deal programme designed to provide long term loans to home owners to invest in energy saving measures, the cost of the loan to be repaid via future bills on the house. It is therefore a programme primarily for the 'could pay' sector although there may be developed variants for tenants and for the fuel poor. The whole programme has yet to start and there are still a

number of uncertainties about the take up and the effectiveness. It would be wise for NI authorities to wait and see if it works in England.

NI Departments should, in say two year's time, review the implementation and take up by consumers in GB of the Green Deal scheme there, and consider whether a similar loan based scheme - repayable via future energy bills and administered via financial institutions - would work for owner occupiers and landlords in NI.

Area Delivery

5.37 Both in GB and NI some of the inefficiencies of delivery of those energy efficiency schemes designed to reduce fuel poverty has been that the identification and qualification for such assistance has been on the basis of individual household circumstances and hence on single dwelling treatment. Some schemes will continue to be developed on those criteria but as argued under fuel poverty much of the delivery of an enhanced energy efficiency strategy will need to be on an area or zonal basis. This implies some degree of prioritisation of areas.

5.38 It is of course also possible to prioritise neighbourhoods on the basis of the general quality of the property using existing statistics on the existing definition to identify where in general the most fuel poor live. Taken together they formed the basis of some of the Warm Zones interventions in GB. In Christine Liddell's report (Defining Fuel Poverty) there is clear identification of the NI districts with the highest incidence of fuel poverty. She suggests an area based approach to energy efficiency interventions on the lines of the Kirklees project in South Yorkshire – though it should, in fairness, be noted that although the Kirklees project is well known this approach was first pioneered, with significant success, in Belfast in the Beechmont and WIllowfield projects.

5.39 As identified under fuel poverty there are many ways in which areas could be prioritised. The combination of SAP rating and income gives an optimum template for such prioritisation. In purely fuel poverty terms this will inevitably be subject to criticism that it is not targeted enough. But improvements in building and heating systems efficiency will ultimately benefit future occupants and maximise carbon savings. There would need to be rigorous prioritisation.

To maximise cost effectiveness and speed a significantly higher proportion of energy efficiency interventions should be on an area basis. Area based interventions should be identified and prioritised on the basis of the interaction between SAP rating and income (as suggested on p73 and Table 5.3 of Christine Liddell's Report Defining Fuel Poverty in NI: A Preliminary Review).

Renewables and Decentralised Energy

5.40 At present the level of renewable generation of electricity is about 9.65 per cent, including hydropower and biomass.

The 40 per cent target for 2020 for renewable contribution to electricity is ambitious for NI (and more ambitious than most in Europe) but it is achievable and should be reaffirmed.

Beyond that there should be substantial decarbonisation of the whole energy system both in supply and use by 2030, with a view to near zero carbon by 2050.

5.41 Up to 2020 the renewables' contribution will consist largely of on shore and offshore wind generation. However, other renewable and low carbon technologies also need encouragement. For example a decision is still outstanding on whether to proceed with two large biomass plants on Belfast Lough. The problem has been that in both GB and NI the incentives have been inconsistent, frequently changed and inequitable between technologies. The cross subsidy incentive for wind energy (mainly ROCs) needs to be consistent and in place for that period i.e. it needs to be renewed beyond 2017 or alternative incentives put in place. All subsidies or cross subsidies need to relate back to a consistent price for carbon or carbon equivalent saved over time – probably related to the trajectory for a floor price of carbon (£16/tce rising to £20 in 2020) already announced by the UK government.

NI needs an urgent and full review of all incentives applicable for low carbon: ROCs, FIT, CRCs etc and the effects of the carbon floor price; the aim should be consistency of assessment.

Decisions are needed on long outstanding proposals for new green energy based sources for electricity - including on off shore wind proposals and the biomass plants.

5.42 This goes much wider than energy policy but the NI economy could benefit from the investment, R&D, jobs and skills that the development of renewables can bring. Having set an ambitious target in an area where innovation is key it would be disastrous if all the skills, technology and hardware were imported - just as now with fossil fuels - and NI lost the economic benefit of setting such a target.

Foremost amongst other renewables to be encouraged are those that can use feedstock waste (mainly from the province's substantial agricultural, food and forestry) into technologies such as biogas and anaerobic digestion and indeed domestic wood and biomass burners in those areas off the gas network. Geological studies suggest that geothermal heat sources are also possible. Above all there are those technologies that can utilise wave and tidal power which Ireland has in abundance.

The island of Ireland is in a good position to be a leader in renewable technology - tidal and wave power and power from agricultural waste in particular; this should be a priority for NI's universities and industrial research budgets and for cross border cooperation.

Invest NI should consider allocating a research budget given the potential for employment and skills growth from design and manufacture of renewable energy.

5.43 Many of the renewable based installations will be primarily decentralised generation applications (with many selling surplus into the electricity or gas grids). Decentralised energy should also be an arm of energy strategy, carbon savings and cost savings can be achieved with gas and electricity as well as renewables, in particular in relation to the provision of heat to both households and businesses.

Consideration should be given to developing a heat strategy, incorporating some of the features of the RHI but applying it also to low carbon technologies.

Encouragement of CHP and District Heating schemes should be a significant part of the mix – both stand alone renewable feedstock based CHP especially in areas unconnectable to the gas network on a commercial basis and in District Heating schemes connected to the natural gas network.

Planning permission for new residential or commercial estates requiring CHP/ District Heating to be the first and preferred option. In some cases - particularly at the point of connecting existing estates to the gas grid – retrofitting should also be considered.

5.44 At the same time it is important to ensure that consumer sensibilities are addressed and consumer protections are built in to the planning and authorisation of District Heating Schemes as, on the face of it, they do restrict choice and households could be susceptible to exploitation by the provider or the landlord.

Infrastructure Priorities

5.45 Simply to maintain a functioning energy system and to take advantage of new technologies requires substantial infrastructure investment from generation through transmission and distribution and into usage. A strategic approach to investment is also key to business and consumer confidence in NI.

5.46 There is of course a strong a priority argument for at least some of that investment - which should benefit the whole of NI's economy and society, and the environment – to be met from state resources. Historically pre privatised NI energy infrastructure was largely paid for out of tax payers' money. With current constraints on public expenditure and public borrowing that is no longer likely to be a politically acceptable option. On the other hand policy objectives have been decreed by politicians in Stormont, Westminster and Brussels which mean infrastructure expenditure over the next twenty years will need to be higher simply to make sure the system works and the lights do not go out. Those policy objectives relate to rapid decarbonisation of energy supply, substantial alleviation of fuel poverty, reducing communal and geographical inequalities, enhancing security of supply and reducing import costs. It is therefore incumbent on the public authorities to operate a framework whereby the investments needed to meet those objectives are met. Largely that will be met from the revenue from domestic and business consumers within the regulatory framework set by the Government and URs. Even so there will need to be some direct government expenditure.

5.47 The NI Government, in DETI's Strategic Energy Framework 2011, have gone some way to identifying the infrastructure needed to meet these varying objectives. That document and other governmental and UR pronouncements have identified key infrastructure developments to be allowed for in the current price review period and beyond, and in some cases the relevant cost and how they will be funded. The costed ones include the following:

Table U
Energy Infrastructure Requirements

Investment	£m
Electricity grid	**898**
Business as Usual' upgrading	**607**
Interconnector	**76**
Renewables:	**215**
Medium term plan	*70*
Clusters (net)	*18*
Long term plan	*127*
Gas	**420**
Gas storage facility	250
Western extension of pipeline	170
Energy efficiency	**310**
Smart meters	280
Energy efficiency schemes*	30
Total	**1,628**

Source: DETI Strategic Energy Framework 2010
Note: *Around £30 per annum

5.48 In the Strategic Energy Framework document DETI refer to £1bn investment in the electricity sector and attribute all of it to the adaptation for renewables; in fact most of that billion appears to be much needed upgrading of transmission and distribution lines - not specific to renewables. The document also estimated that the cost of that £1bn on consumer bills would be an extra £49/83 per household each year at current prices (although it also says that could be offset if fossil fuel prices rise relative to renewables). It is not clear how that calculation is made but if correct it implies an average additional cost to domestic consumers (gross of any offset) of about £7 per annum for every £100m of investment.

5.49 The issue of the western extension of the gas pipeline has been dealt with above under the gas market. That would cost £178m with the cost of connection falling directly on consumers. Because of the small number of connections it is likely to deliver - as indicated above- the conclusion in this report is that the western extension is likely to be less of a priority than other expenditure.

5.50 Unfortunately there are no equivalent estimates for the cost of other aspects such as enhanced connection to the existing gas grids or a consolidated energy efficiency programme. Elsewhere there is reference to the cost of a biomass generator but not other renewable generators - nor for conversion of Kilroot Power Station away from oil and coal. The infrastructure programme is therefore nowhere set out in its entirety.

5.51 Very little of this investment will be met from public funds. In a separate document on investment strategy (Building a Better Future: 2011) DETI set a total of only £105m public expenditure in energy networks to 2016. The main burden will fall on the consumer – domestic and business. Key strategic decisions need to be made on the capital expenditure needed to extend the gas and electricity transmission and distribution networks and on the enhancement of generating capacity as well as an energy efficiency programme. These decisions need to be taken quickly. Only then can timescales and revenue requirements be established for the next five and ten years and difficult planning decisions progressed.

Hence a central task of Government and the UR is the need to continue to ensure adequate resources for the appropriate infrastructure investment and maintenance. Infrastructure development and financing has to have a clear strategy and a narrative that is understood by consumers, business and local communities.

5.52 There are inevitably choices and potential conflicts. Not all of the desirable investments can take place in parallel and not all can be afforded even over a lengthy timescale. Moreover, not all objectives and not all propositions are being judged on a consistent cost benefit basis, even in its widest sense. This is partly aggravated by differing departmental or industrial sponsorship – some programmes which clearly ought to be regarded as infrastructure investment and judged on the same long term criteria of economic, social and environmental return are not seen as investment because the return is to the community and the environment rather than to the company or the exchequer, principally the much higher levels of energy efficiency investment that is required.

5.53 All such investment requirements for social and environmental purposes should therefore be seen as part of the investment prioritisation process. This will annoy many in the energy sector who see these as being not really 'energy' measures and as none of their business – simply government and pressure groups

interfering. It will likewise be dismissed by many campaign groups who see their objectives – social justice or greening the planet – as overriding all others. The reality is that infrastructure and investment – the priorities and the funding - do need to be assessed together.

5.54 There is also the question of sequencing of changes in the fuel mix. Natural gas needs to be seen as the predominant fuel for the areas it serves probably for the next thirty years but it is a transitional fuel; in the long run there needs to be a move to non carbon sources of electricity for the whole of NI.

5.55 Against this backdrop a central task of Government and the UR will continue to be to ensure resources for the appropriate infrastructure investment and maintenance.

The most rational strategy in terms of economic cost effectiveness and environmental and social return would be to prioritise:

- Investment in energy efficiency;
- Substantial modernisation of the ageing electricity network, it needs to be upgraded and adapted to renewable sources;
- Consolidation of the existing gas networks in Greater Belfast and Larne and the ten towns (and thereby facilitating a switch out of oil) by connecting all domestic and commercial users within close proximity of the network;
- Clearing the financing and planning issues to speed up the North South Interconnector and planning new interconnectors with Great Britain and the RoI - with a view to moving to an eventual north west European Supergrid; and
- Developing renewable generation resources and their connection to the electricity network to serve primarily the west and south of NI.
- This would mean the down prioritising of the western extension of the gas pipeline.

5.56 Having set out that scenario as the basic backdrop to the Report we need to recognise that there are two potential major changes to that backdrop which may or may not happen but would be of major importance.

5.57 The first relates to the possible exploitation of shale oil and shale gas. At the time of writing there is still uncertainty whether the shale gas or shale oil indentified in County Fermanagh and in neighbouring counties south of the border can, should, or will be exploited on an economic scale. If there were substantial sources of shale gas in Ireland and the economics and environmental and safety issues could be effectively addressed then Ireland could, for several decades, be

in a transformed position as a source of fossil fuel, probably self sufficient and indeed an exporter. It would mean that – contrary to what is assumed below - gas would be the predominant fuel in Ireland for much longer than two decades.

5.58 There are however considerable problems with shale gas. Small scale exploitation is unlikely to be economic and large scale exploitation would cause significant environmental problems and completely undermine NI's carbon reduction targets and EU commitments (and likewise in the RoI). Its extraction and use is more carbon intensive than natural (sea) gas and its widespread use would undoubtedly reverse progress on carbon targets and in the development of renewable energy in Ireland. There are also a range of local environmental and safety problems about the 'fracking' process - ranging from water contamination and methane release to potential earthquakes - which have led to its banning or restriction in several American States and EU countries. If shale gas were deemed non viable for economic or environmental reasons – as some environmentalists already argue – then technology and public opinion might allow a faster development of renewables so that parts, at least, of NI could 'skip gas' and move more swiftly to a predominantly renewable based energy mix by 2032.

5.59 Similarly double edged is the possibility of nuclear power playing a major role in energy supply in NI or Ireland as a whole. This is a delicate issue in public and political opinion in NI. In reality NI already uses nuclear power – via the interconnector since a significant part (currently about 20 per cent) of GB energy is nuclear sourced within the GB nuclear power sector - which is now about to embark on a new phase of nuclear rebuild – and also indirectly through the interconnector with France. NI's future energy mix is in any case likely to be increasingly nuclear sourced. On the other hand the economics of building a nuclear power station in Ireland are not at all clear – the size of the island of Ireland market is less than the output of an optimum size state of the art nuclear power plant, and nuclear generation, economically best at running at a constant rate near capacity, is really best at only supplying the baseload in any economy. It could of course be argued that with a single nuclear plant Ireland could become both self sufficient and a net exporter of energy and that there are several potential locations where a nuclear power station could be sited on the coasts of NI or the RoI. That is true. But it is still not obvious why an Irish site would be favoured by the global interests that control the substantial funds that nuclear investment requires. And in terms of the SEM in Ireland the economic and security issues of being so dependent on one plant would be difficult. Moreover, public and political antagonisms to nuclear power in NI (and the RoI) run very deep.

Whilst development of either shale gas or nuclear would make a dramatic difference to NI's energy, both of them present serious imponderables as well as political difficulties. The majority of this report is therefore based on the assumptions at the beginning of this section and on neither shale gas nor domestically based nuclear power playing a role in the next twenty years.

If that is wrong and either did materialise, it would make a very significant difference to the long run position and to some of the recommendations – but not to the next ten years.

A decision will nevertheless be needed within the next few years on both shale gas development and on nuclear power.

6 Regulator and Regulation

Price Controls, Choice and Competition

6.1 There are still extant in the UK various models of independent economic regulation each with their own esoteric features reflecting both the nature of the industry they regulate and the political and societal context in which they were legislatively established or altered. Some theorists would see them as a straight line progression from state monopoly to full competition – via private monopoly, regional monopolies, dominant companies with 'ankle biting' competition, regulated oligopoly, quasi competition and no doubt other stages with diminishing forms of price regulation appropriate to the stages. In that context NI electricity and natural gas are at a relatively early stage – the 'dominant company/ankle biting competition stage'. The reality is that markets do not move in straight lines and NI may not move much away from the current market structure – though competition might grow a bit it is unlikely to match even the 'regulated oligopoly' of the GB market. Price controls and other interventions have to recognise this reality.

6.2 Choice for NI's consumers – particularly domestic consumers – has hitherto been limited; moreover, experience of exerting that limited choice through switching has not always been effective or financially beneficial. In electricity and natural gas supply much of the choice that a consumer wants will be delivered by each supplier having a range of tariff options. This is absolutely not to encourage such a wide range of tariffs as exists in the GB market (which mainly serves to confuse the average consumer - let alone the most vulnerable) it is to provide consumers with the ability to switch between tariffs as well as between suppliers. That requires greater transparency of options by supply companies enforced by the UR.

There should continue to be a focus on competition and the encouragement of new entrants. But that has to be tempered with the recognition that in a market of this size there is a limit – admittedly not defined - on how much further competition can be developed.

Given limited competition and prospects for more competition also being limited it is important that the UR retains price controls in gas and electricity markets for domestic consumers.

However, the time limits for regulation could be extended from three to five years to provide certainty both to investors and consumers.

6.3 It is important also to recognise that with competition being limited on prices there needs to be encouragement of non price competition through customer service improvements and development of energy services.

Non price competition needs to be encouraged by the UR.

Regulator Remit

6.4 The UR in the NI system is already, in many ways, in pole position on the delivery of energy policy objectives. Yet the UR is not involved with several of the key aspects of that policy.

6.5 For a start the remit does not extend to the key heating oil sector on which the bulk of households and small businesses rely for their heating. In relation to electricity the principal objective (stemming from the Energy (NI) Act 2003) is indeed 'to protect the interests of consumers wherever appropriate by promoting effective competition'. The remit then specifies the main way in which to fulfil that principal function – '(a) to secure that all reasonable demands are met' and '(b) to secure that licence holders are able to finance (their) activities'. In other words this relates primarily to economic prices to the consumer and ensuring adequate supply; the UR is only required to 'have regard to' issues of affordability, disadvantage or environmental sustainability.

6.6 In relation to gas the main objective deriving from the same Act is actually 'the maintenance of an efficient, economic and coordinated gas industry' with consumer protection reduced to a 'having regard to' status. And all reference to consumers – as with electricity – does not differentiate between the interests of today's consumers and those of future consumers. In GB the remit of Ofgem was explicitly changed to ensure the medium/long term interests of consumers was taken into account.

6.7 This seems to understate the range of issues for which the UR is held to be responsible. In practice in the various price determinations it is clear that past and present URs do indeed take a wider view. But that in turn is a cause of confusion and one of the reasons determinations are often so contentious. For example, regarding the recent determination for PNG, the UR determined that the company had been over-compensated and in part needed to make recompense to consumers generally; a more rational decision might have been to reallocate that to more rapid connection to the gas network or to energy efficiency improvements or reducing the bills of low income groups in fuel poverty.

The UR's remit should be extended to cover the supply of heating oil to both business and domestic consumers. Powers in this sector should cover competition and choice, transparency, customer service, the ability to impose

mandatory Codes of Practice, an energy efficiency levy, and reserved powers of price control.

The remit also needs to be extended to incorporate more explicitly the environmental and social dimensions of policy (as well as energy efficiency) rather than them being seen as constraints on an essentially economic UR.

Role of Consumer Council

6.8 The Consumer Council has played a key role in NI representing consumer concerns and the longer term consumer interest in energy policy issues. On occasion this has led to some disputes with the UR and with Government Departments as well as energy companies themselves. It is important that all parties recognise the independence of the Consumer Council as an advocate and voice in energy policy and that independence needs to be maintained. At the same time there may be a case for greater involvement of the Council in the regulatory process itself. This is closer to the Ofgem proposals under the new RIIO framework and could be done in a number of ways – a clearer role for the Council at key stages of the price determination and other regulatory processes; a requirement that the UR and the Department take into account the Consumer Council view at the draft final decision stage - and report on how they have done so; or the creation of an internal consumer panel with links to the Consumer Council (probably with parallel arrangements for business consumer interests).

There needs to be a strengthening of the Consumer Council's role in the regulatory process and discussions need to take place on how that is best achieved.

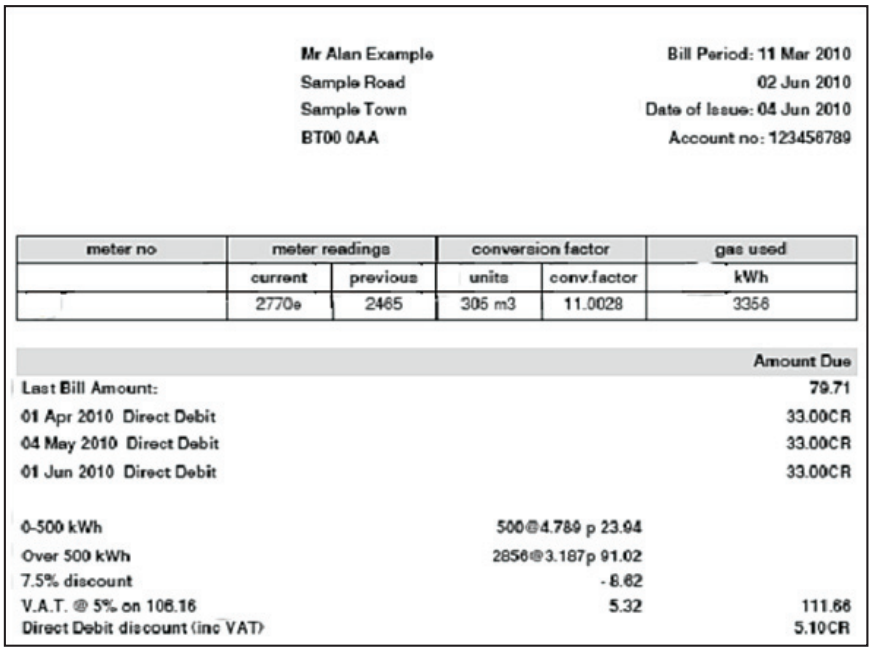
A Radical Approach to the Regulation of Energy in NI

6.9 There is a need to align the role of the UR with the wider policy objectives; a more radical approach is needed.

Over the medium term the UR needs to move away from specific cost reflectivity and towards a pricing system which directs the market to longer term public policy objectives. This new approach should begin to be implemented after the expiry of the present price review period for both gas and electricity – in other words thinking and design should start now.

6.10 In order to mobilise the market to meet the multiple objectives of energy policy the UR and the Department need to introduce a radically different template for price structures for domestic consumers and small businesses. The present structure means the unit cost of electricity is higher for low users than high users and the marginal cost of a unit of electricity is falling. See for example the differentially lower rate at higher volumes for domestic consumers of PSL and firmus energy.

CHART II
Tariffs on Gas and Electricity Bills



Mr Alan Example
Sample Road
Sample Town
BT00 0AA

Bill Period: 11 Mar 2010
02 Jun 2010
Date of Issue: 04 Jun 2010
Account no: 123456789

meter no	meter readings		conversion factor		gas used
	current	previous	units	conv.factor	kWh
	2770e	2465	305 m3	11.0028	3356

		Amount Due
Last Bill Amount:		79.71
01 Apr 2010 Direct Debit		33.00CR
04 May 2010 Direct Debit		33.00CR
01 Jun 2010 Direct Debit		33.00CR
0-500 kWh	500@4.789 p 23.94	
Over 500 kWh	2856@3.187p 91.02	
7.5% discount	-8.62	
V.A.T. @ 5% on 106.16	5.32	111.66
Direct Debit discount (inc VAT)		5.10CR

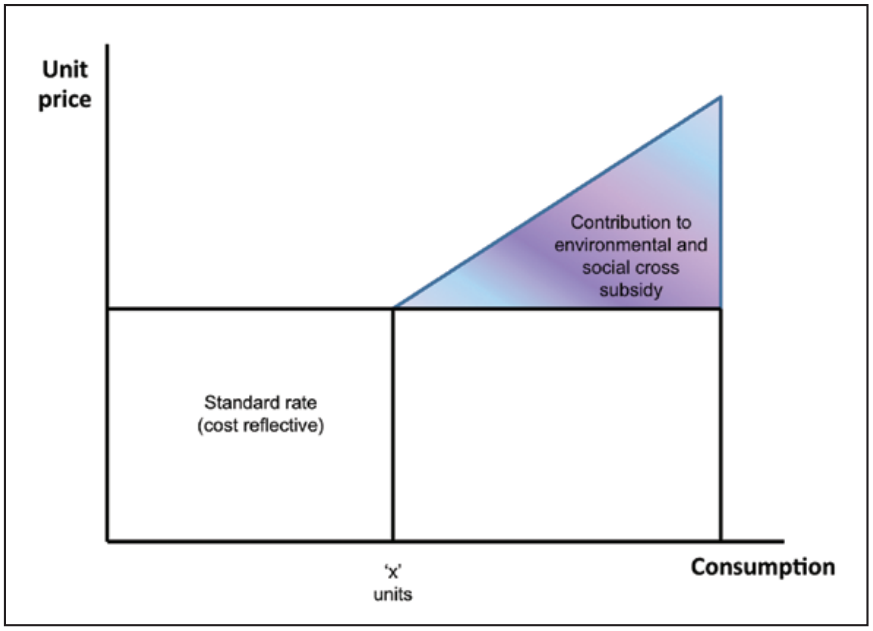
Put simply the more you use the less you pay per unit; and the poor generally speaking pay more per unit. This is both socially regressive and environmentally counterproductive and it acts directly contrary to policy objectives for energy efficiency, energy security and the alleviation of fuel poverty for most – though admittedly not all – of the fuel poor.

The UR should devise and require tariff structures for the medium term that move broadly to a rising marginal cost per unit consumed and not the reverse.

The most straightforward way to introduce this relatively simply is to limit the 'premia' collected for environmental or social purposes via the gas or electricity bill to higher levels of use. There would therefore be an initial tranche up to say

'x' units which could be simply reflective of average cost. Beyond that level there would be a rising contribution to the costs of decarbonisation and the element of cross subsidy for fuel poverty reasons and hence a rising marginal price (without going the full way to rising block tariffs).

CHART III
Diagram of Possible Future Tariff Structure



However, caution must be taken with the implementation of this approach. Many households living in fuel poverty will live in homes which are less energy efficient and as a result consume more energy throughout the year. This problem would be further exaggerated for large households living in fuel poverty.

6.11 This is probably the most radical proposal in this report. As such there is likely to be resistance from the industry, from the UR – and indeed from some domestic consumers. Hence we need a fall back.

In default of this proposed radical restructuring of price tariff structures, or in advance of its introduction – there should be a requirement on gas and electricity supply companies to provide a social tariff i.e. that for designated groups of means tested benefit recipients, the lowest available tariff will always apply.

This stipulation by the UR is preferable to a discount approach to a social tariff, although that could be easier to implement and enforce.

7 Machinery of Government

Departmental Responsibilities

7.1 There are up to eight NI Departments involved in energy policy in NI – the principal ones being:

TABLE V
Departmental Responsibilities for Energy

Department	Energy Responsibilities
DETI	Overall energy strategy
DSD	Fuel poverty and energy efficiency
DOE	Climate change, planning and Local Authorities
DARD	Rural Dimensions
OFMdFM	Poverty and pensioners
DHHSPS	Health related aspects
DEL	Promoting knowledge and skills
DFP	Funding arrangements, energy performance of buildings

In addition there is some influence of UK Departments, particularly DECC and the Treasury.

7.2 It is understood that there is a review underway of the structure of Departments in NI with possible mergers and reconfiguration now being considered.

Consideration should be given to the creation of a single Energy Department for NI.

If that is not politically and/or administratively possible then greater coherence is necessary. DETI needs to be explicitly the lead Department across all dimensions of energy policy. Future statements of energy strategy need to have incorporated the other department's dimensions and a single policy document issued and kept to by all departments.

Parliamentary Accountability

7.3 In Stormont, Select Committees largely reflect departmental structures and hence again there is no single focus of parliamentary oversight, in terms of accountability.

Even if there is not a single Department for Energy the oversight of energy policy in the Assembly may be most effectively served by having a focussed Energy Select Committee.

An Island of Ireland, GB and EU Dimensions

7.4 The creation of the Single Electricity Market (SEM) for the island of Ireland complicates the regulatory strategy but fundamentally provides a real benefit to the developing infrastructure and regulatory framework.

The island of Ireland SEM should be developed further and progress made on CAG.

However, to be fully effective it does require enhancement of North South Interconnector capacity. And the single market approach needs to be delivered also for natural gas. The natural gas interconnector with Scotland has already played a major part in meeting NI's energy demands. In the longer term that will be the case even more with more east west interconnection for both gas and electricity. As GB generation decarbonises this will also make a contribution to meeting carbon reduction targets. Nuclear power – not popular in NI - will in the long run be a larger component of that imported electricity.

7.5 NI is bound by – and faithfully adopts - EU frameworks for energy policy including the latest Third Energy package and, in the longer term, the plans for a North West Europe Supergrid. However the NI influence on that policy is indirect through the UK Government and Ofgem – and to a limited extend through the RoI authorities. Close engagement with DECC is needed, but with the creation of effective single markets for gas as well as electricity the all island dimension in Brussels should also play a major role. DETI and the UR need to reinforce efforts to ensure that NI interests in energy are recognised by DECC and Ofgem and taken into account at EU Ministerial Council, European Parliament, EU Commission and ACER levels.

7.6 One solution suggested was that the NI UR should be subsumed into Ofgem. That is not a sensible proposal: the markets and the players are almost entirely different, the island of Ireland dimension is vital and the approaches of the two URs are for mainly good reasons very different.

This report does not support the subsuming of the NI UR into Ofgem.

However, NI Departments and the UR need to reinforce efforts to ensure that NI interests in energy are recognised by DECC and Ofgem and taken into account at EU Ministerial Council, European Parliament, EU Commission and ACER levels.

LARRY WHITTY
MARCH 2012

Annex

Northern Ireland Electricity

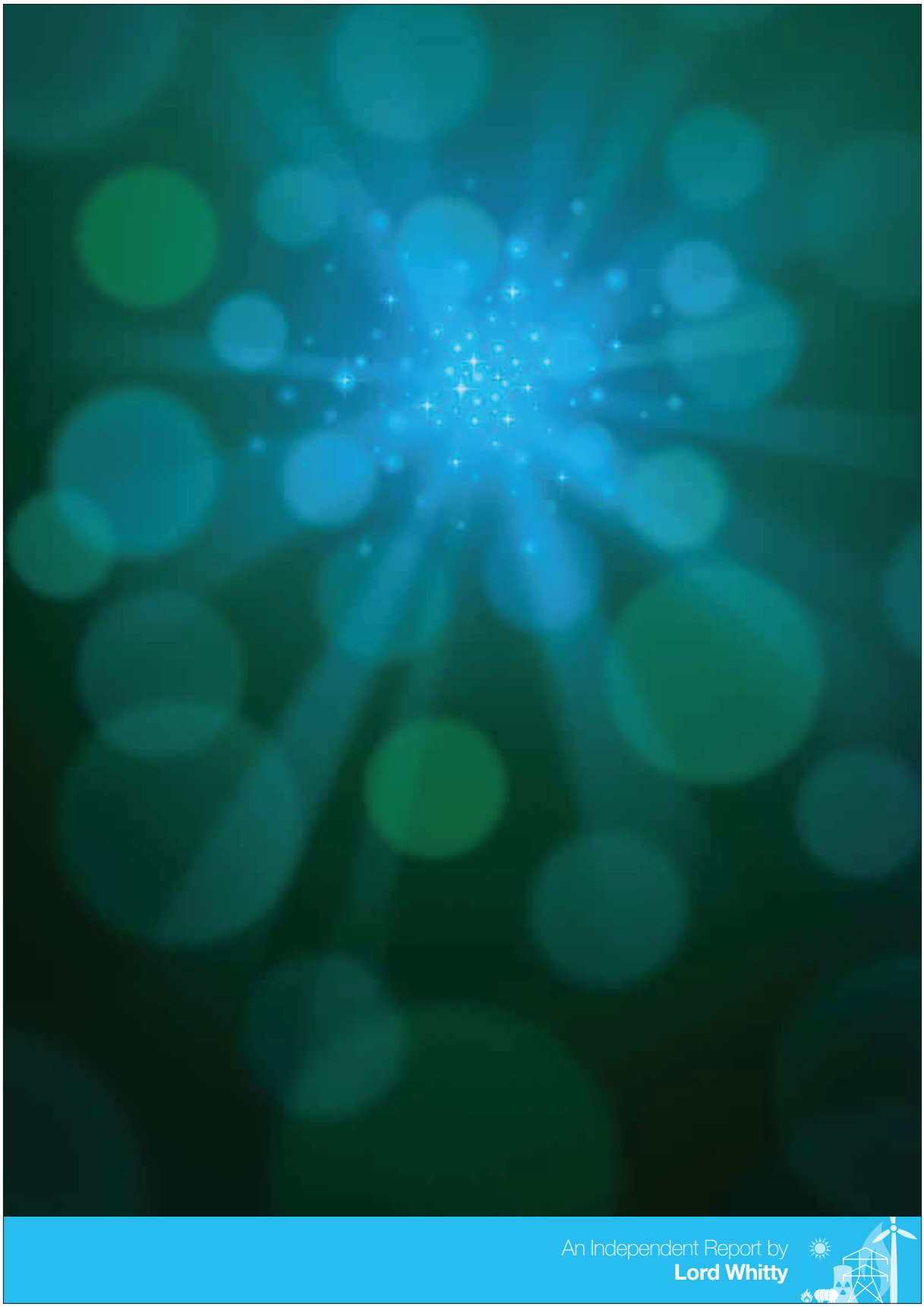
Company	Supply domestic	Supply Commercial	Generation	Transmission	Distribution	Systems Operator	Interconnector	Ownership
Power NI	X	X						Viridian Arcapita
Airtricity	X	X						SSE
Energia		X						Viridian Arcapita
Electric Ireland	X	X						ESB
firmus energy								Bord Gais Energy (RoI)
NIE				X	X			ESB
AES			X					Bord Gais Energy (RoI)
SONI						X		Eirgrid (RoI)
Mutual Energy							X	Mutual

Northern Ireland Gas

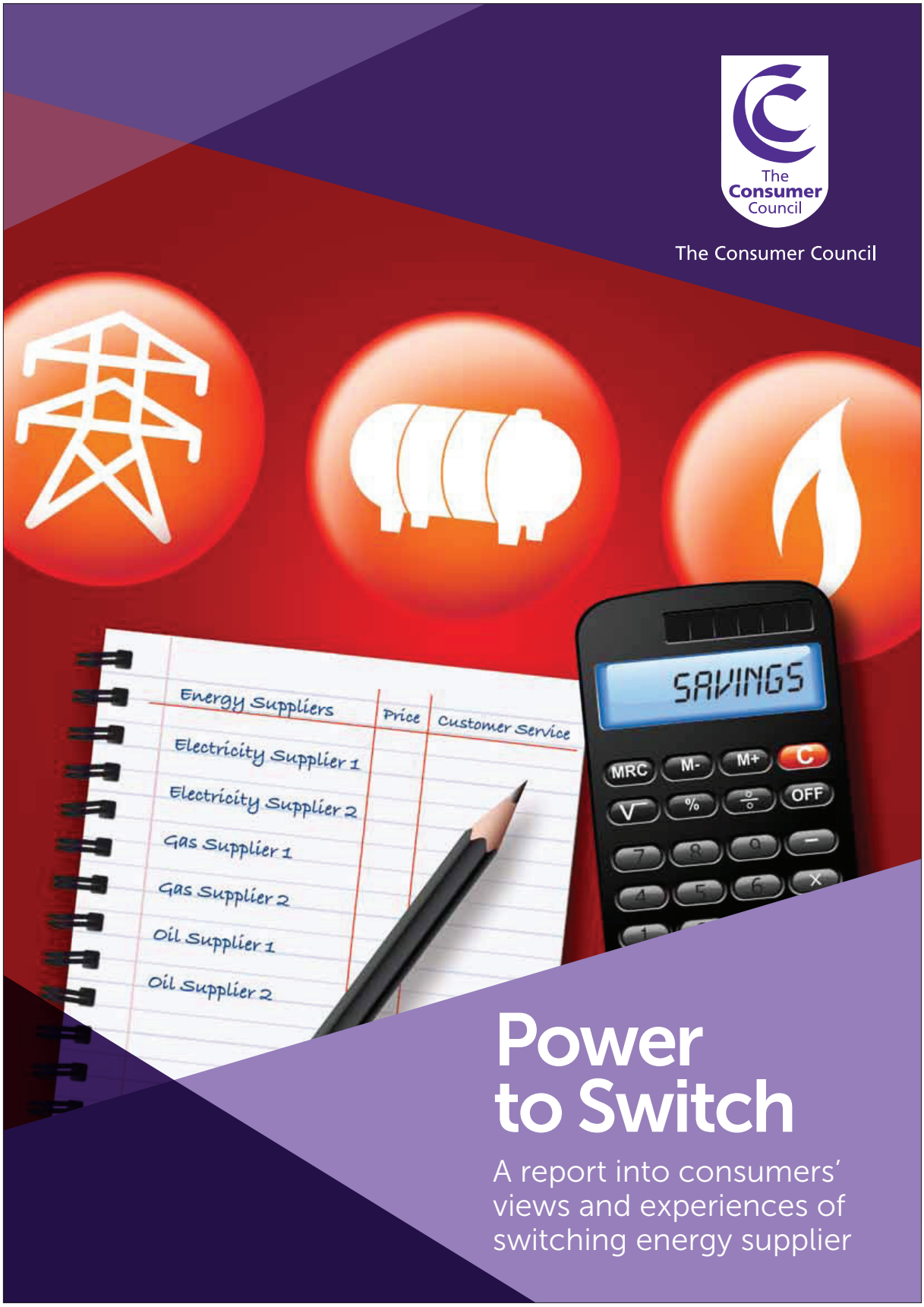
Company	Supply domestic	Supply Commercial	Transmission Greater Belfast and Larne	Transmission ten towns	Distribution Greater Belfast and Larne	Distribution ten towns	Pipeline	Ownership
Phoenix Supply Ltd			X		X			Killen Group, Tera Firma
firmus energy	X	X		X	X	X		Bord Gais Energy (RoI)
Phoenix Natural Gas			X		X			Killen Group, Tera Firma
Mutual Energy							X	Mutual
Airtricity		X						SSE
Energia		X						Viridian Arcapita
VAYU		X						Glencore

Notes

Notes


An Independent Report by
Lord Whitty

Consumer Council Switching Energy



Contents

Please note an executive summary is available in larger print or other formats on request.

1. Foreword

Energy is at the centre of our daily lives. It is essential for us all as we rely upon it to provide light and heat for our homes. However, the cost of energy has been rising in recent years and this looks set to continue given global trends and the need to build an infrastructure to support renewable energy. High energy prices combined with relatively low wages have given Northern Ireland (NI) the highest number of households in fuel poverty in the United Kingdom (UK).

One possible means of addressing the problem of rising energy prices in Northern Ireland is the recent advent of competition, with its potential to drive down prices and improve service. With our statutory remit to report on energy issues the Consumer Council (CCNI) wanted to understand how consumers in NI are responding to competition.

This report finds that 96 per cent of electricity customers knew that they could switch suppliers and switching is on the increase. However, despite this only 28 per cent of electricity customers have actually switched supplier. This report suggests that a switching culture will only develop in NI when there is increased consumer proficiency and confidence in switching. We also reveal the importance of learning from the experience in Great Britain (GB) and ensure that less 'savvy' consumers are not left behind as competition develops.

The Consumer Council's two main priorities of supporting consumers to mitigate the impact of cost of living pressures, and improve consumers' knowledge of their rights, means that energy costs and fuel poverty remain a particular focus for our work. We will continue to work with Government, the Utility Regulator (the Regulator) and energy providers to ensure there is an understanding of the real pressure energy costs place on consumers. We will also seek to reduce costs at every opportunity, but within the context of ensuring consumers' long term energy needs are met. This report is another example of our contribution to this challenge. We remain committed to giving consumers a voice and making that voice count.

Antoinette McKeown, Chief Executive

2. Executive Summary

Our research suggests that competition in domestic electricity and gas is developing steadily as increasing numbers are switching and there is high awareness that it is possible to switch. However, this high level of awareness does not correspond with the level of confidence in the switching process and this appears to inhibit some consumers from switching.

Consumers have a variety of reasons for not switching. Below are the main ones expressed:

- It is too much hassle (31 per cent);
- Being content with the current supplier (29 per cent); and
- Mistrust of a new supplier (18 per cent).

While it is a positive development that around 135,000 electricity and over 10,000 gas consumers have switched to date, our research suggests that there is not yet a switching culture amongst the majority of NI energy consumers.[1]

It is welcome to see that for those who had switched electricity or natural gas supplier it was largely a positive experience. However, a significant factor that mirrors the GB experience of energy switching is that lower socio economic groups are less likely to switch electricity or gas supplier. Furthermore they are:

- Less likely to use the internet to compare home heating oil (oil) prices;
- Less likely to seek competitive quotes; and
- More likely to purchase expensive 20 litre oil drums.

This suggests that those most likely to be in fuel poverty are least likely to take advantage of competition to reduce their energy costs.

Despite a well developed competitive market and a large number of suppliers, two thirds of oil consumers always buy from the same supplier. Whilst this

1. Domestic electricity customers in NI and natural gas customers in Greater Belfast and Larne have been able to switch supplier since 2010.

would suggest that those consumers are not making a purely financially driven decision, evidence from our consumer panels suggests that such an approach can prove financially advantageous.

The experience in GB is that marketing practices by energy suppliers dissuaded consumers from switching. In contrast, our research shows that generally consumers were content with marketing so far in NI and it can be helpful in raising awareness of competition. However, we are still in the early stages of competition development. The Consumer Council has seen an increase in complaints for natural gas and electricity, particularly in electricity where a significant number of complaints have been taken in relation to delays and other problems with the switching process. There have also been complaints received about marketing in public places. The Consumer Council will continue to work with suppliers and the Regulator to identify the cause of the complaints and try to ensure such issues are addressed.

Research Methodology

Quantitative research:

The Consumer Council commissioned Millward Brown to conduct an omnibus survey (see questions in Appendix A). Fieldwork was conducted between 2 October 2012 and 1 November 2012. There was a total sample of 1014, weighted to be representative of the NI population in terms of gender, age, social class and region. Of these, 846 are involved in decisions about energy within their household.

Focus groups:

Six group discussions were held with consumers in Armagh, Ballymoney, Belfast, Cookstown, Derry/Londonderry and Fivemiletown with the use of a topic guide, allowing consumers to speak freely on the subject of switching energy supplier.

Independent research:

We have used statistics from a number of independent sources to illustrate the context in which the CCNI research was conducted.

Key Findings

- 96 per cent of electricity customers and 86 per cent of natural gas customers know they can switch;
- 28 per cent of electricity customers and 20 per cent of natural gas customers have switched their supplier;
- 97 per cent of those who had switched thought switching was easy;
- 67 per cent of those who have never switched have never even considered it;
- 67 per cent of oil customers always buy from the same supplier; and
- Social class group ABC1[2] is more likely to have switched electricity or gas supplier, obtained a competitive quote for oil, find it easy to compare oil prices and have used internet oil price comparison sites.

Recommendations

The Consumer Council is committed to ensuring that all consumers have the knowledge and confidence to switch energy supplier if they wish. We will continue to develop information, such as our 'Switch-On' guides[3], so all consumers can make informed decisions on their preferred energy supplier. We will continue to target the most vulnerable consumers and work with others to ensure the following recommendations are put in place.

2. See Appendix B for Socio-Economic Groups
3. See Appendix C for current Consumer Council information on switching energy supplier.

1. The energy industry should provide more information and support to increase the knowledge, awareness and confidence of consumers on the benefits and process of switching;
2. The energy industry and the Regulator must remain active in developing safeguards to ensure the problems experienced in GB do not occur in NI;
3. The energy industry should target lower socio economic groups and consumers in fuel poverty to promote the benefits of switching energy supplier and shopping around for oil;
4. Government, local Councils and energy advice organisations should support and encourage pilot approaches that provide oil-dependent consumers with alternative purchasing options, such as fuel brokering[4] and low cost loans. This may help address the issue of consumers on low incomes buying 20 litre oil drums[5]; and
5. Energy suppliers and the Regulator must continue to work together with the Consumer Council to identify and address the reasons for the increase in electricity complaints that has accompanied the introduction of competition.

4. Energy brokering schemes aim to negotiate reduced prices and new payment methods for domestic oil purchases within defined geographic neighbourhoods and time limits, so as to assist fuel poor households.
5. Consumers relying on heating oil emergency drums spend 41 per cent or 61 pence per litre more than the cost of the average 500 litre oil refill and between 136-151 er cent more for their oil than those using natural gas, source CCNI Gas v Oil Cost Comparison Brief, March 2013.

3. Introduction

The General Consumer Council for Northern Ireland (CCNI) is an independent consumer organisation, working to bring about change to benefit Northern Ireland consumers. Our aim is to 'make the consumer voice heard and make it count'.

In the field of energy we have a statutory role contained in the Energy Order (NI) 2003 to undertake consumer research, make proposals, provide advice and information and represent consumers on energy matters.

For a number of years energy prices have been increasing. Since 2002, the cost of electricity has increased by 55 per cent[6] and home heating oil by 285 per cent[7]. At the same time the number of households in NI in fuel poverty has increased from 27 per cent to 42 per cent[8]. An increase in the overall cost of living has meant that consumers here have seen their overall spending power diminished in recent years. Figures for November 2012 show the annual cost of living increase, as measured by the Consumer Price Index, rose from 2.2 per cent to 2.7 per cent, the first upwards move since July 2012.

Competition within the domestic energy market is viewed by many as having the potential to put downward pressure on energy prices and at the same time improve service. However, the GB experience demonstrates that competition can also create dangers for consumers such as poor marketing practices, a range of confusing tariffs and a risk of neglecting the needs of vulnerable consumers. Therefore, it is vital that as competition develops here, consumers are well represented.

This report explores how NI consumers are reacting to competition between energy suppliers. This research will enable the Consumer Council and other stakeholders in the energy industry to understand and respond to the needs of energy consumers.

6. Power NI standard tariff
7. Consumer Council oil survey
8. NI Housing Executive - House Condition Survey 2011

To produce the report we undertook a questionnaire survey and spoke to consumers directly in focus groups. We would like to acknowledge and thank all those consumers who took part.

The report provides a snapshot of consumers' attitudes to competition in the domestic energy markets. It outlines recommendations which we believe will help energy companies operate in a competitive market that will deliver on its potential to benefit all consumers.

4. Consumer Context

Consumer Council research[9] shows that half the adult population here is worried about making ends meet and over half are worried about making ends meet in the future. Furthermore, only half are managing to keep up with bills and debt without difficulties and more than one in four stated that they are worried that they, or someone in their household, will lose their job within the next year.

The increase in the cost of energy is a major source of pressure for consumers. In our report, 'Consumer 2010', the Consumer Council noted the impact of energy prices on consumers and tested their views on the emerging competitive market. At that time it was estimated that 78 per cent of consumers in arrears with their electricity or gas bill, were classified as suffering from fuel poverty.

Competition in the energy market provides consumers with more choice on price and service. However, to take advantage of this consumers need to be proficient in making informed choices. In 2010, we reported that 64 per cent of consumers said they had started shopping around more since the economic downturn[10], following years of consumer apathy. Furthermore, consumers need to be aware of the pitfalls inherent in complex tariffs. The Consumer Council recently undertook qualitative research into financial capability and product choice. This showed that the choice of products consumers eventually made was often based on trust, loyalty and word of mouth as they rarely had the information or the confidence to choose a suitable alternative. In addition, they often do not read the terms and conditions even though often they know they should; the primary reason for this is because they do not understand them and find the jargon too complicated[11].

Whilst consumer confidence in knowing their rights has improved in recent years there is a still a long way to go. In 2011, 21 per cent of consumers said that they did not feel confident in expressing their consumer rights[12].

9. The Consumer Council, Consumer Proficiency Research, 2011/2012
10. The Consumer Council, Consumer 2010 Report
11. The Consumer Council Financial Capability Panels Research, October 2012
12. The Consumer Council, 'Canny consumers?' report, September 2012

5. The development of competition in the NI domestic energy market

Competition between suppliers within each of the domestic energy markets (gas, electricity and oil) has developed in different ways because of the different infrastructure required to deliver each utlity into the home and the timing of the introduction of competition in each market. Without the need for a tangible network and in the absence of economic and social regulation of competition, the oil industry has developed based on the principle of supply and demand. From a consumer perspective this model does not necessarily provide a high standard of service which takes account of customers' location, vulnerability or ability to pay.

With regards to the electricity and gas markets, in recent years the technical systems and legal framework required for switching supplier have been developed and improved by the industry and the Regulator, with Consumer Council input. In October 2011, natural gas 'Pay As You Go' meter customers were able to switch for the first time and in May 2012 the completion of the 'Enduring Solution' project ensured that there is no limit to the number of electricity customers who can switch their supplier.

Today, domestic customers in NI have the choice of four electricity suppliers and those in Greater Belfast and Larne have the choice of two gas suppliers. However, competition in NI's domestic electricity and natural gas markets is still in its infancy and each remains dominated by the original supplier.

Consumers have already seen a positive impact of competition in the current price differentials between electricity and natural gas suppliers, which can be as much as 14 per cent[13]. Furthermore, consumer choice has increased with new tariffs, special offers and new innovations such as 'online' payment options becoming available. However, mirroring the experience of Consumer Focus

13. Airtricity – Home Electricity Saver 24 tariff

(formerly Energywatch) in GB, the Consumer Council has seen an increase in the number of complaints about energy suppliers and there is concern that as in GB, vulnerable consumers may be less able to take advantage of competition.

5.1 Electricity

Power NI remains the dominant supplier of electricity in NI but this dominance is diminishing. At the end of 2011 Power NI had over 87per cent of domestic customers but by the second quarter of 2012 this had fallen to 85 per cent. By the end of September 2012, more than 135,000 domestic electricity customers had changed supplier. The net change of supplier in the domestic sector was on average around 5,000 per month switches in 2011. The average increased to 6,000 switches per month in the period January – May 2012 and to more than 10,000 per month switches from June to September 2012.[14]

Table 1. The total number of domestic electricity customers in NI[15]

End 2011	Standard Credit	Keypad	Total
Domestic customers	492,951 (63%)	292,797 (37%)	785,748 (100%)

14. Utility Regulator, Energy Retail Report, 2012
15. Utility Regulator, Transparency Report, February 2013

Table 2. Market share of domestic electricity customers in NI[16]

	Customers		Market share	
	End 2011	Oct 2012	End 2011	Oct 2012
Power NI	431,276	415,639	87.28%	85%
Airtricity	61,221	100,888	12.39%	13%
Budget Energy	1331	13,588	0.27%	1.7%

When Power NI was the only supplier it offered three main tariffs. Now across all suppliers there are 28 different tariffs with a range of payment and billing methods and contractual periods. The difference between the lowest and highest tariff is currently 14 per cent which, using the average NI consumption[17], gives an annual saving of £71.

As competition has developed the Consumer Council has seen a large increase in the number of electricity complaints. Between 1 April 2009 and 1 April 2012 the number of electricity contacts made to the Consumer Council increased by 57 per cent. The number of formal stage 2 complaints[18] investigated by the Consumer Council has also increased sharply from 12 in 2009 - 2010 to 83 in 2011-2012[19].

16. Utility Regulator, Transparency Report- February 2013
17. NI average domestic electricity consumption is 3,300 kwh, source: Utility Regulator
18. CCNI classifies a complaint as stage 2 when the company has been allowed reasonable time to resolve the complaint and the consumer remains dissatisfied.
19. The Consumer Council, Complaints Report 2009-2011 and 2011-12

5.2 Natural Gas

The natural gas market in Northern Ireland is split into two geographical areas. Competition exists only in the Greater Belfast and Larne areas since 2010. There are currently two competing suppliers - Airtricity Gas Supply Limited (NI) (formerly Phoenix Supply) and firmus energy. In the other area, along the South-North Pipeline and North-West Pipeline[20], firmus energy maintains a monopoly.

Where competition exists Airtricity Gas Supply (NI) had 92 per cent of domestic customers at the end of 2011 but this had decreased to 86 per cent by the end of the second quarter of 2012.[21] The price difference between Airtricity Gas Supply (NI) and firmus energy is up to 10 per cent in the Greater Belfast and Larne areas. However, in those areas without competition, NI natural gas customers do not have the option to switch supplier.

Table 3: Natural gas, domestic and small Industrial and commercial market share in Greater Belfast and Larne (December 2011)

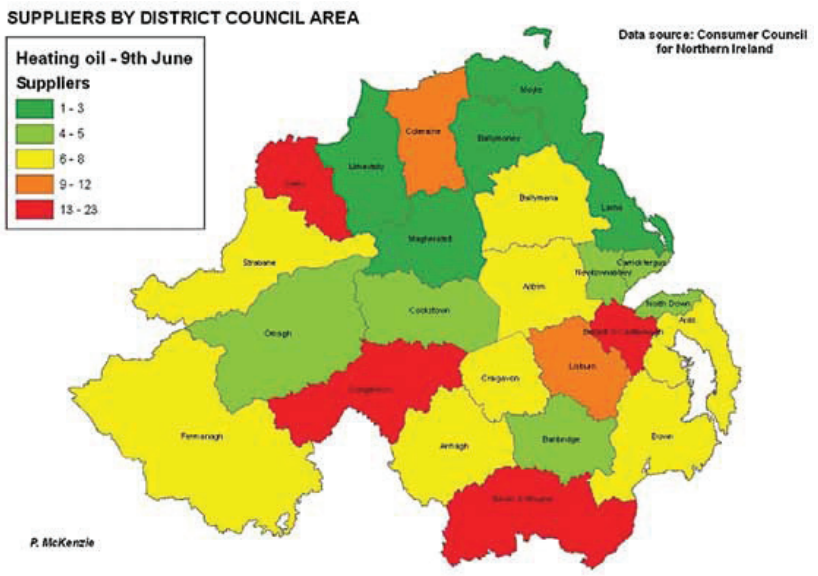
	Customers	%
Airtricity	130,182	91.85
firmus energy	11,535	8.14
VAYU	12	0.01
TOTAL	141,729	100

20. Known as the 'Ten Towns' of Derry/Londonderry, Limavady, Coleraine, Ballymoney, Ballymena, Antrim, Craigavon, Armagh, Banbridge and Newry.
21. Utility Regulator, Energy Retail Report, 2012

5.3 Home Heating Oil (oil)

Oil is the source of heating for 68 per cent of NI homes, rising to 82 per cent in rural areas[22]. According to the Northern Ireland Oil Federation (NIOF) there are around 300 oil distribution companies in NI. Though there are numerous suppliers across NI at a whole, at a local level, especially in rural areas, there is often limited choice as shown in Figure 1 below.

Figure 1: The distribution of oil suppliers in NI by Council area



22. NI Housing Executive- House Condition Survey, 2009

Oil prices vary depending on market conditions. This includes changes to: the price of crude oil; the cost to refine the product; the cost of marketing and distribution; the profits of refiners and wholesalers; the time of year (the price can be more expensive in winter as demand is high during cold weather); and competition from suppliers across the region.

Consumer Council research[23] indicates that oil is 33-45 per cent more expensive than gas, using the average retail unit price for each fuel. Our research also shows that on average consumers using oil spend an estimated £637 extra per year than the average gas consumer.

The research also highlights that the cost of oil can vary considerably depending on consumers' ability to afford larger refills and other energy efficiency variables, such as boiler efficiency rating. For example, consumers relying solely on 20 litre emergency oil drums spend 41 per cent or 61 pence per litre more than the cost of the average oil refill. The same consumers would be paying a staggering 136-151 per cent more for their oil than those using natural gas.

The oil industry is not subject to economic regulation which does apply to both the gas and electricity sectors. In order to ensure oil consumers are afforded similar levels of protection as gas and electricity consumers, the Consumer Council and the NIOF have agreed a Customer Charter. It provides clarity on levels of customer service that will be afforded to oil consumers, including clarity on payment methods and billing.

23. The Consumer Council, Cost of Gas - v - Oil brief, March 2013.

6. Consumer Switching - The Findings

6.1 Choice of fuel

Electricity is available to all households in NI but consumers will use either natural gas or oil for central heating[24]. Our research showed:

- 14 per cent of households surveyed used natural gas;
- 46 per cent of the households surveyed in Belfast city had natural gas supplied to their homes; and
- Outside the city of Belfast the vast majority of households (89 per cent) used oil to heat their homes.

6.2 To switch or not to switch?

It is generally accepted that the higher the rate of switching amongst consumers the more competition is working. Unlike GB, which is seeing switching rates fall[25], NI is currently experiencing an increase in the number of customers switching. In order to maintain a high level of switching stakeholders need to understand why some people switch and why others do not.

Those who have switched

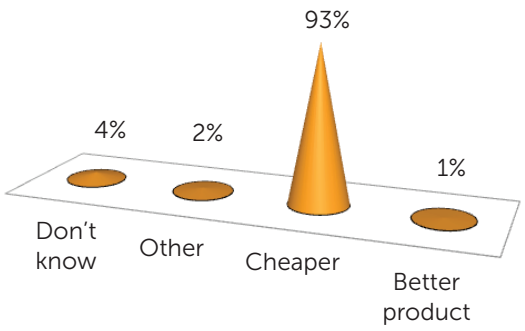
We asked those who had switched what motivated them to do so. Our research showed that:

- For nine in 10, a cheaper product was the key factor for switching;
- Of those who had switched either their natural gas or electricity, one in five required a saving of less than 10 per cent in order to choose to switch supplier;

24. For more information on converting from oil to natural gas see the Consumer Council report 'Customers' Experience of Natural Gas in Northern Ireland' (June 2012)
25. Consumer Focus, 'Switched On?' January 2013

- For almost half, the saving required was between 10 and 15 per cent; and
- Only two per cent said price was not a factor.

Figure 2: Key factor motivating a switch



Those who have not switched

We wanted to find out from those who had not switched, what stopped them from doing so. The results show:

- The most frequently cited reasons for not switching were that it was too much hassle (31 per cent) or that they liked their supplier (29 per cent);
- Other reasons for not switching were that almost one in five (18 per cent) thought the new supplier would eventually put the price up; and
- Around one in 10 (12 per cent) felt they did not know enough about it or they were just too busy (nine per cent).

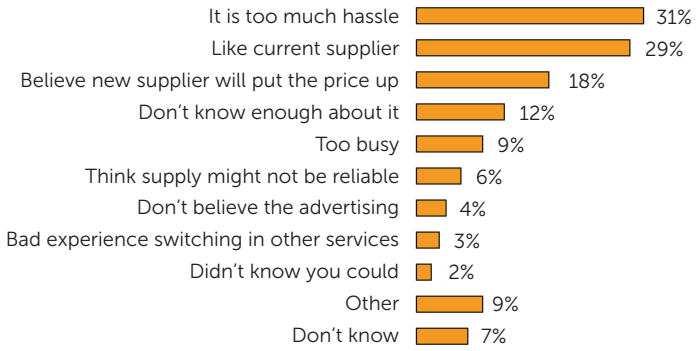
"They said you get 14% discount off NIE ... and 8% less for the second year and when it comes to the end of your second year you can look around and change again if you want to see if they'll be another deal ... so it's saving us money."

Cookstown Consumer Panel

"Cost, obviously the cost."

Derry Consumer Panel

Figure 3: Why consumers have never switched



"I'm afraid just in case you jump out of the frying pan into the fire that it isn't going to be any cheaper, it isn't going to be any more beneficial to me as a consumer. The people come to the door and they're very slick and they're reading from a script, and I just don't believe everything that people tell me, particularly when somebody comes to the door or you're approached in a shopping centre."

Belfast Consumer Panel

"I just wonder how easy it is to monitor it.....I wouldn't know how much electricity is a unit between the two to monitor it."

Cookstown Consumer Panel

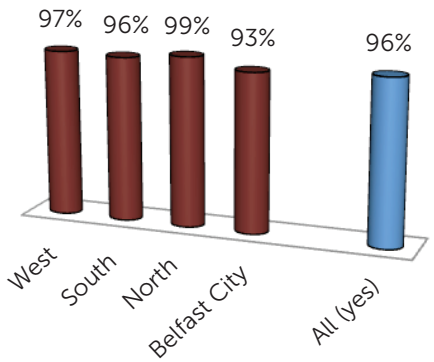
- Amongst those who had never switched supplier a significant proportion (29 per cent) did not know what level of saving would prompt them to consider switching;
- A fifth (22 per cent) claimed that price would not be a factor;
- Of the remainder, most would require a saving of less than 20 per cent to switch supplier; and
- Of those who had not switched supplier, two in three had not even thought about switching. Most of the remainder had thought about switching but had not done anything about it. A small number (six per cent) had decided against switching, while a very small number were planning to do so in the future.

6.3 Knowledge about switching

A prerequisite to someone switching energy supplier is awareness that switching is possible and how to go about it. Clearly it is also helpful if the consumer is aware of the benefits of switching and all the implications it will have for them.

- 96 per cent of those surveyed know that it is possible for NI households to change electricity supplier;

Figure 4: Consumers who know that it is possible for NI households to change electricity supplier



"Well I'd be afraid maybe if you had to move back there may be a charge."

Cookstown Consumer Panel

"It's just I'm too lazy to switch."

Fivemiletown Consumer Panel

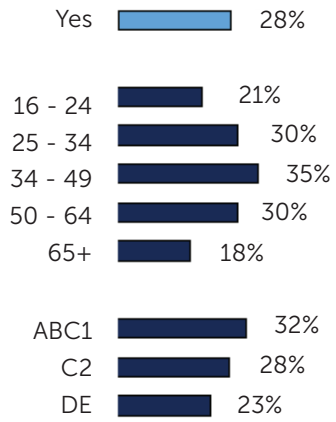
- Of those who use natural gas 86 per cent were aware that depending on where they lived it was possible to change their supplier; and
- Just over half of those who have never switched supplier did not think there was enough information available about switching energy supplier. This view was most prevalent amongst those under 25 and those belonging to socio-economic groups C2DE.

6.4 Who switches?

As well as the reasons people are switching we wanted to find out who was switching.

- One in five natural gas customers had switched within the last year;
- Just under three in 10 had switched their electricity supplier, two thirds (64 per cent) within the last 12 months, with a further five per cent in the process of switching at the time; and
- Those aged 35 –49 were most likely to have switched, while there was a correlation with the socio-economic grouping, with those from middle class groups ABC1 more likely to have switched.

Figure 5: Age group of consumers who have changed electricity supplier



6.5 Experience of switching

The experience of switching by those people who have been through the process will influence whether they switch again and may influence others as their experience is passed on to friends and family.

- The vast majority felt it had been at least easy, if not very easy, to switch;
- Almost seven in 10 believed they had saved money by switching, with around a further two in 10 who could not tell yet; and
- For a similar number, their expectations of switching had been met; some one in six didn't know yet and for a few (six per cent) they had been partly met.

"I honestly did it because it was so easy. I mean if it had been a lot of hassle with it, if I had to start making phone calls and filling in forms I wouldn't have bothered. I knew I was saving a bit of money but because he did it all there and then I thought well happy days, save me the hassle!"

Ballymoney Consumer Panel

"It was easy just. The guy came to the house and he did it all on the laptop and within like two or three weeks it was switched over."

Belfast Consumer Panel

6.6 Marketing

In order to gain new customers, competing suppliers have to market their product and services. Customers' experience of marketing from energy suppliers in GB in the early stages of competition was quite negative. Suppliers were accused of misleading consumers and of heavy handed tactics in their selling techniques, particularly in marketing and sales at the doorstep and in public places. Furthermore, GB experienced an explosion in the number of different tariffs on offer. The

"... It was just the fact that they had rung us on a certain day and if we weren't there then we missed it, and then they sent more and more letters and they expected you to be there for that phone call."

Fivemiletown Consumer Panel

"I've had no bother. When the guy came to the door, you know, I wasn't interested and he wasn't pushy or anything. He was an older man, very professional, and he said, right, that's fine, didn't push me at all."

Belfast Consumer Panel

"I never thought about switching until they came to the door."

Derry Consumer Panel

"I didn't know about Airtricity until the guy landed at my door."

Fivemiletown Consumer Panel

idea was to offer choice but it ended up causing confusion amongst consumers and actually inhibited switching. Doorstep selling and marketing in public places, such as shopping centres are now being used here and it is important that they help consumers make the right choice. The discussion in the consumer panels was generally positive towards the current marketing practices of energy suppliers in NI.

6.7 Comparisons with GB

GB has had competition in gas and electricity since the late 1990s. Despite significant differences in the markets (mainly their size and the limited distribution of natural gas in NI), it is highly likely that, given the level of complaints the Consumer Council is already receiving, there will be some similar experiences in NI to those in GB. It is interesting to compare the current GB switching landscape with the current position in NI. In January 2013, Consumer Focus published a report on its research into customer experiences of switching.

Key findings from Consumer Focus research into switching in GB March/April 2012:

1. Switching rates are down by a quarter since 2008;
2. Some suppliers are failing to meet statutory switching requirements, for example regarding timescales;
3. Some customers are experiencing problems during the switching process;
4. Customers in vulnerable positions have the worst switching experience; and
5. Poor experiences have a big impact on future behaviour.

In Northern Ireland we are already experiencing some of the same issues.

6.8 Home Heating Oil

Switching oil supplier involves a very different process to switching natural gas or electricity supplier. Each time the consumer needs a refill of oil they have the opportunity to compare suppliers and choose a new supplier. For over 60 per cent of oil consumers here this happens at least three times a year. Compared to GB, oil consumers in NI buy their oil more frequently - 26 per cent buy four to six times a year compared with 10 per cent of GB customers[26].

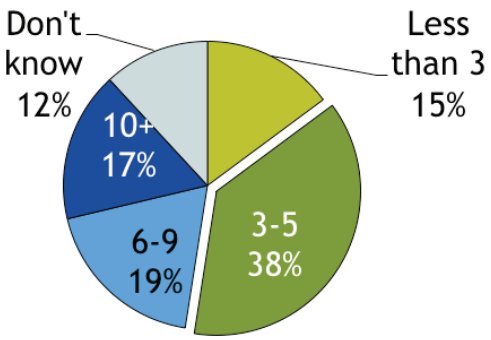
The frequency of purchase and the large number of locally based suppliers suggests that the motivation for choosing a particular supplier may be driven by different factors than the choice to switch natural gas or electricity supplier. The savviest consumer will not only have knowledge of the local oil supplier market but also the inclination and means to take advantage of it. It is not enough to know there are a lot of suppliers available, consumers also need to

26. Office of Fair Trading 'Consumers' Experience of Off-Grid Energy'- 2011

take the time to find out what each supplier can offer and to have the financial resources to buy in bulk to get the lowest price. Our research shows that when buying oil many customers remain with a supplier because of information gained from friends and family or even because they personally know the supplier.

- More than one in three users of oil were aware of at least six suppliers in their area with a similar number aware of between three and five suppliers;

Figure 6: Consumers' awareness of the number of oil suppliers available



"In my family we all use the same oil company and my aunt she does the weekly thing, sort of like an electric card, you top up about £10 a week or whatever and they will come to her house to top it up."

Armagh Consumer Panel

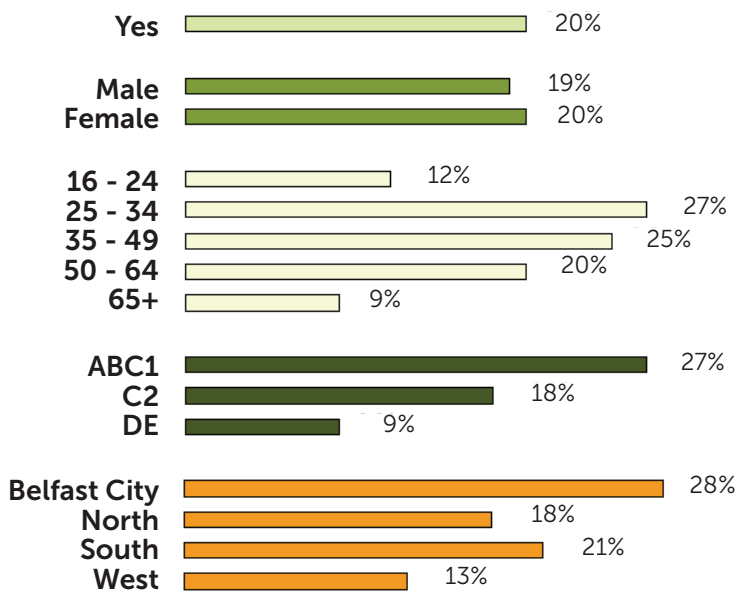
- Two thirds of those who use oil tend always to buy from the same supplier with a further fifth usually buying from the same supplier;
- Very few respondents (five per cent) felt that it was not easy to compare prices charged by different heating oil suppliers;
- Just over one in four get quotes every time they buy oil with more than one in two never seeking quotes from other suppliers;

- Those belonging to socio-economic groups DE and those living in the South or West of NI were least likely to seek competitive quotes;
- Those in socio-economic groups DE were also least likely to feel that comparing prices charged by different suppliers was very easy with a significant proportion (23 per cent) unsure if it was easy or not; and
- One in five had used an oil price comparison site on the internet. Those aged 25-49, ABC1s, and those living in Belfast City were most likely to have used such sites.

"A company of mine, I always get them, I've been getting them for I don't know how long and my husband always says 'ring around' but when I ring them back they know me that well they give it to me for the price I've got it somewhere else, maybe £5, £10 cheaper anyway."

Armagh Consumer Panel

Figure 7: Consumers who had used oil price comparison sites on the internet



"I would buy mine in drums and just fill up. It probably costs me more but I find I couldn't afford to pay a big oil bill so I would put £30 a week into my oil."

Belfast Consumer Panel

7. Conclusion

Competition in the electricity and natural gas industry in NI is still in its infancy, but nevertheless is developing steadily. Those consumers who have switched supplier have found the process easy and have benefited from switching.

Competition in the domestic oil market is far more developed. However, consumers appear to be content to stick with a known and trusted supplier and this seems to reflect the fact that NI has not yet got a well developed 'switching' culture. With more information and awareness of the benefits of switching NI consumers could reap more rewards across all domestic fuels.

It is significant that the 'non-switching' culture is particularly prevalent in the lower socio economic groups, where the benefits of switching could be more profound. It is important that as competition continues to develop, vulnerable and lower income consumers are afforded adequate protection and are equipped with the tools necessary to take advantage of switching. It is important the suppliers, the Regulator and consumer representatives continue to work together to ensure that all consumers reap the benefits of competition.

8. Key recommendations

The Consumer Council is committed to ensuring that all consumers have the knowledge and confidence to switch energy supplier if they wish. We will continue to develop information, such as our 'Switch-On' guides, so all consumers can make informed decisions on their preferred energy supplier. We will continue to target the most vulnerable consumers and work with others to ensure the following recommendations are put in place.

1. The energy industry should provide more information to increase the knowledge, awareness and confidence of consumers on the benefits and process of switching;
2. The energy industry and the Regulator must remain active in developing safeguards to ensure the problems experienced in GB do not occur in NI;
3. The energy industry should be targeting lower socio economic groups and consumers in fuel poverty to promote the benefits of switching energy supplier and shopping around for oil;
4. Government, local Councils and energy advice organisations should support and encourage pilot approaches that provide oil-dependent consumers with alternative purchasing options, such as fuel brokering and low cost loans. This may help address the issue of consumers on low incomes buying 20 litre oil drums[27]; and
5. Energy suppliers and the Regulator must continue to work together with the Consumer Council to identify and address the reasons for the increase in electricity complaints that has accompanied the introduction of competition.

27. Consumers relying on heating oil emergency drums spend 41 per cent or 61pence per litre more than the cost of the average 500 litre oil refill and between 136-151 per cent more for their oil than those using natural gas. Source; Consumer Council 'Gas v Oil Cost Comparison Brief' - March 2013.

9. Appendix A - Survey Questions

1. Did you know that it is possible for households in Northern Ireland to change electricity supplier?
2. Have you ever changed your electricity supplier?
3. When did you last switch?
4. Do you use natural gas or home heating oil?
5. Did you know that depending on location, it is possible for some households using natural gas to change their supplier?
6. Have you ever changed your natural gas supplier?
7. When did you last switch?
8. On price, how much of a saving would be required / was required (as appropriate) for you to switch your electricity (or natural gas)?
9. What was the key factor in causing you to switch?
10. How easy or difficult was it to switch?
11. Do you think you have saved money by switching?
12. Overall have your expectations of choosing to switch been met?
13. Have you ever thought about switching your electricity (or gas supplier)?
14. Why have you never switched?
15. Do you think there is enough information available about switching energy supplier?
16. Do you tend to buy oil from the same supplier every time?
17. How many oil suppliers are you aware of in your area?

18. How often, if at all, do you get quotes from different suppliers before buying heating oil?

19. How easy or not do you think it is to compare the prices charged by different heating oil suppliers?

20. Have you ever used Heating Oil Price Comparison sites on the Internet?

10. Appendix B - Socio Economic Groups

A Higher managerial, administrative, professional e.g. Chief executive, senior civil servant, surgeon;

B Intermediate managerial, administrative, professional e.g. bank manager, teacher;

C1 Supervisory, clerical, junior managerial e.g. shop floor supervisor, bank clerk, sales person;

C2 Skilled manual workers e.g. electrician, carpenter;

D Semi-skilled and unskilled manual workers e.g. assembly line worker, refuse collector, messenger; and

E Casual labourers, pensioners, unemployed e.g. pensioners without private pensions and anyone living on basic benefits.

11. Appendix C – Consumer Council information on switching energy supplier

The Consumer Council has produced a series of 'Switch On' guides for consumers to help inform them about energy switching and other energy issues; these include:

- Switching Electricity Supplier leaflet;
- Switching Natural Gas Supplier leaflet: and
- Home Heating Oil leaflet.

These are part of a suite of energy leaflets that also include information and advice on:

- Coal;
- Electricity;
- Energy Efficiency;
- Energy advice for Business;
- Energy advice for Students;
- Energy Performance Certificates;
- Natural Gas; and
- Energy advice for Older People;

Also available are Natural Gas and Electricity Price Comparison Tables. All these documents are available on the Consumer Council website www.consumercouncil.org.uk, by contacting us via facebook (Consumer Council Northern Ireland), twitter (ConsumerCouncil) or by calling 0800 121 6022.

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Consumer Council Northern Ireland

ConsumerCouncil

DETI Written Briefing Electricity Policy Review

Enterprise, Trade and Investment Committee: Review of Electricity Policy: Briefing from Energy Division, DETI

Energy policy and context

1. DETI is responsible for devolved energy policy and works with the independent Northern Ireland Authority for Utility Regulation (NIAUR) to promote the strategic development and regulation of the energy industry in Northern Ireland in the balanced interests of consumers, the economy and the environment. Both organisations operate within overarching legislative and strategic policy frameworks endorsed by the Assembly.

2. The over-arching pieces of legislation relating to energy matters in Northern Ireland are:

   - The Electricity (Northern Ireland) Order 1992;
   - The Gas (Northern Ireland) Order 1996;
   - The Energy (Northern Ireland) Order 2003;
   - The Electricity (Single Wholesale Market) (Northern Ireland) Order 2007;
   - The Energy Act (Northern Ireland) 2011

3. Additionally, work is progressing on a further Energy Bill. The Bill has obtained Executive approval and arrangements for its introduction to the Assembly are in progress. A summary of the main provisions of each of the Orders, the Energy Act and the proposed Energy Bill is included at Annex A of this paper.

4. European energy policy is a significant driver of energy policy and legislative change for Member States (and for Northern Ireland as part of the UK Member State). Key priorities for Europe include increased use of renewables, greater energy efficiency and delivery of arrangements to achieve closer harmonisation of energy markets across Member States.

5. The key types of European legislation that impact on domestic arrangements are as follows:

   - **EU Regulations** are the most direct form of EU law - they have binding legal force throughout every Member State, on a par with national laws. National governments do not have to take action themselves to implement EU Regulations – they have "direct effect".
   - **Directives** are addressed to Member States, and must be transposed into national law by the binding date specified in the Directive. EU Directives lay down certain end results that must be achieved in every Member State. National authorities have to adapt their laws to meet these goals, but have some latitude as to how to do so within their own legal framework. Directives are used to bring different national laws into line with each other, and are particularly common in matters affecting the operation of the single market.
   - Decisions apply in specific cases only, involving particular authorities or individuals.

6. The Department has worked, or continues to work, to transpose a number of Directives in recent years, the most significant of which are:

   - Renewable Energy Directive (2009/28/EC);
   - Energy Efficiency Directive (2012/27/EC); and
   - Electricity (2009/72/EC) and Gas Directives (2009/73/EC) as part of the wider EU Third Package of energy legislation (also known as IME 3)

7. In 2007, European Union Heads of Government agreed to a binding target that 20% of the EU's energy (across electricity, heat and transport) should come from renewable sources

by 2020. The EU Renewable Energy Directive (2009/28/EC) on the promotion of the use of energy from renewable sources came into force in June 2009 and set a target of 15% **renewable energy consumption** in the UK by 2020. At a UK level, DECC has assumed that this will require a 30% renewable contribution from the electricity generating sector, a 12% renewable contribution from the heat sector and 10% renewable contribution from the transport sector.

8. In order to meet these EU targets (which are set at Member State level) it is necessary to introduce more low carbon generation into the energy mix. To do this it is necessary to promote investment in low-carbon generation, while minimising costs to consumers. This will in the longer term reduce the risks to future security of electricity supply.

9. In 2010, the Northern Ireland Executive published the Strategic Energy Framework (SEF) as the direction of travel for energy policy in Northern Ireland to 2020. The SEF, in part, seeks to capture some of the requirements from the Renewable Energy Directive. It is built around four key goals – building competitive markets; ensuring security of supply; enhancing sustainability and developing our energy infrastructure.

10. Development of the SEF was informed by a pre-consultation scoping study and the All-Island Grid Study which included the first comprehensive assessment of the ability of the electrical power system and transmission grid to absorb large amounts of electricity generated from renewable sources. The Study concluded that it was technically feasible for up to 42% of power generation demand on the island to be provided from renewable energy, that the least cost and most-readily available resource being wind and that in order to capture and transmit the higher levels of renewable generation, significant grid strengthening would be required.

11. SEF included a **renewable electricity consumption** target of 40% by 2020 and 10% for renewable heat. The Executive's Programme for Government 2008 - 2011 had originally set a target of 12% electricity consumption from renewable sources by 2012. This target has been exceeded, with approximately 15% of electricity consumption currently from renewable sources. The Executive's latest Programme for Government 2012 – 2015 sets an interim target of 20% by 2015 which, it is expected, will be met with the current volume of onshore wind in the planning system.

SEF : NI Renewables Policy

12. DETI commissioned work in 2009 (based on information from 2008) to recommend possible renewable electricity targets that might be included in the draft SEF. The costs were evaluated using 2009 prices (pence per kWh) as a baseline over a 20 year period, based on the cost of providing the new renewable generation plant required and associated infrastructure (mostly grid enhancement).

13. The full direct cost of new renewable generation was assumed to be borne by the consumer as well as all of the infrastructure costs, e.g. grid connection. This is currently standard practice in almost every country where a program to increase renewable energy deployment is in place.

14. The cost to consumers of renewable electricity to 2020 will depend on a number of factors, including the exact mix of technologies at that date. The 2009 work examined a number of possible scenarios/ projections for 2020 across a range of areas to inform consideration of future targets including:

- Overall electricity consumption;
- Different electricity generation mix options (onshore/ offshore renewable and conventional generation); and
- Estimated costs to the consumer (domestic and other) across the different scenarios (to include grid strengthening and support mechanism costs).

15. Assessments were also made in relation to the benefits accruing to this policy i.e. projected savings on CO2 and energy security and economic benefits. This work formed the basis for the decisions on the setting of the 40% renewable electricity target included within the SEF in 2010.

16. The estimated cost to the consumer on the average domestic bill (53% of consumers) to meet a 37-48% target ranged from £49 to £83 per annum by 2020.

17. It was acknowledged that it is more difficult to define the non–domestic consumer, which includes commercial, public sector and industry. Moreover, the size and level of consumption for non-domestic users varies greatly depending on the type of business making it difficult to put a precise figure on costs.

18. It is also important to bear in mind that the relative cost to consumers could reduce significantly in favour of renewables if the rise in fossil fuel costs, due to increasing demand and reducing supply, transpires as many commentators predict.

Progress in Renewables Policy since 2009

19. Since the completion of the 2009 study, there have been a number of significant changes in renewable policies. These developments are summarised below:

- considerable progress in the level of renewable generation which has increased from approx 8% in 2009 to 15% (mid-2013);
- a significant increase in the level of small scale generation, with associated impacts on the electricity grid and cost to consumers;
- Announcement by the Crown Estate of development rights for up to 800MW of offshore renewable projects (600MW offshore wind and two 100MW tidal projects) in October 2012;
- Completion of Strategic Environmental Assessments of both onshore and offshore renewable deployment;
- Decision to close the NI Renewables Obligation to new applicants in 2017 and, under the Electricity Market Reform (EMR), introduction of a UK-wide Feed in Tariff (FIT) with Contracts for Difference for large scale (over 5MW) renewable electricity;
- DETI commitment to introduce a small scale FIT in 2016-2017; and

20. Much of the necessary investment to fund grid upgrade will be subject to scrutiny and approval of the Utility Regulator and will be incremental in nature to minimise the impact to consumers who will pay for any new infrastructure.Aspects of the funding considerations are subject to completion of the NIE 2012-2017 Price Determination (known as RP5) which has been referred, in the absence of agreement between the Regulator and NIE, to the Competition Commission for Determination.

21. It is important to note that currently the cost characteristics of the majority of large scale, intermittent, low-carbon generation (wind) that bids into the SEM are high capital cost and low operating cost. While this is also the case for other types of large scale renewable generation (although not all types are intermittent, for example, biomass), currently the largest volume of intermittent renewables bidding into the SEM above 10 MW is onshore wind.

Grid Development for renewable generation

Small Scale

22. The increasing amounts of small scale generation connecting to the 11KV network in Northern Ireland have increased significantly since 2010. The volume and scale of small scale generation connecting onto the 11kV system is now impacting on the 33 kV system.

23. This is a significant development because the generator pays for the cost of connection to the 11 kV systems and hence that minimises the cost to the consumer - once reinforcements are needed at 33KV that cost is then spread across all consumers.

24. In addition the significant volume of small scale generation on the network is leading to, on occasion, larger scale more efficient generation to be turned off to accommodate smaller less efficient small scale generation. The average load factor (for a small scale wind turbine is 15 % compared to 32% for a larger scale wind turbine).

25. DETI is in the process of undertaking a small scale ROC banding review to set the ROC level for small scale wind and other small scale technologies for the period 2015-2017. This review will as part of its terms for reference take into account the impact on grid at different ROC banding levels and the contribution of small scale to the overall 40% renewable target.

Large Scale

26. Current NIE grid development plans, valued at £44m, of which £30M were approved by NIAUR in February 2013, (with the remaining £14m approved in principle) should according to the Regulator allow renewable penetration to reach 27%. This will be accommodated by upgrading and reinforcing the existing network at least cost to the consumer.

27. Further grid development to meet the 40%, which will be subject to approval by the Regulator, will be incremental so that the impact on consumers is minimised. Until the RP5 Competition Commission determination is concluded, it is unknown at this stage the cost of this upgrading and the timescale.

28. It is important to note that currently the cost characteristics of intermittent lowcarbon generation (wind) are high capital cost and low operating cost, which means that this sort of low carbon generation faces greater exposure to wholesale price risk than conventional fossil fuel capacity, which has a natural hedge given that it is a price-setter in the market. Generally speaking, the system marginal price in the SEM generally follows the gas price and hence sets the market price. A wind generator will receive market price for wind generated electricity – so when the gas price/SMP is high a wind generator receives more revenue than when the SMP/gas price is low.

Impact of current DETI Renewable Electricity Policies

29. It is important to note that a number of 'green' policies will impact on retail electricity and gas prices, including renewable energy incentivisation, climate change/carbon reduction policies. Listed below are the main DETI renewable electricity policies.

Northern Ireland Renewable Obligation (NIRO)

30. Currently, the Northern Ireland Renewable Obligation (NIRO) is the main mechanism for incentivising renewable electricity generation. It works alongside the Renewables Obligations in England, Wales and Scotland. Since its introduction in 2005 it has been instrumental in increasing renewables consumption from a base of 3% to almost 15% now.

31. It covers a wide range of technologies – of all sizes – and has been adjusted over the years to reflect the needs of Northern Ireland generators and more recently the reducing cost of some renewable technologies.

32. A key factor in the success to date of the NIRO is the fact that it works within a UK-wide context, therefore the costs of both administering and incentivising the NIRO are spread across all UK consumers which offers the best value for money solution for Northern Ireland.

Cost of the NIRO to the consumer

33. The NIRO places an obligation of financing the policy on energy companies which is then passed onto the consumer through energy bills and currently represents approximately £12 to £15 on an average annual domestic electricity bill. It does not impact on gas bills.

Cost of the Northern Ireland Sustainable Energy Programme (NISEP) and Northern Ireland Fossil Fuel Obligation (NFFO)

34. Other policies such as the Northern Ireland Sustainable Energy Programme and the NFFO/ ROF add a further £11 to a bill. Generally, the NIRO adds in the region of 5% to a typical energy bill.

Electricity Market Reform

35. The UK Government's Electricity Market Reform programme has, in turn, been influenced by European policy and represents the steps identified by the Government to deliver against the binding EU targets. The three primary policy objectives of EMR are to reform the electricity market arrangements to:

(i) ensure security of supply;

(ii) drive the decarbonisation of our electricity generation; and

(iii) minimise costs to the consumer.

36. These reforms should support delivery of the key objective of meeting the 2020 renewables target. The intended effects are that sufficient generation and demand-side resources will be available to ensure that supply and demand balance continues to be met and that there will be sufficient investment in lowcarbon generation to meet decarbonisation objectives.

37. In May 2012, the DETI Minister, with the approval of the Northern Ireland Executive, announced that Northern Ireland would implement a number of the UK-wide Electricity Market Reform (EMR) measures, including:

- Closure of the NIRO to new generation from 1 April 2017
- Introduction of a UK-wide Feed-In Tariff with Contracts for Difference
- Administration of the Contracts on a UK-wide basis
- An Emissions Performance Standard for any new coal-fired power stations

38. In February 2013 the Northern Ireland Assembly passed a Legislative Consent Motion (LCM) in order to extend powers for electricity market reform to Northern Ireland via the DECC 2012 Energy Bill which was introduced in Westminster on 29 November 2012.

39. Contracts for Difference (CfDs) will be available to Northern Ireland generators for projects commissioning from 2016, but, crucially, the costs will continue to be socialised across all UK consumers. A contract for difference is a long term contract that provides stable revenues for low carbon energy projects at a fixed level known as a strike price. These contracts will help developers to secure the large upfront amounts of capital investment required for low carbon infrastructure.

40. By providing a fixed price FIT CfDs should help lower the cost of capital. They will protect consumers from high bills by clawing back money from generators if the market price of electricity rises above the strike price. CfDs will apply across the UK but Northern Ireland has retained the right to set its own support levels where there is clear evidence that this is necessary. However in this case the additional differential costs would fall solely to the Northern Ireland consumer base

41. Although the NIRO closes to new generation from April 2017, projects already supported under the NIRO will continue to receive support. A key factor in the success to date of

the NIRO is the fact that it works within a UK-wide context, therefore the costs of both administering and incentivising the NIRO are spread across all UK consumers which offers the best value for money solution for Northern Ireland. An incentive mechanism funded only by Northern Ireland consumers would be too expensive and not allow us to reach the 40% target by 2020.

Cost of EMR

42. The most recent impact assessment for Electricity Market Reform (EMR) considers the impacts of measures to reduce the risks to future security of electricity supply and promote investment in low-carbon generation, while minimising costs to consumers. The key benefits of decarbonising using EMR are reducing financing costs for investors – the greater price certainty offered by CfDs allows investors to access financing at a lower cost.

43. The most recent UK wide impact assessment is based on a standardised set of assumptions, including technology costs and electricity demand at the time the analysis was undertaken.

44. The impact assessment analysis shows that the design of EMR (through FiT CFDs) will lower the financing costs of the large investments needed in electricity infrastructure, regardless of the level of decarbonisation targeted in 2030 – 50gCO2/kWh, 100gCO2/kWh and 200gCO2/kWh. (The committee will recall that they considered the EMR power sector decarbonisation target LCM at its meeting of 19th September).

45. The impact assessment reflects the policy choices in the draft Delivery Plan published in July 2013 and sets out the costs and benefits associated with EMR, on the basis of the draft CfD strike prices announced in June 2013 and the draft reliability standard to ensure that the UK has security of supply and sufficient capacity to keep the lights on.

46. Under these assumptions, it is estimated that EMR results in a Net Present Value of £9.5bn up to 2030, a slight increase from the previous estimate (£4.2bn-£7.6bn) in May 2013. So therefore EMR could lead to an improvement in welfare of around £9.5bn up to 2030, with larger benefits up to 2050.

47. The updated analysis shows a slightly larger decrease in bills – on average, it is estimated that average annual household electricity bills will now be 9% (£63) lower from 2016 to 2030 (up from 6-8% lower in our previous estimates), compared to what they would be if we decarbonised using existing policy instruments.

Influence of Europe on Local Energy Policy

(i) **Renewable Energy Directive**

See paras 6-8 above.

(ii) **Energy Efficiency Directive**

48. The Energy Efficiency Directive came into force on 4 December 2012. The majority of its requirements must be transposed or otherwise complied with by 5 June 2014. It is aimed at increasing energy savings across the EU.

49. The Directive introduces cross-cutting responsibilities, with a number of NI Departments responsible for aspects of energy efficiency. DETI is working with the other NI Departments (DSD which has statutory authority for energy efficiency in the domestic sector and DFP for the public sector and Building Regulations) and Invest NI (for the commercial and industrial sectors) to address the cross-cutting obligations.

50. The Energy Efficiency Directive establishes a common framework of measures for the promotion of energy efficiency within the EU which will need to be transposed into Northern Ireland legislation or via administrative arrangements, including:

- A building renovation strategy;
- Policy measures to achieve energy savings among final customers, including an energy efficiency obligation or other policy measures to reach 1.5% annual energy savings;
- Mandatory energy efficiency audits for large enterprises (non-SMEs);
- Billing and metering requirements;
- Consumer information requirements;
- Comprehensive assessment of CHP potential;
- Mandatory assessments of energy efficiency potential of gas and electricity infrastructure;
- Priority dispatch for CHP;
- Encouragement of demand side resources such as demand side response in markets; and
- Promotion of the energy services market

(iii) **Electricity and Gas Directives**

51. The EU Third Package of energy legislation (IME 3) is a major package of EU legislation published in 2009 comprising two Directives and three Regulations. It aims to re-invigorate market integration and cooperation between Member States, harmonise the powers and independence of regulators at a national and EU level, increase transparency, and provide for effective 'unbundling' of vertically integrated undertakings (removing conflicts of interest between producers, suppliers and transmission system operators).

52. The Electricity and Gas Directives were transposed in Northern Ireland (in addition to administrative action, where relevant) via a number of legislative measures, new or modified licence conditions by the Utility Regulator, amendments to industry codes and other regulatory instruments.

53. There is a significant body of ongoing work in the development of a range of electricity and gas network codes. The Codes are developed by the European Network of Transmission System Operators for Gas and Electricity respectively and assessed by the Agency for the Cooperation of Energy Regulators (ACER) before being submitted to the European Commission. The Codes are subject to the 'comitology' legislative process before becoming directly applicable pieces of European legislation. At present, there are nine electricity Codes under development and five gas codes. The Utility Regulator will be responsible for closely scrutinising the technical detail of the codes and assessing the impacts for Northern Ireland in conjunction with the electricity and gas transmission system operators and the wider industry in Northern Ireland and helping to shape the development of the Codes where appropriate.

The impact of policy on energy prices

54. Northern Ireland is not unique in seeing rising energy costs. Price has to be considered alongside the security of supply and de-carbonisation objectives as well as the need to operate within the context of constantly fluctuating fossil fuel prices.

55. On 15 November 2012 the European Commission published a communication - "**Making the internal energy market work**"[1] – reviewing progress to date towards the implementation of an internal market that is competitive, integrated and fluid. The communication recognises major

1 http://ec.europa.eu/energy/gas_electricity/doc/20121115_iem_0663_en.pdf

advances in the way the energy market works, but calls for more action to integrate markets, improve competition and make the transition to a low-carbon economy. The communication also warns that energy prices are likely to continue to rise in the future due to a range of issues, including unrelenting global fuel demand and the investments needed to maintain and modernise the EU's ageing energy systems.

Mitigating against the impact of policy

Carbon Price Floor

56. Estimates suggest that the UK will need to replace up to a quarter of existing power plants by 2020 at a cost of up to £200 billion to secure its low carbon energy commitments. The Committee will be aware of initial steps taken by the UK Government, including the introduction of the Carbon Price Floor mechanism as a means of supporting the low-carbon agenda.

57. The successful negotiation of derogation from the measure for Northern Ireland avoided an increase in costs to consumers estimated at £20 million, prevented increases in gas costs (assessed independently at up to 32% by 2020), ensured the continuing level playing field for generators in SEM and prevented potential loss of up to 415 jobs directly associated with electricity generation (with an associated estimated revenue loss to local suppliers of £25 million - £30 million).

Climate Change Levy

58. The Committee has also taken evidence on the impact of introduction of the full rate Climate Change Levy in Northern Ireland from 1 April 2013. The Climate Change Levy (CCL) is a tax on business and public sector energy use, introduced in 2001 as part of a range of measures designed to help the UK meet its legally binding commitment to reduce greenhouse gas emissions.

59. In 2001, Northern Ireland was granted a 5-year exemption from the CCL for natural gas supplies to business and public sector customers in order to encourage the growth of then fledging gas industry and reduce dependency on more polluting fossil fuels, such as oil and coal, for industrial processing and heating. In 2006, the exemption was extended for a further five years to 31 March 2011, and in January 2011 agreement was reached for a further partial exemption until 31 October 2013.

60. In April 2013, the Department wrote to Her Majesty's Revenue and Customs (HMRC) to ascertain whether there had been any developments on the CCL and, in particular, whether there was any scope for continuing with a reduced rate of CCL on gas supplies for Northern Ireland companies. HMRC confirmed that the period for a reduced rate of CCL on gas supplies cannot be further extended, as Article 15 of Directive 2003/96/EC ('Restructuring the Community framework on the taxation of energy products and electricity') dictates that the lower rate of CCL for supplies of natural gas in Northern Ireland must end at 31 October 2013.

Irish Government Carbon Levy

61. In 2010 the Government in the Republic of Ireland introduced a carbon levy on power generators in respect of anticipated windfall profits for the period from mid-2010 to 2012. The measure was intended to maintain the retail electricity tariff rebate that Large Energy Users in RoI had previously received from a claw-back measure of some €300 million from ESB reserves in 2008.

62. The Carbon Levy would have had similar impact as the UK Government Carbon Price Floor measure, with bid prices into SEM having to include the cost of the carbon levy, resulting in price increases in both Northern Ireland and RoI. Industry estimates of the additional cost for Northern Ireland consumers were in the region of £13 million per year, an increase of

approximately 2% on customer bills. The increase for large Energy Users was estimated at £85k for the period March – December 2012 and at £45k for medium size manufacturers for the same period.

63. Following formal representations from DETI at official and Ministerial levels, the levy was removed by the RoI Government at no impact to Northern Ireland consumers.

Other factors impacting on prices

North/South Interconnector

64. The Tyrone to Cavan Interconnector is a major electricity infrastructure project being jointly undertaken by NIE and EirGrid. Increased interconnection between Northern Ireland and the Republic of Ireland is required to meet strategic energy requirements in both jurisdictions. The existing 275kV Interconnector which runs from Tandragee to Louth is limited in capacity and cannot meet future demands for transmission of secure and sustainable sources of energy.

65. Within the Northern Ireland context, the project is critical to meeting commitments set out in the SEF to facilitate enhanced levels of trading, deliver security of supply and enable more renewable generator capacity to be connected to the grid. The Executive's Economic Strategy and Programme for Government also commit to support for significant investment in the electricity grid, including cross-border interconnectivity.

66. Aside from the security of supply issue, delay in the delivery of the Interconnector also means that the all-island wholesale electricity market (SEM) is unable to operate as efficiently as possible in terms of generation dispatch. This inefficiency leads to increased constraint costs borne by consumers in both Northern Ireland and the Republic of Ireland. Current estimates of these charges are approximately £25 million per year, £7 million of which are borne by consumers in Northern Ireland. This figure rises for every year that the Interconnector is delayed.

67. The Committee will recall that every party called to provide evidence throughout June 2013 referenced the impact of delay in delivery of the Interconnector on the efficiency of the market and considered its delivery critical to addressing costs issues.

Northern Ireland Electricity Transmission and Distribution Price Control – RP5

68. The 5th NIE T&D Price Control (referred to as RP5) covers the period 2012- 2017. In the absence of agreement between NIE and the Regulator on funding requirements for the 5-year period, the matter has been referred to the Competition Commission for determination.

69. While the costs of renewables policy has been referenced at up to £1 billion, it is important to clarify that this includes all investment considered necessary on the grid, including necessary maintenance, asset replacement and upgrade and is not attributable solely to renewables. Estimates of the required investment in support of renewable generation targets are in the order of £363 million.

70. NIE, in its submission to the Competition Commission, estimates that its funding proposals, if accepted in full, would result in average annual increases in network charges of 3.3% - equivalent to an increase of approximately 0.7% per year in overall electricity bills for consumers. Its investment plans include expenditure associated with the North/South Interconnector and the connection of renewable generation in support of SEF targets. NIE estimates that this expenditure would add a further 3% to network charges at the end of RP5. The Regulator's assessment of proposed renewable investment for the RP5 period is £223 million.

71. The Department is not party to the detailed discussions between NIE and the Regulator in respect of price control processes. On 20 August 2013 the Utility Regulator, responding to a request from the Competition Commission highlighting the scope and complexity of the Price

Control, extended the period in which the Commission must make its report to 29 April 2014 (the statutory deadline for the Final Determination). The Commission has reported that it anticipates sending its Final Determination to the Regulator by end-December 2013/early 2014.

Pricing in the Industrial and Commercial (I&C) sector

72. In March 2013 the Utility Regulator published the Data Comparisons Paper showing that electricity costs for I&C consumers in Northern Ireland are among the highest in Europe.

73. Since publication of the Paper a number of parties have called for action to restructure tariffs in direct support of I&C customers. The Northern Ireland energy market is privatised and independently regulated. Any Government measure or direction with potential to directly influence pricing is subject to a range of considerations and is likely to require engagement with the European Commission to make the case for permissible intervention under State Aid requirements.

74. Those seeking restructuring of network charges have focused, in particular, on the Public Service Obligation (PSO), suggesting that while I&C customers contribute to recovery of the costs, they derive no benefit from it. Pending completion of detailed analysis of charges by the Regulator, the Department has undertaken a high level analysis of this particular network charge and examined the impact of redistributing the charge, in full, on domestic consumers. The analysis and assumptions are attached as Annex B of this paper. The analysis shows that if applied solely on domestic customers, annual bills would rise by £16. No assessment of the impact of such a measure on those already in or close to fuel poverty has been undertaken. Bills for the largest energy users would reduce by just over £19k per annum.

75. The Department is, however aware that a number of Member States have implemented measures which are now attracting the attention of the Commission, which is keen to ensure that such measures do not distort competition across member States. By way of example, large industrial and commercial customers in Germany are exempted from paying network charges. This exemption, estimated to amount to approximately €300 million in 2012, is financed by electricity consumers who pay a special levy.

76. On 6 March 2013 the Commission opened an in-depth investigation[2] to consider if this exemption constitutes state aid. Its preliminary view is that the surcharge may constitute a state resource and that the exemption seems to give beneficiaries selective advantage compared to their competitors in other Member States. Furthermore, in its communication "**Making the internal energy market work**" (see paragraph 35 above) the Commission also stressed the view that subsidies or regulation aimed at lowering overall energy prices tend to reduce the incentives for energy efficient behaviour and, at worse, can distort competition in and across member State markets. Calls for direct intervention by the Department or the Assembly must be considered against the Commission's position.

77. The DETI Minister has called on the Regulator, as part of the next steps work to progress the I&C Sector Information Paper, to give consideration to and report on the extent to which measures implemented in other jurisdictions may be delivering, legitimately, better price outcomes for I&C consumers. This analysis should also examine the extent to which such measures are considered to be compliant with State Aid obligations. It is important that this analysis is completed before any similar measure might be considered within the Northern Ireland context.

78. On 1 August 2013 the Commission issued Staff Working Document "**Regulatory Fitness and Performance Programme (REFIT): Initial Results of the Mapping of the Acquis**". In this document the Commission highlights the intention to prepare an analysis, for publication by end-2013, of the composition and drivers of energy prices and costs in Member States. It is understood that the report will have a particular focus on households, SMEs and energy intensive industries.

2 http://europa.eu/rapid/press-release_IP-13-191_en.htm

Delivery of Key SEF Actions

79. The Department is progressing a number of commitments set out in the SEF which aim to develop further the market and enhance competition. Key priorities currently include:

Gas network extension

80. The Department is committed to extending the benefits of natural gas, in terms of cost savings, greater convenience and easier budget management, to as many NI energy consumers as possible. The Executive has approved up to £32.5 million towards the new pipelines to bring gas to main towns in the West and North-West (to include Dungannon, Cookstown, Magherafelt, Coalisland, Omagh, Enniskillen/Derrylin and Strabane). New gas networks to the West and North West will impact slightly on the "postalised" gas transmission tariff for all gas consumers in Northern Ireland, resulting in a modest (lower than 1%) increase in gas bills. It is further estimated that gas extension will add approximately 0.5% on electricity prices.

81. Extension of the gas network extension will help to improve companies' competitiveness and reduce energy costs for many public sector bodies. Subject to securing State aid approval for the proposed government assistance, new gas conveyance licences for the West should be awarded in 2014.

Strengthening the electricity grid

82. The Department is also examining opportunities to source funding under Thematic Objective 4[3] of the ERDF 2014-2020 programme to support a programme of grid strengthening works across Northern Ireland. The Department is in early discussions with Northern Ireland Electricity and the Utility Regulator to identify a programme of works that would facilitate the introduction of a greater level of renewables onto the grid. The main focus of such an investment would be on the 11kV, 33kV and 110kV networks.

Smart Metering

83. The EU Third Internal Energy Package (IME 3) required Member States to undertake a cost benefit analysis of the implementation of intelligent (smart) metering systems. Subject to this assessment, and where the assessment determines the roll-out of smart meters positively, Member States were required to prepare a timetable and implement such smart metering systems with at least 80% of consumers attached to smart electricity metering systems by 2020. The provision of smart gas meters is similarly considered in the IME 3 Directive, but no mandatory level of 80% coverage has been set for smart gas meters.

84. Following examination by the Utility Regulator of a number of scenarios for smart metering rollout, the Minister announced in July 2012 that Northern Ireland would rollout an electricity smart meter programme.

85. There remains considerable work to progress the rollout of smart meters in Northern Ireland. In particular, considerations on issues such as safeguards for consumers, data privacy, smart meter functionality, data collection, storage and use, stakeholder engagement and support arrangements and sequencing/prioritisation of meter rollout have to be addressed. This work will require extensive stakeholder consultation.

Market Integration – delivery of single, European wholesale electricity market

86. Detailed rules giving effect to the requirements for implementation of the Target Model for a single, European wholesale electricity market are binding on all EU Member States by 2014. The Agency for the Cooperation of Energy Regulators (ACER) has responsibility to assist national energy regulatory authorities (NRAs) to perform their duties at EU level and to coordinate their actions whenever necessary. SEM, as an island-based market faces

3 Thematic Objective 4 – "Supporting the shift towards a low carbon economy in all sectors"

challenges in meeting the Target Model requirements – these have been recognised by ACER which has provided an extension to 2016 to allow SEM to comply with particular aspects of the Target Model.

87. The main objectives of market integration are protection of the interests of consumers, promotion of competition, delivery of diverse, viable and environmentally sustainable energy supplies and stability and harmonisation of trading arrangements.

88. Work to develop the High Level Design is underway, with the SEM Committee responsible for market design options and delivery of the project. In approving SEM Committee recommendations to the Department on the high level principles under which the project should proceed, DETI has also stressed that the interests of consumers, domestic and non-domestic in Northern Ireland must be reflected fully in the new market arrangements. The Minister has called, additionally, on the Utility Regulator to undertake detailed cost benefit analysis of options to deliver the Target Model.

Working with the energy sector to encourage further investment in networks

89. SEF commits the Department to cooperate with the Regulator and the energy sector to encourage further investment in networks. The Department has previously provided a detailed paper to the ETI Committee on action taken to support companies seeking funding under the European Commission's Connecting Europe Facility (CEF). The energy share of CEF funding is €5.1 billion over 7 years. This funding will be available to project promoters whose projects acquire Project of Common Interest (PCI) status under CEF arrangements.

90. In late-July 2013 ACER made its recommendations to the Commission on the projects that should be included in the final PCI list. The Commission is expected to adopt the Union-wide PCI list in October 2013.

91. There are six electricity/gas projects of relevance to Northern Ireland on the provisional ACER list:

- NIE/EirGrid North-South Interconnector;
- €108 million NIE/ESB Green Smart Zone smart grid proposal (estimated value of investment in Northern Ireland is £35 million);
- €280 million proposal for a new compressed air energy storage solution in Larne;
- £400 million proposal for an underground gas storage project near Larne in East Antrim being developed by Islandmagee Storage;
- Upgrade of the Scotland to Northern Ireland gas pipeline (SNIP) to accommodate physical reverse flow of gas between Ballylumford in Northern Ireland and Twynholm in South-West Scotland; and
- Physical reverse flow of gas at the Moffat gas interconnection point in Scotland

92. These projects are important to Northern Ireland from a number of perspectives, but particularly within the context of delivering against the renewables programme and as a mechanism for addressing future security of supply. The Commission has indicated that it expects that Member States will ensure that regulatory and planning regimes are supportive of early decision making and removal of barriers to early and successful deployment of projects on the final PCI list.

Generation Adequacy/Security of Supply

93. The Department and the Utility Regulator take the issue of security of electricity supply very seriously and a key element of this is available generation capacity. Following publication of the SONI/EirGrid All-Island Generation Capacity Statement the Department and Regulator published a joint paper on Security of Supply/Generation Capacity on 12 June 2013.

94. DETI has continued to engage with the Utility Regulator, the system operator SONI, and generators in relation to measures which can be put in place to deal with the impacts of EU emissions legislation which will affect some conventional generation in NI from the end of 2015. EU emissions legislation (Large Combustion Plant Directive and Industrial Emissions Directive) will largely impact on the AES Kilroot coal-fired plant and some existing generation units at the AES Ballylumford site.

95. The possibility of derogation from the EU emissions requirements has been investigated with DOE (the Emissions Regulator) and it is clear that an appropriate derogation is not possible.

96. The Moyle electricity interconnector with Scotland continues to operate at 250MW (half capacity) due to a cable fault. However Mutual Energy, owners of the cable, have been engaged in discussions with the Department, Utility Regulator and DOE in relation to implementing a temporary option which would see the Moyle restored to its full capacity before end of 2015 through this interim arrangement. Mutual Energy are also working on longer term plans to lay two new low voltage (LV) cables along the route of the existing cables to provide permanent restoration of the Moyle to full operating capacity of circa 500MW by 2017.

97. The temporary option for the Moyle is relatively low cost, however the new LV cables are estimated to cost around £60million. Given the recent history of cable faults and associated cost of repairs it is considered that expenditure on provision of new low voltage cables is more cost effective for consumers than further repairs to the existing cable.

98. The Utility Regulator has been involved in further detailed discussions with electricity market participants in relation to generation capacity – **the Committee is asked to note that these discussions are commercially sensitive, and therefore cannot be discussed in any public forum at present**. The Department and Utility Regulator plan to issue a further update paper on Security of Supply/ Generation Capacity around end-October 2013 with the aim of setting out more definitive proposals to deal with any potential generation shortfall.

99. Security of supply and mechanisms proposed by Member States to address concerns about shortfall in generation adequacy are high on the European Commission's agenda. In its draft paper: "**Delivering the internal electricity market: making the most of public interventions**" the Commission stresses that where member States have security of supply concerns, "**consideration should be given to whether alternative measures such as investment in transmission infrastructure, including interconnectors, can alleviate the concerns. The situation should be avoided where inefficient plants are kept in operation…a particular concern as regards public interventions with the aim to ensure generation adequacy is that they may lock in (fossil) generation-based solutions that end up being stranded in the medium to long term when additional CO^2-free capacity, interconnection capacity or demand and storage-based solutions come on stream**."

100. Interconnection and storage-based solutions are of course included in the existing PCI proposals.

101. From a costs perspective, the Commission also cautions that "**exempting industry or other class of consumers from the cost of ensuring generation adequacy will push bills for all other consumers up even further" and that costs "should be allocated in a transparent and nondiscriminatory manner and should be allocated to consumers in proportion to their contribution to demand**".

Prepared by: Energy Division

2 October 2013

Annex A

Overview of main energy legislation in Northern Ireland

The Electricity (Northern Ireland) Order 1992

The Electricity Order provided the legislative basis for the privatisation of the electricity industry in Northern Ireland. It sets out the licensing framework for the regulation of the activities of electricity generation, transmission, distribution and supply in Northern Ireland, makes provision for a consents regime for generation construction and overhead lines and contains a range of consumer protection measures.

The Gas (Northern Ireland) Order 1996

The Gas Order sets out the licensing framework for the regulation in Northern Ireland of natural gas activities of gas conveyance, storage and supply. It makes provision for the consents regimes for the construction of major gas pipelines or a gas storage facility and for safety/consumer protection and other matters.

The Energy (Northern Ireland) Order 2003

The Energy Order restructured Northern Ireland's framework of regulatory and consumer representation institutions. It created a new regulatory Authority (which became NIAUR) to take over the functions of the Director General of Gas for Northern Ireland and the Director General of Electricity Supply for Northern Ireland which had been in place under the Electricity and Gas Orders and gave NIAUR and the Department new principal objectives and duties in exercising their respective functions in the electricity and gas sectors.

It increased the functions and powers of the General Consumer Council for Northern Ireland in relation to energy matters and enhanced NIAUR's enforcement powers in relation to breaches by licensees of their statutory/licence obligations. It also contained a number of electricity/gas specific provisions.

The current principal objective of the Department and NIAUR in relation to electricity under the 2003 Order, as amended is to protect the interests of consumers of electricity supplied by authorised suppliers, wherever appropriate by promoting effective competition between persons engaged in, or in commercial activities connected with, the generation, transmission, distribution or supply of electricity. For gas, the principal objective is to promote the development and maintenance of an efficient, economic and co-ordinated gas industry in Northern Ireland.

In 2011, both primary objectives were revised to ensure that the objectives under the Electricity and Gas Directives, which form part of the EU Third Package of energy legislation (known as IME 3) are enshrined as part of the primary objectives under the Energy Order.

The Electricity (Single Wholesale Market) (Northern Ireland) Order 2007

This Order (referred to as the SEM Order) facilitated the establishment of a Single Wholesale Electricity Market for Northern Ireland and Republic of Ireland (commonly known as the Single Electricity Market or SEM). The SEM aims to:

- enhance security and diversity of supply in both Northern Ireland and the Republic of Ireland;
- provide greater competition and investment opportunities from a stable market with transparent and equitable trading arrangements; and
- encourage market efficiencies and economies of scale.

Energy Act (Northern Ireland) 2011

The Energy Act (Northern Ireland) 2011 received Royal Assent in February 2011 after representations from both NIAUR and the gas and electricity industry to consider legislation that would apply to the gas sector as it already successfully did in the electricity sector. The legislation introduced the following main provisions:

- Powers of Access extended to gas companies' existing powers of entry beyond entering premises where there is a danger to life or property, to broadly align with the electricity companies;
- Guaranteed Standards of Performance by gas companies in connection with the activities of licensed gas suppliers and those licensed to convey gas, to enhance consumer protection within the gas market, bringing it in line with the electricity industry;
- Special Administration Regime designed to ensure the uninterrupted operation of gas and electricity networks essential to security of supply in the event of actual or threatened insolvency of a network company; and
- Deemed Contracts to provide a sound and binding basis upon which suppliers can supply customers immediately on moving into premises, replicating the electricity sector regime.

Draft Energy Bill

In February 2013, the Executive confirmed final policy for an Energy Bill which will improve the sustainability and security of energy in Northern Ireland and streamline and improve various energy market processes.

The Energy Bill makes provision for the introduction of powers to allow DETI to implement an Energy Efficiency Obligation. Detail on the actual level of energy savings that energy companies will be obliged to meet and hence the cost of the obligation would be set out after the primary legislation is in place and further analysis and consultation will be needed before it is implemented. Careful consideration will also have to be given to the best way to help those in fuel poverty. There will, of course, be full opportunity for the Committee to shape the detailed requirements of the Obligation.

Annex B

Impact of redistribution of PSO levy – recoverable charge £22.3 million

Current Charges

Market segments	Customer Numbers	Annual Consumption GWh (estimated)	PSO cost per MWh	PSO Cost per customer
Domestic	778,854	3,517	£2.77	£13
SME <70kVA	54,770	1,330	£2.77	£67
SME >70kVA	4,804	1,845	£2.77	£1,065
LEU >1MW Total	193	1,351	£2.77	£19,411
	838,621	**8,043**		

Potential Charges

PSO paid 100% by:	PSO Cost per customer	PSO cost per MWh	Increase in average bill
Domestic	£29	£6.34	2.93%

DETI Response regarding Moyle Interconnector Fault

Request from the Committee

Officials agreed to provide more information on the Moyle Interconnector; specifically: What happened? Could it have been prevented? What were the costs? What can be done to prevent it happening again?

Departmental Response

Moyle Interconnector

The Moyle electricity interconnector between Northern Ireland and Scotland is owned by Mutual Energy and consists of two 250MW undersea electricity cables. The interconnector has sustained two cable faults, the first one occurring on Pole 1 on 26 June 2011 and the second one on Pole 2 on 24 August 2011, thus rendering the electricity link out of service.

One fault is located approximately 3km off-shore from Scotland in 20 metres depth of water, while the other fault is some 17km off-shore from N Ireland in an estimated 140 metres of water.

A specialist repair vessel, the North Sea Giant, has been fully equipped, loaded with cable to complete the repairs, and mobilised from Norway. It is expected in the Irish Sea around 25 October 2011, where it will commence the cable repairs, with work continuing on a 24 hour basis. Each fault is scheduled to take approximately 5 weeks to repair, though could take longer as the work programme will be weather dependent. It is hoped to have one cable operational by early December and both cables working by early January 2012. The interconnector will be available for power transfers at up to 250MW as soon as the first cable has been repaired and tested.

A previous cable fault, repaired in autumn 2010, was found to have been caused by a localised defect in the internal cable insulation. It will not be known what caused the current cable faults until the failed sections of cables have been raised from the seabed and inspected. It is therefore difficult at this stage to contemplate any action which could have prevented the faults. Mutual Energy have stated that the cables have at all times been operated and maintained in accordance with the supplier's recommendations.

The repair contract costs are confidential, however submarine cable repairs typically cost £10-12 million for each repair. Mutual Energy expects that the costs will be covered by their insurance.

A conductor reconfiguration is being investigated by Mutual Energy which would mean that if similar faults occurred in the future, it would still be possible to keep 250MW of electricity transfer availability on the Moyle.

The electricity system operator SONI has indicated that the outage on the Moyle interconnector does not currently pose a cause for concern going into the winter months.

Energy Division

31 October 2011

Response from DETI re Review of Electricity Prices

Issue: Query from The ETI Committee in Relation to the Review of Electricity

At its meeting on 10 October 2013, DETI officials briefed the ETI Committee in relation to its review of electricity. Following the meeting the Committee raised a number of points not covered in the briefing session. These, together with the Departmental responses, are listed below.

Departmental Response

Network Charges

Q1. Invest NI informed the Committee that wind generators also take the price for carbon which it does not use and that they get a capacity payment even though wind always runs on the market. Is this appropriate and is it fair on consumers? How much do wind generators receive in payments relating to carbon?

A1. It is correct that wind generators payments include the price of carbon and they receive capacity payments. As this question deals with the detailed market arrangements put in place by the Regulators and the SEM Committee, they (or SEMO, the Market Operator) would be best placed to answer.

Q2. During the oral briefing, officials informed the Committee that the SEM Committee currently has authority to set network charges. Given the differential in costs for the two jurisdictions, it would be helpful to have more detail on the level of authority of the SEMC and an explanation of how network charges are currently set North and South?

A2. The Committee will be aware that the Single Electricity Market (SEM) arrangement ensures there is no wholesale price differential between Northern Ireland and the Republic of Ireland. Wholesale arrangements impose requirements on generators participating in SEM to set prices in a cost-reflective manner, with arrangements overseen by the SEMC Market Monitoring Unit.

A number of parties, including those who responded to the NIAUR I&C Price and Data Comparison Paper published in March 2013 or who have provided evidence to the Committee as part of its review arrangements, have commented that the cost disparity between large energy users in Northern Ireland and the Republic of Ireland can be attributed to the manner in which the network costs have been allocated and, to a lesser extent, to UK-only taxation measures. To be clear on this issue, while the SEM Committee is made up of the Regulators in Northern Ireland and the Republic of Ireland (NIAUR and CER), network charges per se are not a matter for the SEM Committee. Rather, they are allocated by the Regulators in their respective jurisdictions.

As part of its evidence gathering arrangements the Committee has been made aware of Government policy in the Republic of Ireland to give direction to the RoI Regulator to rebalance €50 million network charges in favour of large energy users. This issue was also highlighted by the NI Utility Regulator who advised the Committee that this is one of the key findings of the March 2013 Report and that as part of the next phase in that work, NIAUR would wish to examine further the allocation of network costs in Northern Ireland relative to those in other jurisdictions.

The DETI Minister has called for that work to be given priority and we await the formal next steps proposals. The Department, in its evidence to the Committee, has also referenced

investigations recently initiated by the European Commission into measures implemented by a number of Member States.

Q3. The Utility Regulator informed the Committee that, we have to be very careful about adding to network costs going forward. He stated that the SEF talks about NIE's forecast of £31 billion to get us to 40% and that this will be very expensive in network charges, particularly for large users. The Committee understands that, although the North-South Interconnector will add to network costs, it will result in a net reduction of costs to consumers. Can the same be said for other network charges which may be brought forward as a result of renewables and grid strengthening?

A3. It is important to clarify that SEF references to a cost of £1 billion (not £31 billion as referenced in this question) are made in the context of NIE estimates in 2008/2009 of the required investment to help achieve the 40% target. DETI understands that the £1 billion estimate is not exclusive to the required investment for the 40% target, but includes necessary investment in network maintenance and "business as usual" grid upgrades in the period up to 2020.

At its oral evidence session the Department referenced exploratory work underway with the Utility Regulator and NIE to examine the potential use of ERDF funding under the 2014-2020 programme for grid strengthening. Up to €50 million is being considered, which would, under the ERDF funding rules, require match investment of at least the same amount. The "match" element would be subject to Utility Regulator consideration and approval, based on the merits of specific project proposals and any funding approved under this process would be recovered from consumers. In effect, use of ERDF funding will reduce, by up to €50 million, the amount that would otherwise be recoverable from consumers for necessary grid work.

Considerable work remains to be completed to secure use of ERDF funding – that will include arrangements to ensure that any grid infrastructure delivered under the ERDF funding element is excluded from NIE's Regulated Asset Base (RAB). At the appropriate point full cost/benefit analysis of NIE project proposals will also be completed by DETI and the Utility Regulator.

Q4. What percentage of the time does wind generation set the price for electricity generation? To what extent is this estimated to change between now and 2020?

A4. This question relates to the market operation arrangements put in place by the Regulators and the Department does not hold this information. It is suggested that he Committee approach either NIAUR of the SEM Operator (SEMO) directly.

In terms of change between now and 2020, it is important to note that this could be influenced by a number of variables, including:

- The High Level Design arrangements to be put in place by the Regulatory Authorities to address the Target Model requirements for delivery of the internal market by 2016;
- Any changes that might be introduced through EU, national or local policy development in relation to renewables;
- The outcome of the NIE Transmission and Distribution Price Control (RP5), currently subject to Competition Commission consideration;
- The extent to which Executive policy commitments are achieved in terms of use of renewables – higher levels of renewables penetration will, under existing market arrangements, mean higher levels of dispatch; and
- The intermittent nature of wind as an energy source

Economy Issues

Q5. The Utility Regulator informed the Committee that, for domestic consumers and 70% of our industrial and commercial users, we are around the EU average in terms of electricity prices. Is it policy to concentrate on competitive pricing for the large majority of smaller businesses? Does the Department see the future of Northern Ireland as an economy for less energy-intensive businesses with larger I&C users having to suffer the consequences of that policy?

A5. It is not DETI policy to concentrate on pricing for particular customer groups, nor is the Department in a position to influence prices, either through the regulatory tariff setting process or via negotiations between Large Energy Users and suppliers (which take place outside the regulated tariff process).

Article 11 of The Energy (Northern Ireland) Order 2003 sets out the principal objective and general duties of the Department and the Utility Regulator. While in relation to both electricity and gas, the Department is required to have regard to the interests of particular groups of individuals (disabled/chronically sick, those of pensionable age, those with low incomes and those residing in rural areas), these requirements are not to be taken as implying that similar regard may not be had to the interests of other groups of consumer.

The Northern Ireland Executive endorsed Strategic Energy Framework (SEF) similarly makes no distinction between groups of consumers in terms of pricing priority.

This is entirely consistent with EU policy, particularly within the context of considerations that need to be addressed when implementing measures aimed at supporting specific customer groups. In its recent assessment of the extent to which the internal energy market in Europe is working, the Commission comments on the potential impact of such measures.

It cautions that "some Member States are inclined to partially-exempt energy intensive industries from additional charges…any partial exemption needs to be carefully weighed against the additional costs it causes for household consumers and other industries whose energy bills will increase, as well as distortions in the internal market".

At its oral evidence session on 10 October, the Department highlighted the importance of balanced policy considerations and, in particular, noted that changing policy to impact positively on a specific customer grouping would likely have adverse impact on others. It also outlined the range of interventions (grant schemes and "policy") to encourage businesses to stay and grow in Northern Ireland and attract new Foreign Direct Investment (for example, grants for research and development and innovation and skills training; plus industrial derating).

Security of Supply

Q6. Officials informed the Committee that an interim solution to the Moyle Interconnector could be effected as early as 2014. This interconnector is currently operating at 250MW and full capacity would increase this by a further 250MW. The current surplus capacity in the system is 600MW. If nothing is done by the end of 2015 this will be reduced to 200MW which is considered too low by the Regulator, who informed the Committee that, in the event of a prolonged outage of a large generation plant or the failure of the existing part of the Moyle Interconnector this could result in an electricity deficit at times of peak demand. The repair of the Moyle Interconnector in 2014 would increase the surplus capacity to 450MW, would this be sufficient to ensure security of supply until the North-South Interconnector is completed?

A6. The interim repairs being carried out on the Moyle Interconnector to restore it to full capacity, which are currently programmed to deliver in 2014, remain dependent on the original undersea cables which have suffered a number of failures. The interim works are not therefore considered sufficiently reliable to avoid continued consideration of the means

by which the risk of a prolonged outage of a large generation plant could be managed post December 2015. A more permanent solution for the Moyle will require laying of new undersea low voltage cables in addition to utilising the high voltage element of the existing cables, however this is not expected to be delivered until 2017.

Q7. Would additional conventional generation capacity be required only in the short-term in order to cover the gap until the Moyle and North-South Interconnectors are complete? Is there a possibility that this would result in a high-cost solution to cover a short-term problem? If so, is there a case for doing nothing and hoping that, during the intervening period, demand does not out-strip supply?

A7. The new North-South interconnector is crucial to addressing short term and longer term security of electricity supply issues in Northern Ireland. We are aware that the Utility Regulator is working closely with the system operator SONI to establish the necessary security of supply margins from January 2016, and this will inform the necessity and options for the provision of additional generation capacity at the least possible cost to mitigate risks.

Q8. Given that AES have stated that some parts may take up to 15 months to source in order to comply with any up-grade requirements, what level of urgency has been attached to achieving a solution to the security of supply issue?

A8. The work has been given high priority within DETI, by the Utility Regulator and SONI. All have been working closely for some time to review options. Decisions must take into account a range of complex, interrelated issues to ensure the solution is proportionate to the risks and acceptable to a range of stakeholders, including the European Commission. Everyone is very conscious of the timetable and acknowledge that options will require different timelines to complete depending on the technical requirements that underpin them.

Q9. Are there other potential solutions to the short-term gap (2016-2017) under consideration other than those associated with Kilroot and Ballylumford?

A9. Without full restoration of the Moyle Interconnector to access electricity from Great Britain and construction of the proposed North/South Interconnector to enable Northern Ireland to share surplus generation capacity available now in the Republic of Ireland, consideration is being given to the need for additional conventional generating capacity by the system operator SONI, the Utility Regulator and DETI to maintain Northern Ireland's security of supply. Other measures such as demand side management to support this and further increase local resilience have been considered by SONI and the Utility Regulator, however our understanding is that these are not considered viable options to deal with a prolonged large generation plant outage. The Department of Environment (DoE) has made it very clear that a derogation to extend the operation of the Ballylumford B Station beyond December 2015 is not an option.

Q10. What consideration has been given to any planning consents which may be required to enable Ballylumford/Kilroot to comply with the IED should that course of action be adopted? Will there be any planning issues associated with an up-grade? If so, what informal discussions have there been with Planning Service in relation to time scales for planning decisions for any proposed up-grade?

A10. It is too early to be clear about the extent of planning consents for any option yet to be agreed at whatever location. The Utility Regulator, SONI and DETI are considering all options and will keep in contact with DoE as this work progresses.

Q11. The CBI informed the Committee that other options could be considered to achieve security of supply. Officials also commented on these during oral evidence. These included:

a. Aggregation of Units. Some businesses have stand-by generation capacity which could be used to manage the peaks from 4pm to 7pm. This could be bid into the pool and could include a capacity payment. To what extent has this been brought to the Department's attention? Would it work? Would it require a change in either

primary or subordinate legislation? What assessment has been made of the number and capacity of stand-by generators available? How would it work with the System Marginal Price? Would this plant comply with the EU Emissions Directive in 2016?

b. Demand Side Management. Businesses could agree to shed load at peak periods and either reduce load or move to stand-by generators. To what extent has this been brought to the Department's attention? Would this be considered a feasible and cost effective option?

A11a. Aggregation of small, physically dispersed generation, to act as one "trading site" for the purposes of SEM (an AGU) is an activity allowed for within the market trading rules for SEM. Licence categories, as they currently exist, do not cover this activity – generators that do not at any time provide more electrical power than 10MW from any one generating station are currently licence exempt.

In December 2008 the SEM Committee made provision, through modification to the Trading and Settlement Code, for the inclusion of Aggregated Generator Units in the SEM. The SEM Committee's decision required Generator Aggregators to enter into a contract with the appropriate Regulatory Authority (RA) to ensure compliance with the suite of SEM documentation that the registrant of a licensed Generator Unit would have to comply with.

Northern Ireland currently has two Regulatory Agreements in place and the Department understands that these seem to have worked/be working well. However, NIAUR has asked the Department to make provision, through the legislative process, for licensing of the activity of aggregation of generation.

A11b. When a user of electricity has flexibility to reduce their demand (e.g. switch off plant and machinery) by a substantial quantity, they can operate as a Demand Side Unit (DSU). The DSU provides bids of price and quantity of demand reduction into the SEM pool, in the same way generators bid in prices and quantities of generation that can be made available.

The DSU may be a single large energy user or may be an aggregator. Reduction in demand can be achieved a number of ways – by and entity reducing its demand (eg. by turning off refrigeration units for a period of time) or by switching demand to an on-site generator (the effect being the same, in that they are taking less energy from the grid).

The Department is fully supportive of enhancing/maximising the use of aggregation and demand side measures in the NI electricity market. It has been engaged in a process of discussion with the Utility Regulator to identify what barriers, if any, there are to demand side measures under the current regulatory framework. Part of this process may involve new primary legislation and the Department is working through the necessary policy development stages on this with the Utility Regulator.

There are, however, complex legal issues to be addressed before proposals can be developed for consultation and the Utility Regulator has advised that there may also be issues to be considered as part of the wider market integration project. The Department has asked for further details on this specific matter. It is important that these issues are considered fully by the Utility Regulator as the Department cannot implement primary legislation now that might subsequently require further amendment within a short period of time.

The key issue to be considered when assessing the requirement for legislation is definition of the licensable activity. The purpose of a license is to permit something that is otherwise prohibited – in the context of a demand-side measure it is illogical to define the prohibited activity as demand reduction – this would also run contrary to EU objectives to facilitate demand side interventions in electricity markets.

Notwithstanding these issues, we continue to work on these matters. However, given the timeframe for new primary legislation the Department's **immediate priority is to encourage**

the Utility Regulator to find a workable arrangement for demand side measures under the existing legislative and regulatory frameworks.

Arrangements for the participation of AGU/DSUs in the market are regulatory matters and the Department is not in a position to consider the impact on System Marginal Price. The Department also holds no information on number/capacity of available generating plant as it has no role in considering applications from potential market participants.

In terms of compliance with the EU Emissions Directive, the nature of individual generating plant that would participate as part of an AGU arrangement is that it must not, at any time, provide more electrical power than 10MW. While participation and dispatch arrangements are unlikely to be affected by the Emissions Directive, such arrangements are again for the Utility Regulator to consider as part of any authorisation procedure.

Q12. The Committee has been informed that the earliest completion date for the North-South Interconnector is 2017. Can the Department provide an update of the current situation and the likely timescale for completion of the Interconnector?

A12. The Department understands that DOE Strategic Planning Division received the revised planning application and consolidated environmental statement from NIE on 21 June 2013. DOE launched the public consultation on the NIE application on 18 September 2013. It is now a matter for that Department to complete the public consultation phase and, if appropriate, make arrangements for resumption of the Planning Appeals Committee (PAC) enquiry. NIE estimates that construction of the interconnector will take three years from the point at which PAC business is completed.

Q13. AES informed the Committee that Kilroot will probably opt for the Transitional National Plan (TNP), which would allow restricted operation of the plant up to 2020. How will this impact on the security of supply issue post 2016. Has this already been factored into the estimated 200MW surplus margin or would it have further impact?

A13. In the 2013 Generation Capacity Statement SONI assumes that AES will enter the TNP. While we understand that no definite decisions have yet been taken, the information (duration of plan, limitation on running hours, etc) provided by AES was considered in the analysis that went into the preparation of the 2013 generation adequacy assessment. SONI will be discussing AES proposals again this year prior to preparation of the 2014 Statement.

Q14. In the absence of any derogation, would it be necessary to up-grade all Ballylumford B generating plants?

A14. Upgrading all of the Ballylumford B Station generating plant remains an option for the owners AES. However, the final decision is for the company to consider in conjunction with SONI and the Utility Regulator who are best placed to advise on the extent of additional generation capacity required until the new North/South electricity interconnector is built.

Energy Division

Date: 14 November 2013

Energia Briefing Electricity Policy Review

NI Electricity Prices

Committee for Enterprise, Trade and Investment

Thursday, 13th June 2013

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The Energia Group

- Founded in 1999 the Energia Group is a vertically integrated energy business operating in both Northern Ireland and the Republic of Ireland
- Energia is the largest supplier to businesses on the island of Ireland and is backed by electricity generation from two combined cycle gas generators and long term contracts with renewable generators
- Headquartered in Belfast the Energia Group has a turnover of £1bn and employs 224 members of staff
- We have made significant commitments to improving the competitiveness of industry including leading the market in innovative retail products and commitments to the renewable sector over the next decade in excess of £800m

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Electricity Prices in the SEM

- Electricity prices on the island of Ireland are among the most regulated in Europe
- Structural and macro price drivers result in relatively high prices on the island of Ireland:
  - SEM is at the end of the supply line
  - Economies of scale
  - GB prices are too low – "the wholesale price in BETTA is set too low to cover generation costs" (ESRI Working Paper 452, April 2013)
  - SEM Committee endorsement of SEM prices

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Views of the Regulators

- SEM Committee Annual Report 2011 (published October 2012):

  "The SEMC believes the market has worked well since its introduction in November 2007 and continues to deliver benefits to consumers through the use of efficient generation plant to meet demand across the whole island. The SEM model of setting prices in a transparent and cost reflective manner is not only assisting to promote competition and attract new investment, it has also resulted in improvements in the availability of generation plants".

- Utility Regulator Annual Report 2011-12 (published October 2012)

  "After over four years, the SEM continues to delivers benefits to consumers. The SEM ensures that the price of electricity charged to consumers is reflective of the costs incurred by the generators to actually produce the electricity".

- Quarterly SEM Price Report, Quarter 4 2012 (published 22nd January 2013):

  [SEM Prices are] "at the upper end of prices across European markets. This is not unexpected given the island's size and reliance on imported fossil fuels."

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A Regulated Market

- End user prices are highly regulated:
  - SMP – Common across both jurisdictions. Regulated to be cost reflective through generator licence and Market Monitoring Unit
  - CPM –Common across both jurisdictions. Set by regulators using established BNE methodology
  - Network & Pass Through Charges – Set by regulators
  - Levies / Renewables support – Set by government
  - Taxes – Set by government
  - Supplier costs – Subject to competition, small relative to the above
- The UR paper contains the clear inference that the differential between ROI & NI I&C prices is largely down to the lack of competition. As we show, this is not correct

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Supply Competition

- Highly competitive market with innovative products
- Over 50% of April contract round was conducted through consultants and e-auctions
- >10 consumer high profile consultancies active
- Supplier margins common across NI and RoI

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NI vs. RoI Price Divergence

- The UR analysis misses the obvious starting point for such an exercise:
  - Customer prices must be disaggregated to enable meaningful comparisons
  - Analysis must be carried out on like-for-like basis, Energia analysis uses common customer profiles
- UR report shows delta of >£20/MWh between NI & ROI I&C customers
- The Irish Government and CER have clear intentions when setting UoS tariffs
  - €50m p.a. of savings for large energy users funded by a rebalancing of domestic tariffs (CER/10/102 & CER/10/206)
- Divergence is driven by network charges and taxes/levies
- Comparing prices across jurisdictions is prone to difficulties without a complete understanding of those jurisdictions

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Irish Government Policy

- Minister for Communications, Energy and Natural Resources (Deputy Eamon Ryan):

  "Restoring the competitiveness of Irish industry is a priority concern for Government. In that context proportionate rebalancing of network tariffs in favour of Large Energy Users (LEUs) has been called for, in order to mitigate the cost of energy for industry. Protecting jobs and economic activity is in the interest of every consumer and every citizen as Ireland's industrial electricity prices tend to be above average when compared with other EU Member States as a result of a variety of factors. The Government therefore agreed in July that the Commission for Energy Regulation (CER) be asked to undertake a measure of rebalancing of network tariffs next year in favour of large energy users"

http://debates.oireachtas.ie/dail/2009/10/13/00055.asp

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Analysis of End User Prices 2011

	2011			
	Domestic		I/C	
	NI	ROI	NI	ROI
SMP	64.78	64.78	56.63	56.63
Capacity	16.46	16.46	13.86	13.86
MO	0.64	0.65	0.62	0.62
IMP	3.48	3.57	3.32	3.33
TUoS	4.44	7.97	1.88	3.48
DUoS	26.77	38.71	6.08	3.81
PSO	4.73	7.18	4.68	1.97
SSS	3.30	-	3.05	-
RO	1.98	-	1.98	-
Moyle (CAIR)	-	-	-	-
LEU REBATES	-	-	-	- 8.09
	126.57	139.32	92.09	75.62

Divergence in network and other pass through charges

Figures in £/MWh

- NI domestic network charges & pass through charges are c£12.50/MWh lower than RoI.
- NI I&C network charges & pass through charges are c£16.50/MWh higher than RoI.
- Taxes and direct renewables support (CCL, Electricity Tax and VAT) increase I&C differentials by c£6/MWh (or greater for VAT exempt RoI customers)

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Analysis of End User Prices 2012

	2012			
	Domestic		I/C	
	NI	ROI	NI	ROI
SMP	62.37	62.37	54.22	54.22
Capacity	16.23	16.23	13.78	13.78
MO	0.62	0.62	0.62	0.59
IMP	4.68	4.66	4.72	4.44
TUoS	3.82	8.15	2.97	3.94
DUoS	29.52	38.94	6.96	4.10
PSO	3.55	4.13	3.60	1.68
SSS	3.60	-	3.40	-
ROC	2.98	-	2.98	-
Moyle (CAIR)	0.53	-	0.44	-
LEU REBATES	-	-	-	- 4.05
	127.90	135.10	93.70	78.70

Divergence in network and other pass through charges

Figures in £/MWh

- NI domestic network charges & pass through charges are c£7/MWh lower than RoI.
- NI I&C network charges & pass through charges are c£14.70/MWh higher than RoI.
- Taxes and direct renewables support (CCL, Electricity Tax and VAT) increase I&C differentials by c£6.30/MWh (or greater for VAT exempt RoI customers)

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Conclusion & Next Steps

- Wholesale electricity prices on the island of Ireland are higher than other European counties. Solutions are being progressed:
  - reducing our dependence on fossil fuels
  - maximising the efficiency of interconnector trades
- The UR identifies three key areas for 2013/14: Review competition in the I&C market; Continuing scrutiny of network price control proposals; Efficient integration of wholesale market with Western Europe
- These are inappropriate or already being done
  - Premature to identify next steps without completing the required analysis
  - The problem must be correctly identified
  - UR needs further analysis of disaggregated costs and their allocation
  - Resources need to be correctly focused
- NI vs. RoI difference is driven by allocation of network charges & government policy
- Supplier margins do not contribute to price differentials

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GMB, Prospect and Unite Trade Unions Written Briefing Electricity policy review

Security of Power Generation and Supply in Northern Ireland

Submission by Prospect, GMB and Unite to the Committee for Enterprise, Trade and Investment

May 2013

Introduction

1. Prospect, GMB and Unite represent members throughout the UK who are engaged in operational and support functions, technical management, research and development, and the establishment and monitoring of safety standards engineers in many industry sectors, including defence, energy, environment, heritage, shipbuilding, telecoms and transport. In the energy sector we represent members in nuclear and radioactive waste management industries, the wider electricity supply industry and the gas industry. In Northern Ireland all three unions represent members who work at all levels in Ballylumford and Kilroot power stations.

2. Prospect, GMB and Unite view with great concern the potential impact on security of power supply within Northern Ireland post 2015, as a result of the reduction in power generation across the UK due to the Large Combustion Plant Directive, and specifically as a consequence of the closure of existing power generation plant at the AES owned sites at Ballylumford and Kilroot power stations, and the reduced capacity of the Moyle Interconnector.

3. A decision to close Ballylumford 'B' station in 2015 will reduce Northern Ireland electricity generating capacity by 540Mw. Kilroot Power Station (520MW), also faces a reduced capacity factor of approx. 50% from 2016, and reduced running hours from 2020 –2023 (limited to 1500 hours). There is no new conventional generation planned for Northern Ireland to replace this capacity, only renewable energy (40% target by 2020).

4. Prospect, GMB and Unite support use of a mix of renewable energy to reduce emissions to the environment, but believe that there is a need to maintain security of supply with back - up conventional plant when wind generation in particular is low, to ensure system stability and response, and to meet peak demands. The EirGrid / SONI 2013-2022 'All Island Generation Capacity Statement' states that there is an increased risk of power cuts within Northern Ireland following the closure of Ballylumford 'B' Station post 2015, and Kilroot Power Station being placed on reduced running hours.

5. Any plan to replace capacity from ROI or the UK Mainland is dependent on the Moyle Interconnector being brought back up to full capacity, and commissioning of a new additional 140Km North / South Interconnector to carry 90 0Mw (upgradable to 1500Mw) that is planned for 2017. Prospect, GMB and Unite are concerned that these routes for importing power into Northern Ireland will either not be complete or not sufficiently robust to replace capacity lost by the closure of Ballylumford 'B' station and reduction in running hours at Kilroot, thereby avoiding potential black - outs at times of peak demand, let alone being sufficient to meet the ever - increasing demands for energy. We understand that the new North/South Interconnector has yet to clear the planning stage, and the Moyle Interconnector

has exhibited a serious cable fault since November 2012 reducing its capacity by 50%; the last in a series of 8 faults since September 2010, totalling 619 days of outage or reduced capacity, counted to the end of April 2013.

6. The Ballylumford 'B' Station could remain open and continue to serve the Single Electricity Market (SEM) and Northern Ireland energy security needs if a solution within the current SEM is found to justify the commercial investment to retrofit and reduce Noxemissions from the existing 350mg/Nm3down to below 100mg/Nm3. In addition, without introducing selective catalytic reduction (SCR) or selective non-catalytic reduction (SNCR) which reduces Nox, Kilroot will only be able to run to 2023 while limited to 1500 running hours per annum.

Questions to be addressed

7 Prospect, GMB and Unite therefore believe the following questions should be addressed prior to a decision being made on the future of the AES owned power stations in Northern Ireland:

8 What will be the potential impact on peak electricity supply in Northern Ireland if the conventional power generation plant at Ballylumford 'B' station is taken off line in 2015, given reports from Eirgrid and SONI that clearly state the likelihood of power shortages in the region?

9 Are the potential alternative routes for importing power from ROI or mainland UK robust enough to replace lost capacity, or in the case of the planned new North/South interconnector, will it actually be in place to provide any capacity before the Northern Ireland-based generation plant is taken off-line?

10 Can the availability of power from the ROI and mainland UK be assured, given the continual increases in demand from consumers? Will the largely state-sponsored ROI generation sector be in a position to export energy to Northern Ireland on demand, and how will the well-publicised potential for reduction in generating capacity in England, an example being the recent closure of Didcot, affect the availability of "spare" capacity to serve Northern Ireland during periods of peak demand?

11 How do the potential costs to the Northern Ireland economy of increasing power black-outs during periods of peak demand, compare with the investment required to retrofit conventional power generation facilitie s within Northern Ireland to comply with EU emission standards?

12 What incentives might be available to encourage long-term investment by private companies in power generation facilities in Northern Ireland, be it new build or retrofit of existing plant?

13 What would be the impact of the loss of key engineering skills in Northern Ireland resulting from the inevitable redundancies arising from closure of power generation plant in the region?

14. What What would be the wider impact of the closures on the local communities, and on all the local businesses that support one of the major employers in the area?

Invest NI Written Briefing Electricity Policy Review

Invest NI Evidence to Enterprise, Trade & Investment Committee on Electricity Princing in Northern Ireland

Invest NI Assistance for Large Energy Users

- Invest NI will consider providing Selective Financial Assistance, on a pilot basis, to large energy users that bring forward proposals for capital expenditure on equipment that will make a significant impact on energy efficiency.
- Eligible manufacturing and internationally tradable service companies will be those that can provide evidence that they are using 1MW or more of peak electricity demand; that their international competitiveness is being adversely impacted on as a result of energy costs and that energy is a significant element of their cost base.
- The pilot scheme will, therefore, focus on proposals for capital expenditure on equipment which will make a significant impact on energy efficiency and thereby reduce costs and improve company competitiveness in international markets. While companies can avail of grant and ROCS, the State Aid ceilings cannot be breached.
- The scheme is designed to encourage lower carbon emissions and therefore companies moving from oil to gas (lowering their carbon in the process) can avail of the capital grants on offer. Whilst Invest NI has discussed potential assistance with a number of companies, it has found that the level of support available through claiming the ROCS has outweighed any advantages of Capital Grant assistance.

Invest NI Energy Efficiency Activity

- Invest NI appreciates the impact that energy costs can have on a company's competitiveness and so provides both resource and energy efficiency support to eligible companies from across the wider business base through its £12 million Sustainable Productivity Programme.
- This support includes free technical consultancy, grants and interest-free energy efficiency loans for projects. Invest NI also offers support to identify and implement opportunities for the commercial exchange of excess resources and waste.
- Invest NI Sustainable Productivity Programme is available to companies with a total annual expenditure of more than £30k on water, energy, waste and raw materials and are interested in implementing resource efficiencies and / or the deployment of renewable energy technology to help reduce operating costs.
- Invest NI provides technical advice and free resource efficiency audits to companies with potential to make appropriate cost effective resource savings. Up to five free days of consultancy support for project management is available from Invest NI to eligible companies. The consultancy can be used to help implement renewable and resource efficient projects to reduce the cost of energy, water and waste within the business. This support may include for example, developing business cases for individual projects, providing project management skills for particular projects, defining equipment and / or process specifications and identifying suppliers of goods and services.
- Invest NI also provides funding for the Energy Efficiency Loan Fund which is managed and delivered by Carbon Trust and offers interest-free loans from £3,000 - £400,000 to Northern Ireland businesses to help them install more energy efficient equipment. The size of the loan offered and its repayment period will be based on the projected CO2 savings of the energy project, which will be subject to assessment.
- £1,000 of loan will be available for every 1.5 tonnes of CO2 saved per annum for a project. Each project will be assessed on its potential to deliver energy and carbon

dioxide savings. In 2012/13 the Energy Efficiency Loan Fund issued 194 loans totalling £5.19million to Northern Ireland businesses for energy efficiency projects across a range of technologies.

Sustainable Energy Horizon Panel

- The Sustainable Energy Horizon Panel Report, published by Matrix in February of this year, recommended that "the development of an Intelligent Energy System can not only provide significant export opportunities for Northern Ireland businesses, it can simultaneously address the challenges facing the existing electricity infrastructure in Northern Ireland and improve the sustainability, security and affordability of the regional energy chain".
- Since the publication of the report Invest NI has supported the establishment of a new Competence Centre in Sustainable Energy for Northern Ireland. The Centre for Advanced Sustainable Energy (CASE) will be an industry-driven research centre looking into a number of key areas including turbine development, manufacture and decommissioning; integration and storage; energy efficiency and biomass.
- In addition, through its Collaborative Network Programme, Invest NI is facilitating two new networks to explore issues arising from the Matrix report. The first network, SENSE, is a collaboration of 12 companies, led by B9 to explore new energy storage solutions. The second network, Intelligent Energy Systems Transition, is a collaboration of 10 companies who, in conjunction with CASE, are exploring the commercial opportunities arising from intelligent and distributed energy systems. Phase 1 scoping studies for these networks will be completed towards the end of 2013.

The Impact of Electricity Pricing on Northern Ireland's International Investment Proposition

- Northern Ireland, through Invest NI's overseas office network, has a successful track record in identifying export opportunities for NI companies and attracting high quality Foreign Direct Investment (FDI) projects and we remain one of the most competitive in Europe for inward investors seeking talented people in a cost competitive location.
- However there are still a number of barriers when seeking to win new and follow-on investments in Northern Ireland. For example, the unresolved issue of securing a lower rate of corporation tax rate continues to pose some challenges for the Northern Ireland proposition to secure increased FDI levels, particularly given the more competitive taxation rate offered in ROI.
- It is recognised that the NI proposition could be disadvantaged in terms of the cost of electricity, particularly where a need exists by a potential investor for significant amounts of readily available power. Evidence suggests that the cost of electricity continues to play an important part in the decision by an investor as to where to locate although this varies according to the sector / industry in which they operate.
- If NI's electricity costs are to remain high relative to other European countries then this has the potential to weaken our competitive position in terms of winning new or follow on FDI, particularly in those sectors which are energy intensive, despite the benefits that would accrue from a lower rate of corporation tax.
    - However, energy costs in Northern Ireland are only one of the issues that must be considered by potential investors. When deciding where to invest, companies will consider the potential impact of Northern Ireland's higher energy costs along with other costs to their business and balance these against the key incentives we have to offer such as industrial de-rating and the range of Invest NI support that is available. All of these factors will be considered in the round before a company makes its final investment decision.

The points below provide some anecdotal evidence from across the Invest NI client base ranging from SMEs to larger scale manufacturing companies such as Michelin, Bombardier and Ryobi.

- In one case, the cost of electricity for a company's factories in Northern Ireland is two thirds higher than equivalent costs in other territories – they stated that, as the cost difference is so stark, there is no current possibility that the differential can be bridged.
- One company is currently working with a consortium of waste companies to develop a business case for the construction of an 'Energy from Waste' plant. However, even with the successful introduction such a plant, the company's energy costs would still be double those of its overseas parent company.
- Another company reported that they are paying the second highest electricity rates within their overall global group of companies – and therefore any further electricity price increases in Northern Ireland will only serve to further undermine their inter group comparative competitiveness.
- A company which has its only European manufacturing facility based here reported that the other companies within the group, all of which are located in Japan, the Far East and South America, had energy costs between 50% and 70% cheaper than Northern Ireland.
- An East Londonderry manufacturer is facing constant pressure from its parent over its energy costs, which, when compared to other global operations within the parent group, are considerably higher in NI and therefore are a significant hurdle when the site is seeking additional corporate investment in any areas such as new plant and machinery.
- One company, with a sister company based in GB, noted that its energy costs in NI were significantly higher when compared to its sister plant. The company suggests their electricity costs were around one third more expensive (12.43p in comparison to 8.276p per unit).

Mel Chittock

Executive Director of Finance and Operations
1 October 2013

Letter from Manufacturing Northern Ireland regarding high energy costs

Member

MANUFACTURING NORTHERN IRELAND

Patsy McGlone, MLA,
Chairman,
Enterprise Trade & Investment Committee,
Parliament Buildings,
Ballymiscaw,
Stormont,
Belfast. 12th April 2013

Dear Chairman,

It is now some 12 months since Manufacturing Northern Ireland last briefed the Committee on the impact of high energy costs on the manufacturing sector in Northern Ireland, and the premium paid by local companies over their competitors in GB, RoI and elsewhere in Europe and the rest of the world.

Since that time a number of key factors impacting on energy costs have changed, and much new information has come to light, which we believe makes it appropriate to bring the Committee up to date on the present situation.

Comparative Electricity Costs in Northern Ireland –v- Republic of Ireland

Much of our presentation last year was concerned with our research into the premium paid by local companies over their competitors in the Republic of Ireland, despite the Single Electricity Market. Since that time the "Large Energy Users Rebate" which meant a substantial reduction in energy costs for companies in the Republic of Ireland has been abolished. Many had presumed that this would lead to a convergence of costs North and South of the border.

Unfortunately that has not proved to be the case. Appendix A provides an up to date analysis of costs for the same sample company with an electricity spend of around £530,000 per annum as we provided to the Committee last year. As members can see from the NI –v- RoI comparison, despite the loss of some £33,000 in rebates, Southern companies continue to enjoy an electricity bill some £88,000 less than their Northern Counterpart for this size company and usage profile. The overall differential has only reduced by only £3,000.

Leaving aside the various elements of taxation charged by the two governments, commercial users in Northern Ireland are paying a premium of some 42% this year on network charges over Southern competitors. This has increased in 2012/13 from a premium of 19% in 2011/12.

We first briefed both the Regulator and the Department in detail on these figures in March 2012 and supplied detailed updated figures again in March of this year. It is disappointing that neither have yet provided any rational explanation as to how this situation has arisen.

Competitive Electricity Costs –v- Europe

As the committee will be aware on 26th March the Regulator published the first element of new research conducted into comparative electricity costs in Europe for industrial and commercial users (I&C).

Although the research shows that some 71% of I&C users enjoy competitive electricity costs, these customers are largely small shops, office and micro businesses who purchase electricity on a domestic tariff. This is evidenced by the fact that they consume only 9.7% of I&C electricity.

The remaining 29% of I&C users, who consume over 90% of I&C electricity are paying well above the European median, with the second highest electricity costs in Europe after Italy.

Despite the bad news contained in this report we welcome the increased transparency that the Regulators research brings to the marketplace for large energy users. This research confirms what we have been highlighting to the Department of Enterprise, Trade and Investment for some time. Electricity costs for manufacturers in NI are almost double those of our competitors in countries such as France and Sweden, and significantly higher than both GB and the Republic of Ireland. These latest figures provide indisputable evidence of exactly where Northern Ireland sits in terms of manufacturing costs.

High costs such as these have a major impact on the competitiveness of Northern Ireland plc and consequently on jobs in the private sector. Local manufacturers who are competing in export markets face huge challenges to overcome such a high cost base against their competitors. Our largest employers, many of whom are multi-national companies such as Michelin, Montupet, Bombardier and Almac, are effectively competing against other plants in their own group located elsewhere in the world, where electricity costs are much lower.

MNI also believe that such costs have a major negative impact on efforts to attract new Foreign Direct Investment to Northern Ireland, not only from manufacturing companies, but from energy intensive companies providing facilities such as data storage in the service sector.

The research also reports domestic electricity price comparisons. We note that Northern Ireland domestic electricity costs are relatively competitive and slightly below the European median. This very fact alone is demonstrates that costs within the energy market are unevenly applied between domestic and commercial consumers compared to markets in GB, RoI and elsewhere in Europe, where such disparities between domestic and commercial users do not occur, despite regulation under the same European guidelines.

Northern Irelands target of 40% renewable electricity by 2020.

The Utility Regulator now estimates that Northern Ireland's target of 40% electricity from renewable sources by 2020 will add 113% to network costs with an overall impact of 25% on bills. If this prediction is right, it will seriously compound the situation set out above and further degrade Northern Irelands competitive position.

We note that the Strategic Energy Framework states:

> *"While the key forces are in the social, economic and environmental arena, it is imperative that any policy decisions made now are assessed for their impact on energy costs"*
>
> *"It will be important to ensure that policy changes which could impact on energy costs do not have an adverse effect on business competitiveness "*

Given the weight attached to competitive impact in this document, in March of this year we wrote to DETI Energy Branch quoting the Regulator's estimate and querying what research might be available on the impact of this target. A copy of the reply is attached.

It is disappointing that the Department are only aware of the impact of the RP5 review of costs for Northern Ireland Electricity. NIE's proposals would increase network costs by 46%

with a net impact on bills of 10% by 2016/7. The Regulators present determination, which Manufacturing NI support, and which has now been referred to the Competition Commission by NIE, would reduce that to 19%. The increased costs would of course include a large element for the cost of new renewable connections to meet the 40% target.

There are many other costs inherent in the cost of renewable electricity, which have been included in the Regulator's estimate, but which the Department appear to be unaware of. Each Mw of wind power which is brought onto the grid requires another Mw of conventional power station on standby, in case the wind does not blow. This leads to exponential increases in constraint charges. Wind generation can frequently be unpredictable and unreliable, which will also have an impact on imperfections charges and other elements of network costs.

Manufacturing NI is also aware that, as a result of high electricity costs, some of our largest users are considering the self generation of electricity, to extent that some may even come off the grid. In this scenario such companies would of course enjoy massive savings on network costs as described at the start of this document.

The 22 largest users in NI account for 15% of volume and accordingly 15% of I&C network costs. The loss of such a contribution to network costs would unfortunately increase costs for remaining users. If this led to a domino effect the impact could be huge on network costs for remaining grid users, compounding the situation we have described even further.

DETI anticipate that the Executive is likely to review the progress of the Strategic Energy Framework in 2015. Given the time frame likely for the conduct of such a review, and the lengthy period of time required to initiate any policy changes derived as a result, we believe that this scenario will be a case of closing the stable door after the horse has bolted. Irreversible damage will have been done to Northern Ireland's industrial base and private sector employment.

Unfortunately the perceived benefit to manufacturing companies in Northern Ireland through increased business from the development of green energy sources is unlikely to materialise. Recently reported figures indicate that only 3% of the capital expenditure for wind farms in the Irish Sea, is likely to be spent in Northern Ireland.

We note that the Executive does not have any strategy or policy in place to address high commercial electricity costs in Northern Ireland. Indeed the only existing and developing energy policies we are aware will add to costs and compound the problem.

Future Cost Drivers

The Utility Regulator has identified the following:

Short/Medium Term Price Drivers

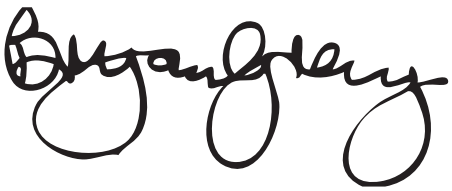
- Wholesale Prices (fuel, carbon)
- Network Charges (NIE RP5 Price Control)
- Demand Growth
- Degree of Competition
- SEM treatment of wind curtailment and gas transportation charges
- Revised renewable subsidies (NIROC replacement)
- Energy Efficiency Levy
- Moyle I/C Repair and Potential NI Security of Supply Issue

Longer Term Price Drivers:

- Regionally Integrated Market Structure (wholesale and retail)

- Wholesale Prices (fuel, carbon)
- Network Price Controls
- Renewables:
  - Network Development for On-Shore and Off-Shore Renewables (inc. connection policy)
  - Back-Up Generation and Network Controls
  - Impact of Wind on Wholesale Prices
- Demand Growth
- Degree of Competition
- Smart Meters

Given the complexity of the factors driving electricity prices, Manufacturing Northern Ireland believe that a wide ranging forum involving all stakeholders and all elements of available expertise needs to be initiated as a matter of urgency, to identify likely future cost increases and advise the Executive on the need to develope strategies as a matter of urgency to address this issue.



Bryan Gray,
Chief Executive

Attached:

Appendix A: NI –v- RoI Network Cost Comparison

Letter from DETI Energy Branch, 20th March 2013

MANUFACTURING NORTHERN IRELAND

APPENDIX A

EXAMPLE SHOWS THE NETWORK COSTS ELEMENT FOR A TYPICAL NORTHERN IRELAND COMPANY WITH AN ELECTRICITY SPEND OF © £530K pa

TARIFF INCREASES 2010-13 - NORTHERN IRELAND	NI SITE 2010/11	2011/12	Change	2012/13	Change
Use of Service (inc. Moyle)	£ 49,120	£ 56,474	14.97%	£ 74,381	31.71%
Public Service Obligation/System Support Service Levy	£ 42,458	£ 38,787	-8.65%	£ 34,402	-11.31%
Single Electricity Market Charges	£ 99,063	£110,860	11.91%	£ 105,209	-5.10%
Sub-total before Taxation	£ 190,641	£206,121	8.12%	£ 213,992	3.82%
Uk Climate Change Levy	£ 25,292	£ 26,099	3.19%	£ 27,337	4.74%
Total After Taxation	£ 215,933	£232,220	7.54%	£ 241,329	3.92%

COMPARATIVE FIGURES SHOW WHAT THIS COMPANY WOULD PAY FOR NETWORK COSTS IF LOCATED IN RoI

TARIFF COMPARISON NI -v- RoI 2010-2013	2010-11 TARIFF YEAR			2011-12 TARIFF YEAR			2012-13 TARIFF YEAR		
	NI 2010/11	RoI 2010/11	Diff	NI 2011/12	RoI 2011/12	Diff	NI 2012/13	RoI 2012/13	Diff
Use of Service	£ 49,120	£ 49,005	£ 115	£ 56,474	£ 52,192	£ 4,282	£ 74,381	£ 50,943	£ 23,438
Public Service Obligation/System Support Service Levy	£ 42,458	£ 14,909	£ 27,549	£ 38,787	£ 9,080	£ 29,707	£ 34,402	£ 10,528	£ 23,874
Single Electricity Market Charges	£ 99,063	£ 99,063	£ -	£ 110,860	£ 110,860	£ -	£ 105,209	£ 88,935	£ 16,274
Sub-total before Taxation	*£ 190,641*	*£ 162,977*	*£ 27,664*	*£ 206,121*	*£ 172,132*	*£ 33,989*	*£ 213,992*	*£ 150,406*	*£ 63,586*
Uk CCL/RoI Electricity Tax	£ 25,292	£ 2,631	£ 22,661	£ 26,099	£ 2,595	£ 23,504	£ 27,337	£ 2,158	£ 25,179
RoI Rebates	£ -	-£ 54,712	£ 54,712	£ -	-£ 33,821	£ 33,821	£ -	£ -	£ -
Total After Taxation	£ 215,933	£110,895	£105,038	£ 232,220	£ 140,906	£ 91,314	£ 241,329	£ 152,564	£ 88,765

Manufacturing NI Response to Consumer Council on RP5

Response to Competition Commission on the Northern Ireland Electricity Limited price determination

Manufacturing NI welcomes the opportunity to respond to the Competition Commission on this issue. Manufacturing NI represents the interest of almost 500 manufacturers in Northern Ireland including some of the largest energy users. Energy is typically the third largest cost faced by manufacturers after labour and raw materials and is a vital component of every manufactured product.

However we would stress that we have neither the resources nor the expertise to examine what is a very complex matter in detail. We have examined the Utility Regulators proposals and we have also been briefed by Northern Ireland Electricity about their position in relation to the proposals.

In this regard we are inclined to the conclusion that the Utility Regulator has both the expertise and resources to examine NIE's proposals in detail, and that it is his legislative duty to act in the best interest of consumers including our members.

Electricity Costs in Northern Ireland

Competitive energy costs are vital to the survival of the manufacturing sector in Northern Ireland. For some time now we have been highlighting the fact that our members are struggling to compete against a background where they are paying a major premium on electricity costs over their competitors in GB, the Republic of Ireland and elsewhere in Europe. We refer the Commission to the Utility Regulators recently published research "Northern Ireland Electricity Prices: Data and Comparisons"

Although the research shows that some 71% of I&C users enjoy competitive electricity costs, these customers are largely small shops, office and micro businesses who purchase electricity on a domestic tariff. This is evidenced by the fact that they consume only 9.7% of I&C electricity.

The remaining 29% of I&C users, who consume over 90% of I&C electricity are paying well above the European median, with the second highest electricity costs in Europe after Italy.

Despite the bad news contained in this report we welcome the increased transparency that the Regulators research brings to the marketplace for large energy users. This research confirms what we have been highlighting to the Department of Enterprise, Trade and Investment for some time. Electricity costs for manufacturers in NI are almost double those of our competitors in countries such as France and Sweden, and significantly higher than both GB and the Republic of Ireland. These latest figures provide indisputable evidence of exactly where Northern Ireland sits in terms of manufacturing costs.

High costs such as these have a major impact on the competitiveness of Northern Ireland plc and consequently on jobs in the private sector. Local manufacturers who are competing

in export markets face huge challenges to overcome such a high cost base against their competitors. Our largest employers, many of whom are multi-national companies such as Michelin, Montupet, Bombardier and Almac, are effectively competing against other plants in their own group located elsewhere in the world, where electricity costs are much lower with differentials as high as 300% compared with other jurisdictions such as the USA.

Manufacturing NI believes that the major driver of such high electricity costs is network costs. Appendix A provides an up to date analysis of network costs and taxation for a typical company with an electricity spend of around £530,000 per annum in Northern Ireland. The table shows what their network costs would be if they were located in the Republic of Ireland.

Leaving aside the various elements of taxation charged by the two governments, the table shows that a typical NI company is paying a premium of some 42.3% this year on network charges over Southern competitors. This has increased in 2012/13 from a premium of 19.75% in 2011/12, and 16.9% in tariff year 2010/11.

Transmission charges in Northern Ireland have increased by 41% on average between 2011-12. This is much higher than the UK and ROI whose average annual increases are under 20%. Use of System charges account for approximately 11% of overall electricity spend in NI and have a significant impact on end-user price. Users need to be reassured that the structure and application of such charges comply with best practice in the EU.

Demand on the network has a major impact on network costs and has already reduced 4% from 2008. If electricity prices continue to rise as predicted we have serious concerns that a number of large users may close their Northern Ireland operations thus compounding costs for remaining users. There are also indications that some large users are considering self-generation to save on network costs. This would of course have the same impact on remaining users.

RP5 Price Control

As stated at the beginning of this letter, Manufacturing NI support the Utility Regulator's position in regard to this price control. Expenditure on the network, whether operating or capital is funded by consumers, and we believe that the Utility Regulator has acted in our members best interests in this matter.

There are a number of areas which are of particular concern to our members and which have a major impact on the confidence of consumers in relation to NIE operations. We believe that consumer confidence has been seriously eroded by NIE's resistance to more transparency and accountability in their business and by the following factors:-

- It has been indicated to us that the present owners paid 20% more than regulated value for company when they purchased it, and some 15% more than the under bidder. The is serious concern among users that this overpayment can only be recovered by NIE through outperformance on more and more capital works;
- NIE have refused to accept -1% efficiency target on operating expenditure. We understand that this efficiency target is common practice amongst utility companies.
- Most of NIE's work delivered by Powerteam who are wholly owned subsidiary and not subject to regulation. This provides the potential to retain profit in an unregulated business
- There has been a 30% reduction in opex from 2004/5 to 2006/7 – this expenditure has been moved to capex which we understand may be in breach of regulation rules. We are strongly of the opinion that consumers should not pay twice for this and that these payments made in the RP4 period should not be added to the asset base in the RP5 period.
- The company displays major inefficiencies compared to other utility companies in the UK;

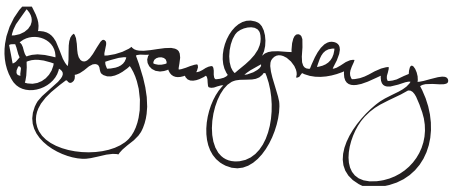
- There has been a huge increase in the request for Capex – from £370m in RP4 to £660m in RP5. NIE fail to recognise that consumers cannot fund such increased investment in the middle of a recession. Such increased costs will have a major impact on fuel poverty, competitiveness and employment;
- NIE's refusal to accept an independent "Reporter" embedded in the company;
- Recent changes in capitalisation practice and the high level of capitalisation;
- We consider that pension deficit costs should not be funded wholly by consumers but shared between NIE & consumers. Account must also be given to pension holidays taken by the company;

We believe that it is vital that the Commission take account of the prevailing economic climate and all of the above matters when considering what is a prudent investment in our electricity network at this time.

In the interests of transparency, we would also ask the Commission to ensure that all trade or business organisations who respond to this consultation, declare whether NIE is a member of their organisation. Northern Ireland Electricity is not a member of Manufacturing Northern Ireland.

Manufacturing NI have no objection to the publication of this submission.

Yours faithfully,



Bryan Gray,
Chief Executive

Manufacturing NI Response to Utility Regulator

Response to the NI Utility Regulator's Paper: NI Electricity Prices: Data and Comparisons - Information Paper2

Manufacturing NI represents the interest of almost 500 manufacturers in Northern Ireland including some of the largest energy users. Competitive energy costs are vital to the survival of the manufacturing sector in Northern Ireland. For some time now we have been highlighting the fact that our members are struggling to compete against a background where they are paying a premium of around 20% on electricity costs over their competitors in both GB and the Republic of Ireland. Energy is typically the third largest cost faced by manufacturers after labour and raw materials and is a vital component of every manufactured product.

MNI welcomes the increased transparency which this latest research brings to the industrial and commercial electricity market. It confirms figures which MNI have already provided to both the Regulator and the Department of Enterprise Trade & Investment and provides a firm base line on which future energy policies can be founded as well as a springboard for further research into the principle drivers of the high costs demonstrated and we hope, the development of policies to address the issue.

We believe that it is vital that further work is carried out as soon as possible to disaggregate the figures contained in this report. Only then can we seek to address the main drivers of such costs.

There are three areas identified for further work in the report:-

- Market size/scale, isolation and consumer dispersion
- Wholesale energy costs and fuel mix
- Energy Policy, Taxation and Regulation

Market size/scale, isolation and consumer dispersion are not variable, but relatively fixed elements of the market. While it may be relevant to quantify what impact these various elements have on costs, the reality of the situation dictates that these fixed elements are something which cannot be influenced. Accordingly we believe that this part of the future work should be given a low priority.

We do not concur with the suggestion in the report that the lack of either competition or regulation in the I&C market have a major impact on cost. Once again it will be useful to quantify the impact of this element on cost, however any issues on competition can only be addressed through new entrants into the marketplace, and an increased awareness by users of the benefits of switching supplier. Again this is not something which can be addressed by policy makers, and should be given an equally low priority.

The key cost drivers which can be addressed in the short term are those listed under Energy Policy, Taxation and Regulation. This element of the research should we believe examine not only UK and NI Government policy, but policies in place in competing jurisdictions such as the Republic of Ireland. It is our understanding that the reason why NI domestic network charges & levies are c£13/MWh lower than RoI, against a situation on I&C network charges & levies

which are c£16.50 /MWh higher than RoI, is wholly as a result of government policy in RoI skewing the distribution of network charges towards domestic consumers to the benefit of large users.

Government has pretended for nearly twenty years that electricity costs are a result of the interplay of regulation and competition in the energy markets. In reality Government decisions affect the price of electricity directly, as the Executive recognised when it successfully and to its credit campaigned against the carbon floor price applying in the SEM. To give effect to the drive to rebalance the NI economy the corporate sector should be part of a formal and continuous conversation of policy makers on energy policy.

It is our belief that regulated elements of costs are the main drivers and in this context we note the following:-

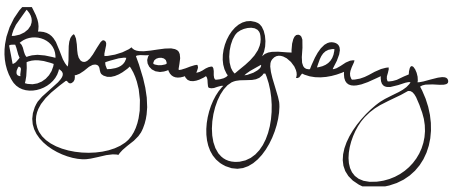
- Transmission charges have increased by 41% on average between 2011-12. This is much higher than the UK and ROI whose average annual increases are under 20%.
- Use of System charges account for approximately 11% of overall electricity spend in NI and have a significant impact on end-user price. Users need to be reassured that the structure and application of such charges comply with best practice in the EU.
- Single electricity market (SEM) charges account for up to 15% (approx.) of overall spend.
- The charge for the Renewables Obligation scheme has risen significantly since its introduction in 2005. Since 2011 it has risen over 91% from 0.213 p/kWh to 0.408 p/kWh and above inflation increases are set to continue.
- Imperfections charges have risen 51% since 2010. Users need to be reassured that imperfections and constraint charges are being levied on a basis which is cost effective for different user groups. The load profiles of most LEU's are such that we believe the major elements of these costs are derived from domestic users.
- The present application of costs for the Public Service Obligation means that I&C customers are subsidising domestic users though payment of costs toward retail market IT systems and the NI Sustainable Energy Programme. These elements of the charge benefit only to domestic users. This element of charges needs to be reviewed as a matter of urgency to reflect different cost recovery from different user groups. Sculpting of both the above charges across different categories of customer usage should be explored.

We believe that the main focus of further research should be on these areas of costs. MNI welcomes the opportunity to work with the Regulator on the further development of this research.

There are a number of areas where we believe that the research could be refined to present a more accurate picture.

- We note that in relation to comparisons with the Republic of Ireland that there are 26 large users there who are directly connected to the transmission network and thus do not pay any distribution charges. The electricity consumption of these companies (Intel, Irish Cement etc) amounts to more than the total I&C market in Northern Ireland. This has the potential for major distortion of figures.
- Accordingly, it would be helpful to know more about the characteristics of large users here and in other member states. Northern Ireland lacks very large users such as smelters and aluminium producers. It is also not clear from the way the figures are produced if the 22 large users or the 352 next tier down of largish users in Northern Ireland have a different operating pattern to those elsewhere – e.g. do they operate three shifts per day or two; do they operate through the peak? Unless we compare similar kinds of manufacturers with similar operating patterns we cannot properly isolate the factors which make Northern Ireland different. With the relatively small number of large users in NI it should be possible to clarify this point.

- Comparisons of the industrial price as a percentage of the domestic price are liable to muddy the waters. By definition it will make the industrial price performance of countries with high domestic prices look relatively good. Perhaps it would be more useful to look at industrial and domestic prices as a percentage of the weighted average of all the units sold in that system.
- It is also necessary to correct industrial prices for non-grid delivered electricity. If it is practice in other states for large users to use their own generation to supplement grid generation or to replace it at certain times of the day this too should be factored in to the analysis. (historically other countries have been more successful in exploiting CHP for example.)
- It would also be useful to know how much electricity is used per £m of GDP. If Northern Ireland uses below average amounts of electricity per unit of GDP/high value added per MW/h this might well have lessons for industrial policy
- At present we do not know what the effect would be if all of Northern Ireland's very large users were to disappear from the system either because they close down or produce their own power. Modelling would provide the evidence on which to make policy. If it showed that the removal of large users would increase costs for everyone else this provides evidence of the extent to which it would be in the interests of all electricity users to find a pricing solution which works for large users. Modelling would also establish if part of the solution were to provide a much greater quantity of on-site generation for peak demand periods. If modelling showed that getting some or all large users off grid would be helpful then this too could be fed into the mix.
- If further detailed analysis shows that on a fully "like for like" basis large users in NI are paying more than comparable consumers elsewhere then it should be possible to identify exactly where the composition of the large users' price differs from the price elsewhere. If gas prices, transmission and distribution costs etc. do not disadvantage domestic and small users in comparison with their peer groups elsewhere it should be possible to identify what factors cause the disparity for large users.



Bryan Gray,
Chief Executive

Mutual energy briefing for ETI Committee Jan 2013

Briefing on Mutual Energy Limited: A Northern Ireland company working for consumers

Prepared for: Enterprise, Trade & Investment Committee
Thursday 31st January, 10.15am

Briefing by: Paddy Larkin, Chief Executive, Mutual Energy Limited
& Gerard McIlroy, Finance Director, Mutual Energy Limited

Contents:

1.0 About Mutual Energy Limited (MEL)

Mutual Energy Limited is an established and substantial player in the Northern Ireland energy sector.

The Group's key assets are:

1. The Moyle electricity interconnector
2. The Scotland to Northern Ireland gas pipeline (SNIP)
3. The Belfast Gas Transmission Pipeline (Islandmagee to Belfast and Larne)

MEL is a company limited by guarantee (also known as a 'mutual') which was set up to reduce the cost of energy in Northern Ireland and bring energy infrastructure back into local ownership. As a mutual, the company has no shareholders – **all profits and savings are for the long term benefit of Northern Ireland customers**.

1.1 How does the mutual model work?

The assets MEL manages are fundamental to Northern Ireland infrastructure and will therefore always be paid for by the consumer. Under the MEL model the consumer explicitly guarantees that the assets will be paid for. Making this explicit guarantee that these assets will be paid for allows 100% debt financing at costs significantly below those otherwise achievable. There is little cost to the consumer in making this guarantee as these assets are so important the consumer will always end up paying for them.

MEL manages major energy assets on behalf of energy consumers with all the benefits of the low cost of capital and operational efficiencies being returned to energy consumers. In addition, proactive and coordinated management of group assets has meant that further opportunities for operational savings have been identified and captured.

Essentially, under the mutual model, the core energy infrastructure assets operated by MEL are being operated at a much lower cost to the consumer than under the previous, nonmutual model.

1.2 Customer savings: What we have delivered

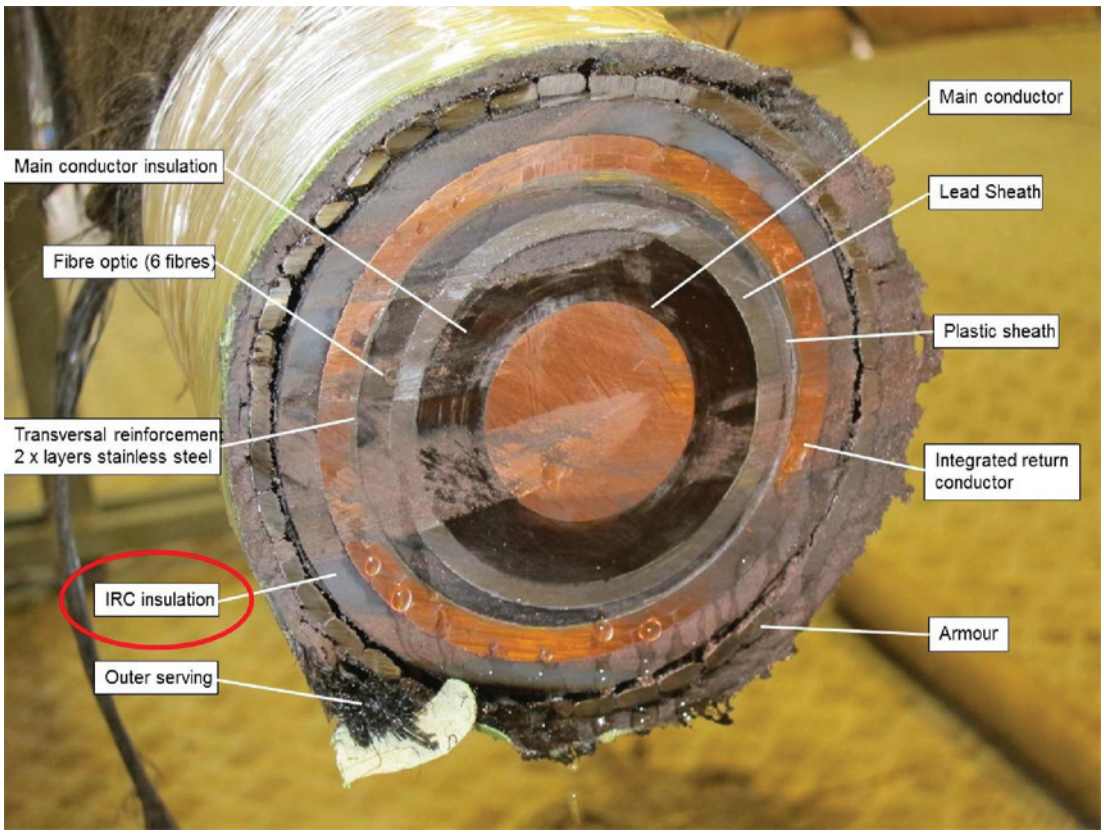
Company	Cost of capital savings (to March 2012)	Efficiency savings (to March 2012)
Electricity business	£21.2 million	£4.0 million
Gas business	£62.8 million	£2.7 million

These represent per annum savings of 27% and 43% in respect of the average applicable annual electricity and gas transmission charges. The cost of capital savings are significantly front end loaded and the rate of increase in savings will reduce over time.

Without these savings, electricity and gas prices to consumers would be higher.

2.0 Moyle Interconnector faults

The Moyle Interconnector has unusually experienced four cable faults over the last two years as shown in the table below. The 500MW Moyle Interconnector is built with two 250MW cables, Pole 1 and Pole 2 and each cable contains two conductors, a main conductor and an integrated return conductor (IRC). As can be seen from the table all of the cable faults to date have been problems with one component of the cables, the insulation on the integrated return conductor.



Fault	Location	Return to Service
September fault 2010 IRC insulation	Onshore Scotland, Pole 1	Nov 2010
June 2011 IRC insulation fault	Offshore 17km from NI, 140m water depth, Pole 1	Jan 2012
August 2011 IRC insulation fault	Offshore 3km from Scotland, 20m water depth, Pole 2	Feb 2012
June 2012 IRC insulation fault	Offshore 3km from Scotland, 20m water depth, Pole 2	Location work ongoing

2.1 Update on latest fault

The most recent fault on Moyle occured on 23rd June 2012, resulting in a reduction of transfer capacity to 250MW. Initial onshore testing placed the fault in the vicinity of the previous repair carried out in early 2012. Further offshore fault detection work carried out in late 2012 concluded that we cannot be fully confident that the fault is located at the previous repair joint, which would be covered by the repair warranty. Consequently if we set out on a warranty repair there would be a risk that the substantial repair cost would fall to MEL. Further testing work is ongoing to try to establish the exact location of the fault. If a cable repair was to proceed, it would be unlikely during the winter weather.

2.2 Reconfiguration

In order to mitigate against a further similar cable fault reducing the Moyle capacity to zero, we could reconfigure the cables to bypass the unreliable parts of the cables and allow Moyle to operate reliably at half its full capacity.

During Q4 2012, a number of tests were carried out which proves that the reconfiguration set up can work (using the integral high voltage elements of each cable to deliver a single but reliable pole capable of transferring 250MW). Furthermore, the system operator is now content to accept Moyle operating in that mode. The link cables at the converter stations

have been permanently installed so that if a similar fault to what has been experienced occurs again on the in-service cable, the reconfigured mode can be put in service in less than one day.

This means that Moyle supplies to Northern Ireland, security for interconnector users and revenue for Moyle up to 250MW of capacity is not reliant on the incident prone return conductor insulation.

2.3 Long term solution

Whilst clearly unwelcome, the latest fault brings to four the number of similar cable faults experienced on the Moyle cables since September 2010. The number and nature of the faults is abnormal for underground cables and raises questions in relation to the future reliability of part of the cables. Even before the latest fault we had begun to prepare for the eventuality of recurring faults, and had alerted key stakeholders, including the Utility Regulator of the need to consider an alternative approach. In order to avoid recurring and prolonged outages with very high repair costs, a more cost effective approach could involve replacing entirely the unreliable part of the cables by laying standard replacement cables, work which would take a number of years to complete. This is both more cost effective and returns the long term reliability and full capacity of the cables.

Another solution may be to configure the interconnector to operate as a single 500MW unit instead of two 250MW units. In order to do this the control systems and ancilliary equipment at the converter stations at each end of the interconnector would have to be replaced.

Feasibility studies are continuing into a long term solution for the Moyle cables. The studies also include considering the impact of the potential change on the cables' electrical and magnetic fields as well as considering what, if any, further consents might be required. The primary focus of these studies will be the cost and time required to execute a solution. We plan to complete the studies in Q1 2013 with a decision in Q2 and a tender issued thereafter.

3.0 Impact on consumers

3.1 Background

The Moyle interconnector is a transmission system that links SEM market customers to power stations in Britain and the BETTA market generally and vice versa. Moyle Interconnector Limited does not buy or sell power, but merely provides the conduit for power to flow. Electricity suppliers and traders use Moyle to move their power between markets from generators to customers. This is similar to other transmission systems such as the NIE transmission system; NIE does not buy or sell power but merely connects customers to power stations so that suppliers can move electricity around.

Customers, via their suppliers, pay for the transmission systems by paying a use of system fee for each unit of electricity that they use. The fee pays for the capital costs and operating costs of the transmission system. The capital and operating costs allowed are set by the regulator.

This is essentially how Moyle is paid for. However due to the price difference between the BETTA (GB) and SEM (all-island) markets Moyle cannot accommodate all of the demand for flowing power into the SEM market, it is congested in this direction. To resolve this congestion Moyle allocates its capacity by auction to the highest bidders. The auctions have a zero reserve price. Any monies raised at auction are used to reduce the direct charges to consumers for use of the system. Up until 2011/12 tariff year Moyle has been able to offset all of the direct charges to consumers using its congestion auction revenue. Of course as prices between the SEM and BETTA markets equalize, less auction revenue is collected and therefore a bigger direct charge is made to consumers. The benefits arising from the

equalisation of prices between the markets, of course, more than outways the effect of the direct charges.

3.2 Benefits of Moyle interconnection

The Moyle interconnector benefits customers in two ways:

1. *Security of supply*. By having the interconnector, customers have access to 500MW of electricity supply, providing power to keep the lights on and avoiding the need to build local generators to make up that capacity.

2. *Lower prices*. Wholesale electricity costs are set by the most expensive unit of electricity in each half hour period. Cheaper power flowing in across the interconnector displaces the most expensive generators first and thereby lowers the cost of the most expensive unit of electricity and consequently the overall wholesale electricity price. If the interconnection capacity was unlimited the wholesale price in SEM would drop to the BETTA price.

These benefits have been significant since Moyle was commissioned.

3.3 Costs of Moyle Interconnection

Normal

While the costs vary from year to year, Moyle's capital costs (the costs of paying for construction of the interconnector) are typically around £15m per annum and operating costs are typically £5m per annum. The operating costs are dominated by fixed costs such as rates, fees and insurance. Being a mutual, the major costs – the capital costs – are based on debt costs only (3% +RPI) and do not include a profit element.

Cable repairs

Moyle had insured against damage to its cables and the cost of repairing the 2010 and 2011 cable faults that occurred is covered by insurance. The claim for the 2010 repairs has been settled and the claim for the 2011 repairs is ongoing. Until the claim is settled Moyle has paid for the costs from its cash reserves. Since December 2011 the insurance market would not insure the risk of further similar faults, therefore any further repair costs (due to similar faults) would fall on Moyle, and if Moyle had insufficient reserves, on consumers.

Long term cable solution

The cost of implementing a long term cable solution to once again provide 500MW of reliable capacity would fall to Moyle and consequently to consumers. This cost is estimated to be of the order of £60 million, although there is a fair degree of uncertainty.

However we are confident that the security of supply and wholesale electricity price benefits would be many times this cost. As a benchmark, approval for the 500MW East West interconnector, recently commissioned between Dublin and Wales, was based on value for customers and a construction cost of nearly €600 million. In terms of security of supply, Northern Ireland is very likely to need more capacity by the latter half of this decade, a 250MW power plant is likely to cost in the region of £250 million.

Notwithstanding the above, a long term solution, with the associated costs would only proceed with the support of the regulator.

Any decision to incur costs on behalf of customers would only be made where the benefits outweigh those costs. Consumers' interests will be at the heart of Mutual Energy's considerations.

4.0 Islandmagee Gas storage project

MEL is providing local support for the development of a gas storage project with UK natural gas storage company InfraStrata plc. The project, which is being developed by Islandmagee Storage Limited (IMSL) will provide a natural gas storage facility in caverns created within the salt deposits 1,500m below Larne Lough and accessed from boreholes drilled onshore. The storage facility will consist of seven caverns which will hold up to 500 million cubic meters of gas (enough to satisfy Northern Ireland's peak demand for more than 60 days) and will cost in the region of £400 million.

4.1 Benefits of gas storage

The project will ensure the future development and security of natural gas supplies to Northern Ireland. The island of Ireland badly needs facilities to store natural gas. With the heating requirements for homes and industry coming more and more from gas and with 60 per cent of our electricity locally being generated from gas, Northern Ireland is extremely vulnerable to any disruption in the gas supply to the island. Gas storage has also the added advantage of smoothing out price spikes in the market, with gas being stored when demand and wholesale prices are low and released onto the market when demand increases.

Northern Ireland has a target to generate 40% of electricity from renewables by 2020 – this will primarily be achieved through wind-powered generation. A shift to renewable energy sources is likely to result in an increasing reliance on gas-fired power stations to support the fluctuations in supply from the intermittent nature of wind. Rapid cycle gas storage facilities, such as this planned project, will be important to respond to the rapidly fluctuating gas supply demands for electricity generation.

4.2 Major investment

It was announced in January 2012 that IMSL had entered into agreements with BP Gas Marketing Limited (BPGM) regarding appraisal of the project and the option for BPGM to acquire a 50.5% equity interest in IMSL. Under the terms of a Joint Appraisal Agreement, BPGM has agreed to fund the activities necessary to develop the project, including the drilling of a test borehole, up to the point where a decision can be made on whether to proceed with its detailed engineering design.

This investment into the project by BP Gas Marketing Limited (BPGM) represents a significant and much-needed inward investment.

The project will create more than 20 high quality permanent jobs, with construction activities generating temporary employment for over 200 people.

Importantly, the project is currently being developed as a commercial venture, with little or no cost incurring to the energy consumers.

4.3 Planning approval granted

Planning approval for the gas storage facility was granted by the Department of the Environment in October 2012, representing a significant milestone for the project. Other critical regulatory requirements for the project remain to be addressed in order to allow the project, which has the potential to deliver a major economic boost to the local area, to proceed in a timely fashion and to ensure it can operate on a level playing field with gas storage elsewhere on these islands.

The Northern Ireland gas market is too small to support a commercial gas storage project. However Ireland and Britain have a real need for gas storage and the Islandmagee location is ideal in terms of geology and existing infrastructure.

Consequently, arrangements need to be in place to allow access to spare capacity in transmission pipelines within Ireland to allow the security of supply benefits to be accessed

across the island. In addition, a tariff structure needs to be developed that will allow the Islandmagee facility to compete fairly with storage facilities in Great Britain. Finally, in the future, gas must be allowed to flow into the Great Britain gas market from the Irish market. Provided such a regulatory environment is established, this essential project could be delivered with little or no additional cost to gas consumers on the island.

4.4 Next stage of the project

The next stages will include drilling of the first borehole from the site in order to finalise the design and confirm the necessary data to support the consenting process for the marine aspects of the project. Drilling is planned, subject to confirmation on the regulatory framework for the project, for later in 2013. Construction of the project, which is expected to involve the creation of seven caverns in the Permian salt layer at a depth of 1,500 metres, is projected to take around seven years to complete with a major amount of this time spent dissolving the underground caverns.

IMSL has consulted extensively on the project with the local community and will continue to meet with residents to discuss issues in relation to the project. A further information event will be organised prior to the first borehole drilling, to provide another opportunity for the local community and other key stakeholders to meet the project team, and review the plans for the project including the timing of construction activity.

Mutual Energy Written Briefing Electricity Policy Review

mutualenergy

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15th October 2013

Nathan McVeigh
Committee for Enterprise Trade and Investment
Netherleigh House
Massey Avenue
Belfast
BT4 2JP

Dear Mr McVeigh

DETI Committee Review of Energy Policy.

Thank you for the opportunity to make an input into the DETI Committee's Review of Energy Policy and the two areas of electricity pricing and security of supply. These are two areas of great importance to Mutual Energy given that, as a business, we operate key energy assets which are vital to security of supply in Northern Ireland and which by their very presence can impose downward pressure on electricity prices.

As you mentioned, along with Mutual's Finance Director Gerard McIlroy, I briefed the Committee in January of this year and in May 2013 we provided a detailed briefing paper on the Moyle Interconnector including the cable faults and our proposed short and long-term solutions. (A copy of that briefing paper, which continues to reflect accurately the overall position, is attached for convenience.)

Update on Moyle

Since May, the Utility Regulator has indicated his support for our proposed short and long-term solutions to the challenge of getting the interconnector restored, reliably, to its full capacity. This is set out in an exchange of letters between Mutual Energy and the Utility Regulator, published on the UREG website on 13 May 2013.

In addition to progressing work on the two potential short term measures, work on permitting and procurement relating to the cable replacement project, which will bring a permanent solution, has also continued to move ahead since May.

Electricity Prices

The Committee Review into electricity prices is welcome. Given the importance of electricity prices to social wellbeing and to business competitiveness, it is vital that energy policy promotes genuine competition in the market place and the provision and operation of electricity infrastructure at lowest possible cost.

In the end customers pay for infrastructure and networks, and it is primarily the role of the Regulator to ensure that adequate provision is achieved at lowest possible cost. From Mutual Energy's perspective that is also what we try to do. Since taking ownership of the Moyle Interconnector, the Scotland Northern Ireland Gas Pipeline (SNIP) and the Gas Transmission Pipeline to Belfast, the company has achieved savings for customers in excess of £80million in cost of capital savings alone. Our focus on lowering operating costs has also saved energy consumers millions of pounds. With no shareholders to remunerate, Mutual energy's focus is on what is in the best interests of Northern Ireland's energy consumers.

Registered Office: First Floor The Arena Building, 85 Ormeau Road, Belfast, BT7 1SH. Registered Number: NI053759

A Northern Ireland company working for consumers

Mutual Energy is keen to bring the low-cost mutual model to bear on other important energy assets in Northern Ireland including gas storage at Islandmagee and gas network extension to the West.

Whether successful or not in securing these developments, the very presence of Mutual Energy should inject a real cost discipline into any competitive process.

Security of Supply

Unlike the issue of electricity prices, which has an immediate impact and affects everyone, the issue of security of supply is left to a small group of policymakers, regulators and energy suppliers to worry about. Generally, security of supply is taken for granted by energy consumers despite the potentially overwhelming consequences of a prolonged shortfall in supply.

Northern Ireland is undoubtedly, as things stand, facing a tightening in the electricity security of supply position in the next few years. This is well described in the information paper prepared by UREG and DETI, published on 12th June 2013.

Mutual Energy agrees with the broad thrust of the analysis in this paper, in particular the focus on the importance of the Moyle Interconnector being restored to full capacity and the early completion of the proposed North South electricity Interconnector, which has been slowed down through the planning process.

Indeed, there is probably no business in Northern Ireland more concerned with the security of supply issue than Mutual Energy. In addition to owning and operating the Moyle Interconnector, the company owns and manages the pipeline through which all of Northern Ireland's gas flows. Given the fact that all of our gas comes from one place and that it is vital to power generation, and given the fact that Northern Ireland's wind power necessitates greater grid operational flexibility, Mutual Energy has engaged as a development partner in a major gas storage project in Islandmagee, County Antrim, which aims to address these issues.

Gas Storage

Gas storage would be hugely beneficial to Northern Ireland, providing up to 60 days' supply of gas in the event of a prolonged interruption. Also the rapid response availability of gas out of storage would allow system operators the much needed flexibility to allow larger amounts of renewable energy to be dispatched onto the system, in line with Northern Ireland's ambitious renewable energy targets.

The Islandmagee gas storage site is highly advantageous given its uniquely favourable geology and proximity to strong points on the gas and electricity networks. Because of the scale of the proposed investment, the project can only make sense if it can operate not only in an all-island market but in the main UK gas market. To do this it will need to be able to operate on the same terms as any other UK gas storage facility, which presents a challenge to regulators given that gas going in and out of storage in Northern Ireland would pass through several different jurisdictions.

A major challenge in securing vital investment in infrastructure which can deliver greater security of supply (such as gas storage) will be clear and fair inter-jurisdictional regulation. Otherwise the best projects which should go ahead may not proceed.

Conclusion

Northern Ireland, historically, has suffered from high energy prices and poor security of supply primarily because of a lack of economies of scale, a lack of competition and relative network isolation. Now, with a more competitive market and much greater interconnection, price differentials should be reduced Mutual Energy believes that wider application of the mutual model in Northern Ireland could provide lower long term infrastructural costs passing through to customers.

On security of supply, Mutual energy believes that the UREG/DETI analysis is correct. We also contend that gas storage can make a major contribution to improved security of supply in Northern Ireland if the regulatory environment across different jurisdictions can be optimised.

I would be pleased to furnish the Committee with any additional information it might request.

Sincerely

pp Aaisin Clarke

Paddy Larkin

Chief Executive

Briefing on Moyle Interconnector: Decision on long-term repair of Moyle Interconnector cables

May 2013

About Mutual Energy Limited (MEL)
Mutual Energy Limited is an established and substantial player in the Northern Ireland energy sector.

The Group's key assets are:

1. The Moyle electricity interconnector
2. The Scotland to Northern Ireland gas pipeline (SNIP)
3. The Belfast Gas Transmission Pipeline (Islandmagee to Belfast)

MEL is a company limited by guarantee (also known as a 'mutual') which was set up to reduce the cost of energy in Northern Ireland and bring energy infrastructure back into local ownership. As a mutual, the company has no shareholders – all profits and savings are for the long term benefit of Northern Ireland customers.

Moyle Interconnector faults

The Moyle Interconnector has experienced four cable faults over the last three years as shown in the table below. The 500MW Moyle Interconnector is built with two 250MW cables, Pole 1 and Pole 2. All of the faults have occurred in the same element of the cables, the integrated return conductor (IRC) insulation. The faults have been located at weak manufacturing defects and there is an unacceptable risk that further faults will arise.

The table below sets out further details of the faults incurred to date:

Fault	Location	Return to Service
September 2010 IRC insulation fault	Onshore Scotland, Pole 1, south cable	Nov 2010
June 2011 IRC insulation fault	Offshore 17km from NI, 140m water depth, Pole 1, south cable	Jan 2012
August 2011 IRC insulation fault	Offshore 3km from Scotland, 20m water depth, Pole 2, north cable	Feb 2012
June 2012 IRC insulation fault	Offshore 2.5km from Scotland, 20m water depth, Pole 2, north cable	Fault located May 2013

Update on latest fault

The most recent fault on Moyle occurred on 23rd June 2012, resulting in a reduction of transfer capacity to 250MW. Fault location work has recently been completed and has visually identified and precisely pinpointed the fault to be 150m on a piece of spare cable inserted during the winter 2011/12 repairs on the North cable.

Long-term repair programme

MEL's primary focus has been to remove the reliance on the potentially defective IRC insulation altogether and the feasibility of a number of alternative long term solutions has been considered. The best solution is to lay new low voltage submarine cables along a similar route to augment the existing cables and replace the existing return conductor. This would avoid any cable handling risks and address the resilience of the return conductor across the full length of the submarine cables. This project could be expected to take 4-5 years to complete and could cost in the region of £60 million, although at this stage this figure is highly uncertain.

MEL recognises the tight capacity margin on the Northern Ireland electricity system, particularly from 2015 onwards so, in order to condense the project programme and restore the valuable interconnector benefits to customers, the company is proposing to run the consents process for the works and the cable procurement process in parallel. Appointment of consultants to specify and tender the new low voltage cables is underway. It may be possible, with favourable conditions, to achieve an autumn 2016 commissioning date, although a more realistic delivery date would be autumn 2017. This programme should become much more certain by the end of 2013.

Financial benefit of Moyle to consumers

Research conducted by independent consultants Energy-Link Partnership (based on figures for the last 3-4 years) indicates that wholesale electricity market costs in Northern Ireland would have typically been £28 million higher per annum in Northern Ireland (£112 million all-island) and reserve costs £8 million higher per annum in Northern Ireland (£32 million all-island) without the Moyle Interconnector. Consequently, in addition to security of supply benefits it would appear from the study that the future customer financial benefits would far outweigh the cost of the cable replacement project.

Paying for the repair

The Moyle Interconnector is wholly debt financed, with significant savings for consumers locked in until 2033. The arrangement provides for Moyle to charge all electricity suppliers (and thereby consumers) an annual use of system fee, known as CAIRt, to cover the costs of operating the interconnector. These costs are expected to be approximately £20 million per year on average for the 2013/14 and 2015/16 period. The fee is reduced by any revenue which Moyle earns through its capacity allocation auctions. Up until 2012/13 Moyle had earned sufficient capacity auction revenue to allow it to waive the CAIRt fee completely.

Applying auction revenue to reduce the costs of the new low voltage cables, MEL estimates that the required unexpected additional CAIRt fee should not be more than £10 million in 2014 and £20 million in 2015/16. £10 million equates to approximately 1% of consumers' annual electricity costs.

MEL is continuing to progress a number of claims in relation to the cable failures and any contribution from these has not been factored into the above calculations. The company is also trying to avoid or delay some normal one-off operational expenditure during this period. If successful in these areas, it may be possible to meet the unexpected CAIRt fee and to waive part of the normal CAIRt fee.

Interim measures

Whilst the long-term repair programme is being progressed, steps have also been taken to mitigate the risk to the system of a further fault on the currently in service cable. This has involved the successful design, installation and testing of a conductor reconfiguration which allows the interconnector to run at 250MW without the need to rely on the incident prone elements of the cables. This reconfiguration, which can be set up in a matter of hours, effectively assures 250MW of Moyle capacity.

MEL is also progressing feasibility studies on two possible interim solutions to return to the full 500MW capacity ahead of installation of the new low voltage cables. These interim solutions are unconventional and may not be feasible and critically, they would rely on the integrity of the incident prone return conductor insulation. However, if feasible, they would bring valuable additional capacity to the Northern Ireland system and MEL believes it is well worth pursuing these options further.

Regulatory support

MEL's decisions with respect to the long term future of the Moyle cables impact on customers in terms of both quality and cost of electricity supplies. The company is therefore keen that its decisions and plans are fully transparent and open to regulatory challenge. In a letter dated 10th May 2013, the Chief Executive of the Utility Regulator recognises "The repair of the Moyle Interconnector is of the utmost importance as it plays a critical role in securing the supply of electricity to consumers in NI" and expresses the view that "the investment to restore full and reliable capacity, estimated to be up to £60m, is in the interest of consumers in Northern Ireland".

MEL welcomes this support and has committed to confirming a realisable delivery programme for the project to replace the low voltage cables as well as to take forward more in-depth analysis to assess future costs and savings to consumers in association with Moyle. MEL has also pledged to keep the Utility Regulator updated on the viability of the other possible interim solutions which are being explored. It is expected to take six months to design and ultimately confirm the feasibility of these interim options and a further twelve months to install and commission.

Northern Ireland Electricity Written Briefing Electricity Policy Review

Northern Ireland Electricity

Update on the North – South Interconnector Project.
Provided to the Committee for Enterprise, Trade and Investment.

24th October 2013.

Why does Northern Ireland need a new electricity interconnector?

1. The North South Interconnector is the most significant electricity infrastructure project developed since the 1960s. The Interconnector is a cross border project, requested by the Utility Regulators and Governments both in Northern Ireland and the Republic of Ireland because it is recognised as a 'key enabler' for the effective operation of an efficient 'all-island' electricity market, to support the realisation of strategic renewable energy targets and to exert downward pressure on NI electricity prices.

2. For NI in particular, it is also crucial for the provision of secure electricity supplies. The bulk of the generation in Northern Ireland is provided by three main power stations, two of which must reduce their output by 2016 in order to comply with EU Directives associated with the reduction of environmental emissions. The Interconnector will increase security of supply for Northern Ireland by enabling increased power flow between Northern Ireland and the Republic of Ireland to meet peak demand.

The Northern Ireland economy

3. All three of the primary drivers for the Interconnector project are of major importance for the future success of the Northern Ireland economy:

   - Efficient, all island competition will drive electricity prices downward and improve NI competitiveness. The Interconnector will remove the network constraints which currently cost all-island consumers up to £25 million annually.
   - Enabling the development of indigenous renewable energy resources will increase the scope for both inward investment and for employment[1].
   - The assurance of a secure and reliable electricity supply is essential in attracting foreign direct investment[2].

4. Whilst all three of the above are of major economic importance, the ongoing delay in achieving consent to build the proposed new Interconnector is giving rise to particular concern in regard to the electricity security issue.

5. The transmission system operators in NI and RoI have recently published a statement on all island generation capacity for the years between 2013 and 2022, and this statement indicates serious concern for the future security of electricity supply (for Northern Ireland in particular) in the years beyond 2016. The document observes the likelihood of electricity supply shortfalls arising from the planned closure of several generating units (required in order to comply with EU emissions Directives), and shows that in the continuing absence of

1 The European Wind Energy Association has estimated that 0.4 ongoing direct jobs are created for every MW of installed wind capacity. In Northern Ireland, this translates into a potential for up to 600 full time jobs by 2020.

2 Invest NI recently published its Digital Northern Ireland 2020 report. This discusses opportunities for inward investment in large scale data centres. However, data centres have a high demand for energy and require very high levels of assurance on security of electricity supply.

adequate interconnection with the Republic of Ireland, there is likely to be a serious shortfall in available sources of electricity supply in the years ahead.

6. Shortfalls of the nature described above would require the introduction of arrangements to prevent power system failure by switching off the electricity supply (using a rota system for selected areas) during times of peak electricity demand. This would be highly undesirable, and underlines the increasingly critical nature of the need for additional interconnection.

7. The risk of loss of supply is highly relevant in the context of industrial or commercial investment decisions, and a secure energy environment is essential as an enabler of economic recovery in Northern Ireland.

Project Status

Northern Ireland

8. A planning application for the Northern Ireland section of the project was submitted to DOE Planning Service in December 2009.

9. Against a background of extensive local opposition to the proposed overhead line, the Environment Minister decided that the project should be referred to the PAC for a Public Local Inquiry. The Inquiry began in March 2012 and was adjourned shortly after commencing, with NIE being requested to amend the presentation of detailed application drawings and to provide a revised and consolidated Environmental Statement.

10. The application was re-submitted by NIE in April 2013. When the Planning Service has completed the public consultation process, the application will be passed back to the PAC in order to continue the Public Inquiry. There is currently no scheduled date for the Inquiry to reconvene. The timetable for this process is a matter for the DOE Planning Service and the PAC to determine.

Republic of Ireland

11. A planning application for the RoI section of the project was submitted to An Bord Pleanála in December 2009. However, owing to challenges arising during an Oral Hearing convened in April 2010, EirGrid decided to withdraw its planning application, and to perform a thorough and detailed re-evaluation of the project before re-submitting the application.

12. In April 2013, EirGrid published their "Final Re-Evaluation Report" – and following consultation completed in September 2013, they plan to submit an application to An Bord Pleanála in early 2014.

Going Forward

13. Construction of the Interconnector will take approximately three years, and the application of "best case" projections indicates that the earliest possible date for completion will be at the end of 2017.

14. It is evident that the extending process for planning approval is already such that Northern Ireland could be exposed to increased electricity supply risk for the period of time beyond 2016. NIE believes that it is imperative to ensure that the period of any such exposure is limited to a minimum, and that construction of the Interconnector should be permitted to commence at the earliest possible date.

Addendum

Underground Cable vs Overhead Line Solution

16. A primary argument presented by many objectors to the proposed Interconnector is that they accept the strategic need, but believe that the required infrastructure should be located **underground** in order to preserve visual amenity for local residents.

17. The proposed Interconnector is a 140km transmission connection, with approximately 34km within Northern Ireland. Because of its strategic importance as an electricity network security measure, it is crucial that the Interconnector is able to provide a fully synchronous link between the two transmission systems. NIE and EirGrid have proposed a high voltage AC overhead line because it is both the only proven technical solution and the most cost effective proposal. The extensive environmental assessments clearly demonstrate that, other than having an unavoidable impact on visual amenity, the overhead line will have minimal impact on the environment. The line will comply fully with UK and international health and safety standards.

18. If the Interconnector were to be re-designed and proposed as an AC underground cable, then it would be the very first application of this technology worldwide for a circuit of this overall length. Both NIE and EirGrid have serious technical concerns about whether a 140km circuit could be operated successfully within the relatively small power system on the island of Ireland. Even if the cable were to be a technically acceptable solution, it would cost many times more than an overhead line. The updated costing studies presented as part of the re-submitted planning application show that, over its lifetime, an HVAC underground project would cost €845m more than the proposed overhead line project (nearly five times as much as the overhead line), and all of this additional cost would have to be borne by electricity customers through higher electricity prices.

19. If the Interconnector were to be re-designed and built as a HVDC underground link (rather than as an AC circuit) then such a link could theoretically be made to work given that there are a number of very long HVDC circuits successfully operational worldwide. However, for the North South Interconnector to use HVDC technology it would be necessary to develop and apply complex control systems that would attempt to make the link behave in a synchronous fashion – and such technology would, again, have to be developed as a “world first”. NIE and EirGrid do not wish to take this level of technical risk with a circuit of such importance for future electricity security on the island. In regard to relative costs, the cost of such a link would be even higher than the AC cable.

20. The proposed AC overhead line is therefore the only practical solution for effecting this important strategic interconnection.

21. NIE believes that it has found an overhead line route which properly balances the minimised but unavoidable visual impact of an overhead line against the significant benefits that will be delivered for the NI economy as a whole when the Interconnector is operational.

Response from Northern Ireland Electricity to Committee queries

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Our ref

Your ref

Ms Stephanie Mallon - Assistant Assembly Clerk
Committee for Enterprise, Trade & Investment
375 Parliament Buildings
Ballymiscaw
Stormont
BELFAST
BT4 3XX

06 November 2013

Dear Stephanie

Further to NIE's meeting with the ETI Committee on 24th October, and the various related requests for further information, we set out our response in the attachment.

If the Committee or individual members require any further information we would be happy to oblige.

Yours sincerely

Robert Wasson
Asset Management Director

INVESTOR IN PEOPLE

ETI Committee meeting on 24th October 2013 – NIE's response to requests for further information.

1. A brief explanation of why an initial high level estimate of circa £1bn (for NIE network investment associated with the 40% renewable target) has been reduced to a figure that is nearer to £500m.

   The figure of £1bn was based upon preliminary work undertaken in 2010 in order to estimate the likely cost associated with extending and reinforcing the NIE transmission network (most especially in the north and west) to enable the connection and operation of sufficient wind powered generation to achieve the 40% target for renewable integration.

   Since then the Renewable Integration Development Project (RIDP) has concluded its study work for the selection of a preferred scheme. This has enabled a refined overall estimation of circa £500m.

   RIDP is a joint project between NIE, SONI and EirGrid, part funded by the EU, to assess the reinforcement of the 275kV/220kV networks in the north and west of the island to meet the renewables targets established by Government in both jurisdictions on the island of Ireland.

   The main areas of scope clarification and cost reduction have arisen as follows:

   - Avoidance of the need to construct new 275kV circuitry from Omagh to Coolkeeragh. This also avoids significant and costly additional 275kV substation works in each location.
   - The expectation of building only one new double circuit 275kV overhead line between Kells and Coleraine, rather than two separate 275kV circuits.
   - The expectation that transmission infrastructure required to support offshore windfarms, and also to establish cluster substations to supply groups of onshore windfarms, will be funded by the associated renewables developers.
   - The cost of equipment to provide for voltage support has been refined downwards as a result of more detailed technical study.

2. Further information on relative timeframes and costs for the repair of faults arising on overhead lines and underground cables.

Whilst overhead lines generally suffer more interruptions than their equivalent underground cables, the vast majority of these interruptions are transient in nature and the lines are normally returned to service automatically within seconds of the interruption occurring. Consequently other paths within the transmission system can accommodate the briefly diverted load, and the line interruption normally has no impact on consumers at all.

Underground cable circuits, however, do not suffer transient faults. If a fault does occur in a cable or in one of its joints, be it a design failure or "dig in" by a third party, the consequence is almost invariably destructive and thus persistent. As a result, all cable faults are treated as persistent and must be investigated before the circuit is returned to service. These circumstances mean that average repair times for cables are much higher than those for overhead lines, being measured in weeks rather than hours.

There are two factors that further compound this difference. Firstly, it is normally much easier to locate an overhead line fault than an underground cable fault. Secondly, the technology and skill-set required to effect an overhead line repair would generally be much more readily available locally than would be the extremely specialist requirements of an underground cable repair at transmission voltages. There are no people or resources currently available for such specialist work on the island of Ireland, and sourcing the people, equipment and materials for this type of work can itself take many weeks. These two factors, when taken together with the destructive nature of cable faults, yield significantly lower expected availabilities for underground cable circuits, length for length, than for circuits comprised entirely of overhead line.

The table shown below is based on data published by the European Commission (EC), and takes into account both the reliability (the probability of an unplanned disconnection) and the outage durations (the time taken to restore the circuit to service). It compares the number of hours for which an overhead transmission line and an underground transmission cable might be expected to be unavailable each year, and it will be evident that the time differences become particularly substantial for an overall circuit length of 140 km.

Average Unavailabilities

Hours per circuit km pa	
Overhead Line	0.126
Underground Cable	6.4

Further and more detailed information can be found in the report entitled "Cavan-Tyrone and Meath-Cavan 440kV Transmission Circuits: Comparison of High Voltage Transmission Options: Alternating Current Overhead and

Underground, and Direct Current Underground", produced by international consulting engineers Parsons Brinckerhoff in February 2009 and available for download from NIE at:

http://www.nie.co.uk/documents/NS/T-C-Inter_H-Safety/7-PB-Final-Report-FEB-2009.aspx

The figures quoted in the 2009 report were revisited and updated in a further report published in April 2013 and available at http://www.nie.co.uk/documents/NS/Appendix-4B-3511435A-NIE-N-S-Costs-Update.aspx

A further source of relevant information is EirGrid's Final Re-Evaluation Report (Published by EirGrid in April 2013). The report is available for download at http://www.eirgridprojects.com/media/FinalRe-evaluationReport.pdf

EirGrid's report makes reference to the latest fault statistics for their existing 439 km of 400 kV overhead lines in which there has not been a single sustained fault (i.e. a fault that required repairs to be carried out before the line could be returned to service after a fault trip) in 25 years of service.

The EirGrid report notes statistical projections that the average period for which an overhead line circuit will be out of service for repair after a fault is considerably less than that of an underground cable circuit - less than one day in the case of overhead lines, and 25 days or more in the case of a 400 kV underground cable.

Overhead lines will generally be quickly repaired by locally based linesmen employed by NIE and using techniques and materials that are readily available and most usually in immediate stock. Underground cable faults may take a considerable period of time to locate, and a further considerable period of time to procure the materials required for repair (which could include additional lengths of the cable itself as well as the highly specialised jointing materials), to excavate the space required for construction of concrete lined jointing bays, and to arrange for the time commitment of specialist jointing experts who would need to travel from continental Europe or from further afield to perform the work involved.

The relative costs can vary widely dependent upon the circumstances, but the cost of repairing an underground cable will always be very much greater than the cost of repairing an overhead line – with costs for the repair of a single cable fault running into several hundred thousand pounds.

3. A brief explanation on why the reinforcement of existing networks close to the border (inter alia addressing the standby 110kV connections, and also lower voltage networks) cannot be used as an alternative to the currently proposed 400kV North-South Interconnector project.

The North – South Interconnector is a planned 400kV single circuit overhead line connecting the NIE "backbone" 275kV network near Moy in Northern Ireland to an existing 400kV substation, called Woodland, near Dublin. The proposed new high capacity interconnector will enhance existing interconnection arrangements between the two jurisdictions, and will remove network constraints that are currently giving rise to significant operating costs. The removal of these constraints will reduce network costs by over £25m per annum, and will therefore become a direct contributor to any future reduction in electricity prices.

Currently the two transmission systems are interconnected by a single high capacity 275kV double circuit tower line from Tandragee – Louth. There are also two (much lower capacity) 110kV circuits from Strabane – Letterkenny and from Enniskillen – Corraclassy. However these two small circuits are only designed to provide local emergency support to the electricity networks in Counties Fermanagh and Donegal, and are not capable of handling the high levels of potential power flows that would be necessary for full network interconnection.

The line transfer capacity required for full network interconnection is 1500MVA, matching the capacity of the existing Tandragee – Louth 275kV double circuit tower line. For perspective, the maximum, or peak, demand of all customers connected to the Northern Ireland system is approximately 1800MVA.

In contrast, the two small 110kV cross-border standby circuits are only capable of carrying about 125MVA. They were installed to provide local support and have been very useful in this context, but these two relatively small circuits are simply not capable of handling the transfer capacities required for full network interconnection, and any attempt to do so would have severe consequences for network stability in those areas. It is not feasible to simply upgrade them for an extended duty because this would also require extensive reinforcements and new network construction on both sides of the border - that would be significantly more costly and more intrusive than the construction of the proposed North – South Interconnector. The concept of such reinforcement to create a "western link" was closely examined, and rejected, as part of the detailed engineering studies leading to the decision to commence development of the Interconnector as currently proposed.

4. An explanation of the NIE process for assessing system capacity versus growing demand and incoming point loads.

The capacity rating applied to the various components making up the electricity network is based on national and international industry standards. These standards apply limits on the electrical current carrying capacity of underground cables, overhead lines, transformers, etc. Consequently, the assigned rating of individual circuits or sections of the network is based on the lowest rated component comprising the circuit or section of the network. NIE has a statutory obligation to operate the network in a safe manor, which includes preventing thermal overload, and to ensure voltages are maintained within predetermined limits. NIE also has a licence obligation to ensure adequate network capacity to maintain an agreed level of security of supply and quality of supply delivered to the Northern Ireland customer.

NIE monitors the network demand at each transformation node and on a circuit by circuit basis to ensure the peak electrical load does not exceed the assigned rating of the network. We also forecast the demand at each transformation node by extrapolating forward the historic demand trend at each site. The forecast is to identify the underlying incremental load growth and excludes large step changes resulting from individual large load connections or transfer of load blocks from neighbouring substations. A cross check is taken of the forecast demand by comparing with other internal and external sources, e.g. The NI Planning Service's Area Plans. Where the existing or forecast load exceeds the assigned rating of a section of network, NIE will propose remedial action. Under its Distribution Licence NIE is required to "develop, maintain and operate an efficient, co-ordinated and economical system for the distribution of electricity". Consequently, any remedial action will take the form of the most efficient and cost effective solution, ranging from demand management through to the minimum necessary capital investment in network reinforcement. NIE does not have regulatory authority to invest in reinforcing network infrastructure beyond that required to meet its statutory and licence obligations.

Individual applications for connection of load to the distribution network are assessed against the available network capacity at the proposed point of connection. The connection charge applicable is based on the cost of connection to the system at the appropriate voltage level plus the cost of network reinforcement, where necessary, to meet the anticipated increase in demand. Where capacity is available locally at a higher voltage level, the connection charge will be inclusive of equipment necessary to transform the voltage down to a usable level. Costs for connection to the distribution system and the limitations on chargeability for deep reinforcement are set out in NIE's Charging Statement which has been agreed with the Utility Regulator – see link to NIE's Charging Statement in section 5 of this document.

5. The planned programme of work to strengthen the NIE Network and current issues with high connection charges for the connection of small scale generation.

The Transmission System

NIE's transmission system is shown in the attached diagram.

NIE's Medium Term Plan (MTP) entails the reinforcement of the 110kV transmission system to facilitate the increased transfer of renewable generation - from the west of the province (where the majority of the renewable generation is developing) to the east of the province (where the majority of electricity demand is located, and where network interconnection will enable transfers to the Republic of Ireland and elsewhere).

To date NIE has upgraded two strategic circuits between Omagh and Dungannon and has completed the upgrading of an initial section of a circuit between Kells and Coleraine. Work is ongoing on the completion of this circuit as well as on a major upgrading of a transmission substation at Tamnamore (near to Dungannon). It is also intended to augment the two upgraded circuits between Omagh and Dungannon with a third 110kV transmission circuit. Planning permission has already been secured for this new circuit, and following the securing of wayleaves and detailed design work construction is planned to commence in 2014. All of the above work is targeted for completion by 2016.

Further work associated with the MTP will involve upgrading of the remaining 110kV circuits in the west of the province between Coleraine and Coolkeeragh and also between Omagh and Coolkeeragh.

The Distribution System

As distinct from large scale wind farm developments, small scale generators are typically single turbines of relatively low capacity being developed by individual farmers or other small/medium size enterprises. These developers are typically seeking connection to NIE's rural electricity network which has developed progressively over the last 50+ years to service the relatively modest electricity needs of the rural community, which to date has been almost exclusively to supply farming and domestic electricity demands.

Connection of generators to these networks is a recent development and the unprecedented increase in demand has been driven largely by the introduction of very attractive Government incentives. The role of the electricity distribution network is therefore evolving rapidly in response. In locations where there has already been a significant uptake in generator connections, the network has now reached the point that further connections require significant reinforcement of either the local 11kV network, and indeed 'deeper' reinforcement of the 33kV network which supplies a much wider area and customer base. Without this reinforcement, the connection of further generation would adversely effect the safe operation of the electricity network and/or the quality of supply being provided to the general body of electricity customers in that area.

In general, NIE has a responsibility to ensure that the costs of developing the electricity network are apportioned appropriately between charges to the specific developer seeking connection to the network, and future electricity tariffs paid by all electricity customers in Northern Ireland. To achieve this requirement, NIE's current charging policy (as approved by the Utility Regulator) means that a developer seeking connection of a small scale generator to the low voltage network will, in general, be charged for the full cost of reinforcement of the low voltage and 11kV networks. As a result, some connection charges now being quoted to small scale generator developers are reflecting the costs of significant 11kV reinforcement that is now becoming required in areas that are already congested with existing generation.

Furthermore, the rapid increase in small scale generation connections is producing electricity flow that is also placing significant pressure on parts of the 33kV network. Currently c. 60 of our 33/11kV substations are at the point where no further generation can be connected without reinforcing the 33kV network. This issue has only recently emerged and raises new and unprecedented regulatory questions of how the cost of such work should be fairly apportioned between the connection applicant and Northern Ireland customers in general, requiring assessment of the benefits of the investment enjoyed by each. To address this, NIE has been working with the Utility Regulator in recent months to consider these issues. In the meantime NIE has been issuing "conditional" connection offers to applicants seeking to connect to the networks supplied by these substations. The connection of these generators is therefore conditional on Utility Regulator approval and the completion of the 33kV investment at the associated primary substation.

The latest position is that the Utility Regulator has now approved a tranche of relatively low cost 33kV network reinforcement works which will remove the more immediate constraints on 40 of these substations. The approach for higher cost projects is under consideration by NIE and UR.

It should be noted that while 33kV investments will facilitate some additional small scale generation connections by enabling increased generation export from the 11KV network, these 33kV investments will not reduce actual connection costs for developers. The 33kV investments will however facilitate generation export from viable small scale generation projects which would otherwise not be able to proceed.

"Heatmap"

NIE showed the Committee a "Network Heat Map" during its presentation. This document, recently published on NIE's website, provides guidance to developers on the capability of the networks to accept further small scale generation export. The Network Heat Map is intended to provide a simple visual representation of those areas now either at or reaching saturation point.

Whilst all reasonable care has been taken to ensure the accuracy of the Network Heat Map, it should be noted that this map will change over time as further generation is committed and should therefore be used as a guide only. Actual connection costs can only be established following receipt of a formal

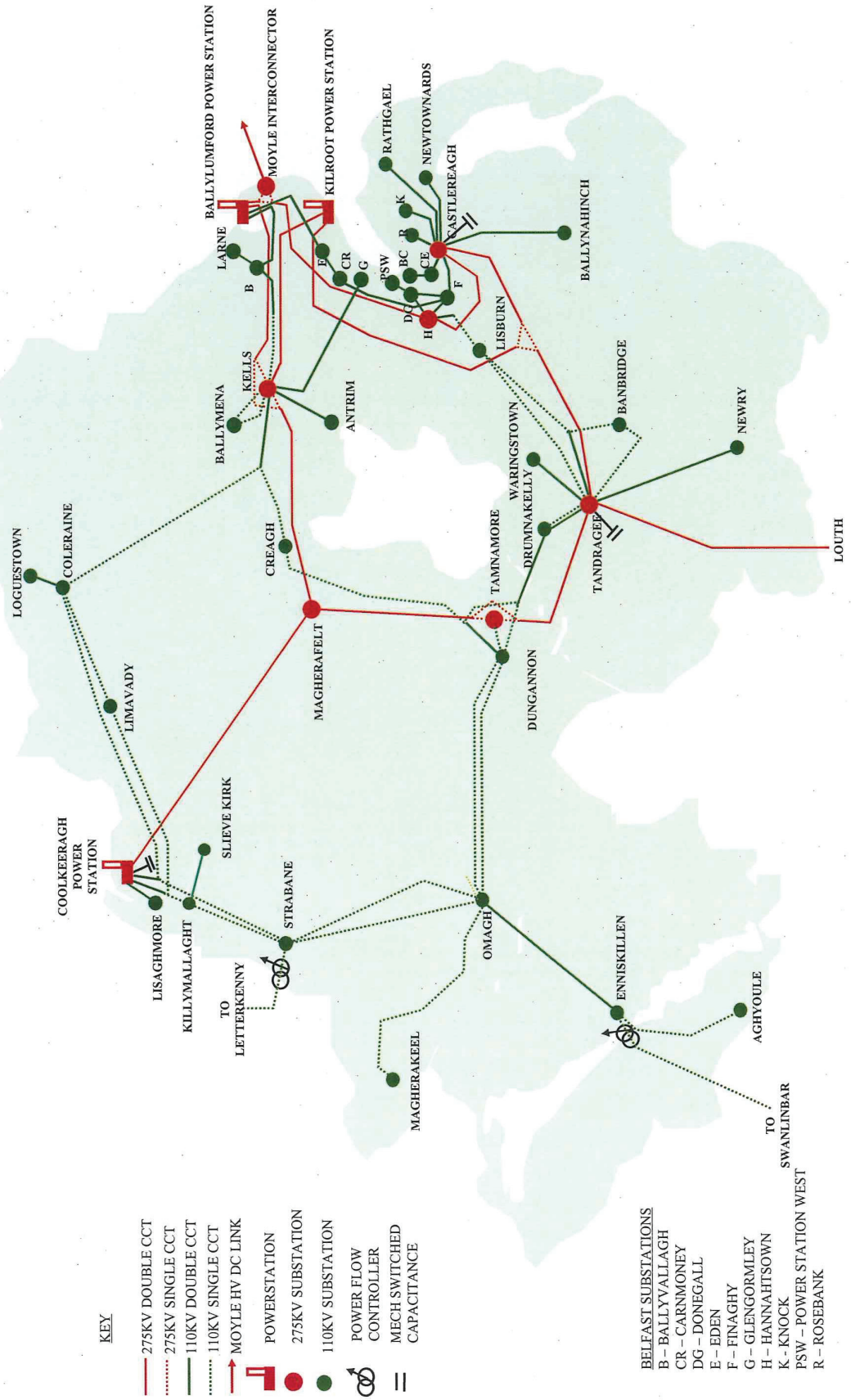
application and by NIE carrying out a detailed network analysis on the specific circuit to which the generation will connect. The NIE connection charging statement is available at URL link:

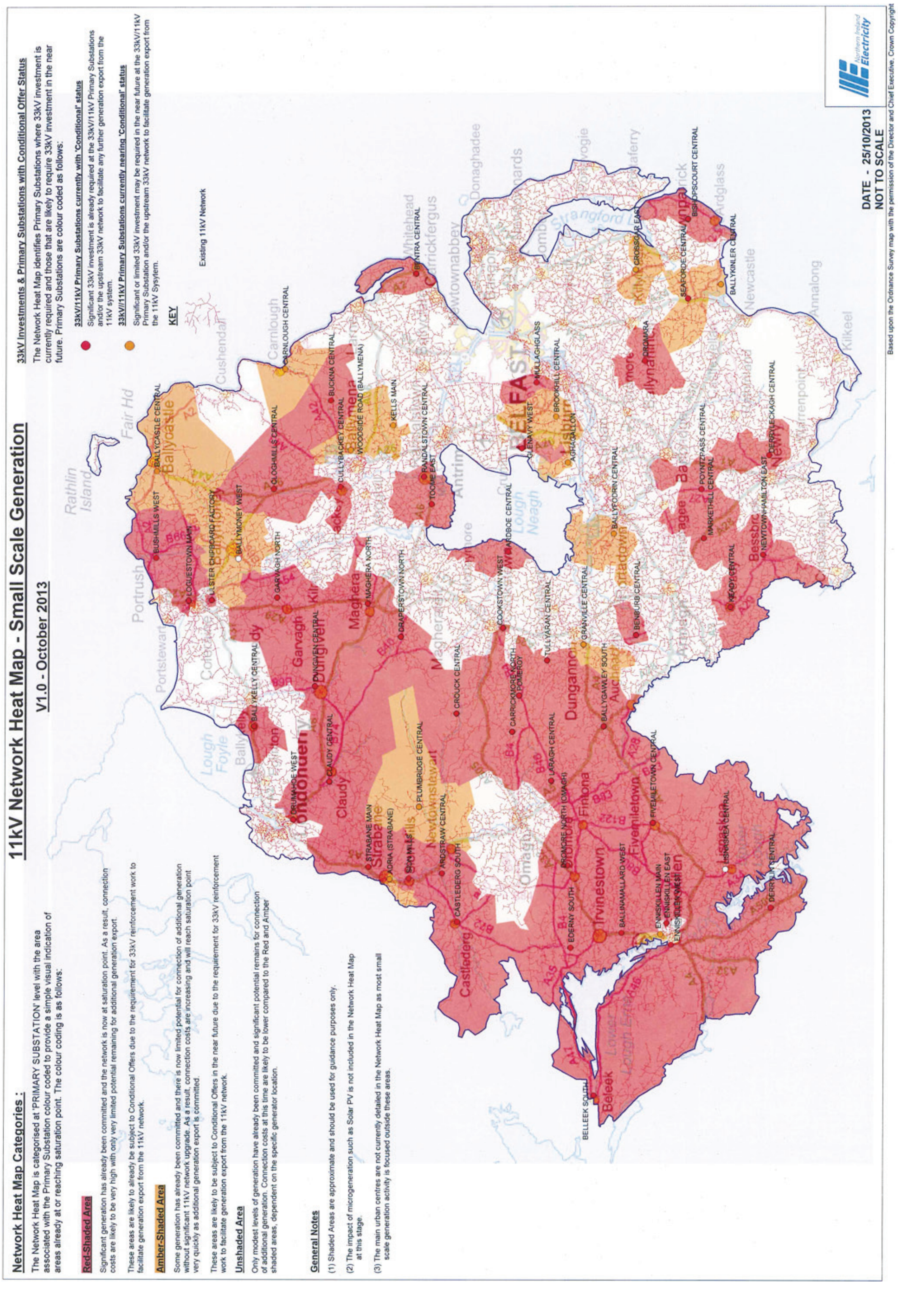
http://www.nie.co.uk/Connections/Generation-connections/Small-scale-generation/NIE-statement

The Network Heat map is available at the URL link below, and a current hard copy is attached for information. It is intended to update the map on a quarterly basis.

http://www.nie.co.uk/Connections/Generation-connections/Small-scale-generation/11kV-Network-Heat-Map

It should be noted that potential remains in all areas for generation installed to offset site electricity usage, provided export to the network can be permanently limited or reduced to zero.


BALLYLUMFORD POWER STATION
MOYLE INTERCONNECTOR
KILROOT POWER STATION
RATHGAEL
NEWTOWNARDS
CASTLEREAGH
BALLYNAHINCH
LISBURN
LARNE
KELLS
BALLYMENA
ANTRIM
CREAGH
LOGUESTOWN
COLERAINE
LIMAVADY
MAGHERAFELT
TAMNAMORE
WARINGSTOWN
DRUMNAKELLY
BANBRIDGE
NEWRY
TANDRAGEE
LOUTH
DUNGANNON
COOLKEERAGH POWER STATION
SLIEVE KIRK
LISAGHMORE
KILLYMALLAGHT
STRABANE
TO LETTERKENNY
OMAGH
ENNISKILLEN
AGHYOULE
TO SWANLINBAR
MAGHERAKEEL
KEY
275KV DOUBLE CCT
275KV SINGLE CCT
110KV DOUBLE CCT
110KV SINGLE CCT
MOYLE HV DC LINK
POWERSTATION
275KV SUBSTATION
110KV SUBSTATION
POWER FLOW CONTROLLER
MECH SWITCHED CAPACITANCE
BELFAST SUBSTATIONS
B – BALLYVALLAGH
CR – CARNMONEY
DG – DONEGALL
E – EDEN
F – FINAGHY
G – GLENGORMLEY
H – HANNAHTSOWN
K - KNOCK
PSW – POWER STATION WEST
R – ROSEBANK


11kV Network Heat Map - Small Scale Generation
V1.0 - October 2013
Network Heat Map Categories :
The Network Heat Map is categorised at 'PRIMARY SUBSTATION' level with the area associated with the Primary Substation colour coded to provide a simple visual indication of areas already at or reaching saturation point. The colour coding is as follows:
Red-Shaded Area
Significant generation has already been committed and the network is now at saturation point. As a result, connection costs are likely to be very high with only very limited potential remaining for additional generation export.
These areas are likely to already be subject to Conditional Offers due to the requirement for 33kV reinforcement work to facilitate generation export from the 11kV network.
Amber-Shaded Area
Some generation has already been committed and there is now limited potential for connection of additional generation without significant 11kV network upgrade. As a result, connection costs are increasing and will reach saturation point very quickly as additional generation export is committed.
These areas are likely to be subject to Conditional Offers in the near future due to the requirement for 33kV reinforcement work to facilitate generation export from the 11kV network.
Unshaded Area
Only modest levels of generation have already been committed and significant potential remains for connection of additional generation. Connection costs at this time are likely to be lower compared to the Red and Amber shaded areas, dependent on the specific generator location.
General Notes
(1) Shaded Areas are approximate and should be used for guidance purposes only.
(2) The impact of microgeneration such as Solar PV is not included in the Network Heat Map at this stage.
(3) The main urban centres are not currently detailed in the Network Heat Map as most small scale generation activity is focused outside these areas.
33kV Investments & Primary Substations with Conditional Offer Status
The Network Heat Map identifies Primary Substations where 33kV investment is currently required and those that are likely to require 33kV investment in the near future. Primary Substations are colour coded as follows:
33kV/11kV Primary Substations currently with 'Conditional' status
Significant 33kV investment is already required at the 33kV/11kV Primary Substations and/or the upstream 33kV network to facilitate any further generation export from the 11kV system.
33kV//11kV Primary Substations currently nearing 'Conditional' status
Significant or limited 33kV investment may be required in the near future at the 33kV/11kV Primary Substation and/or the upstream 33kV network to facilitate generation export from the 11kV Sysytem.
KEY
Existing 11kV Network
DATE - 25/10/2013
NOT TO SCALE
Northern Ireland Electricity
Based upon the Ordnance Survey map with the permission of the Director and Chief Executive, Crown Copyright

SONI Briefing Electricity Policy Review

Generation Adequacy Report Security of supply in NI post 2015

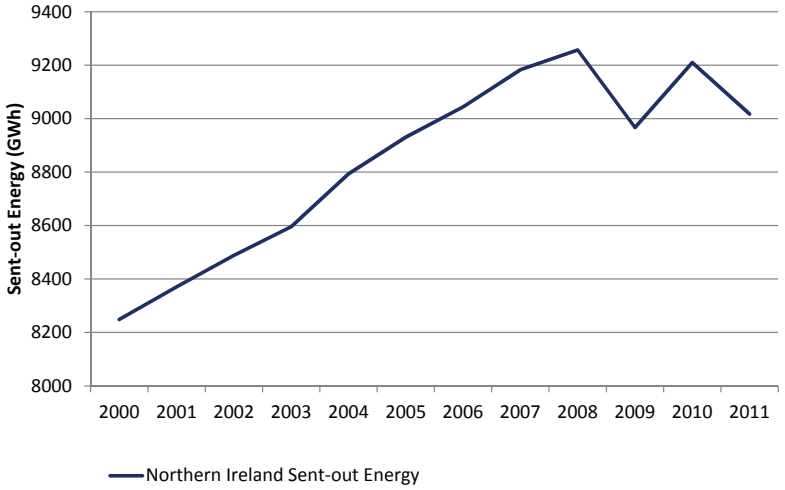
Presentation to ETI Committee
Thursday 27 June 2013

Role of SONI in Northern Ireland

- Independent Transmission System Operator
- Market Operator
- Established the Single Electricity Market Operator (SEMO) in 2007
- Purchased from Northern Ireland Electricity by EirGrid in 2009

2

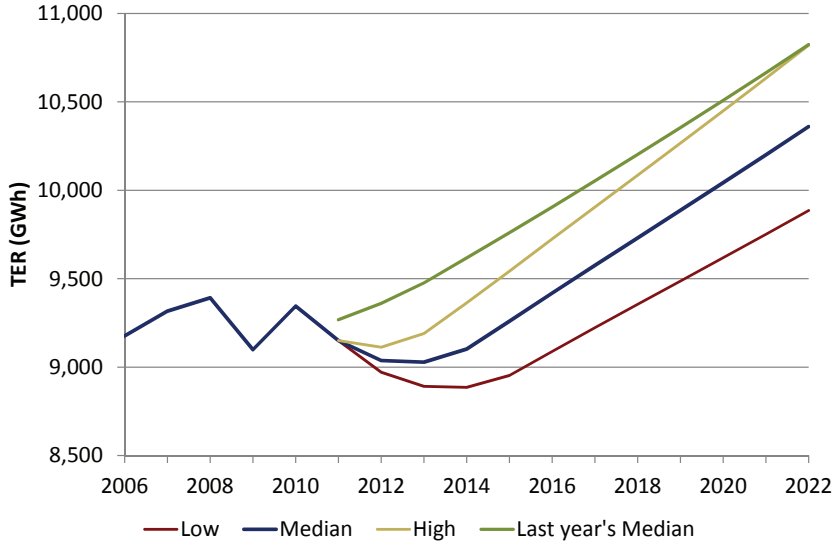
Historical Demand in Northern Ireland



- Steady growth in past

3

Demand Forecast: Northern Ireland



- Demand remains subdued with no immediate signs of a return to growth.

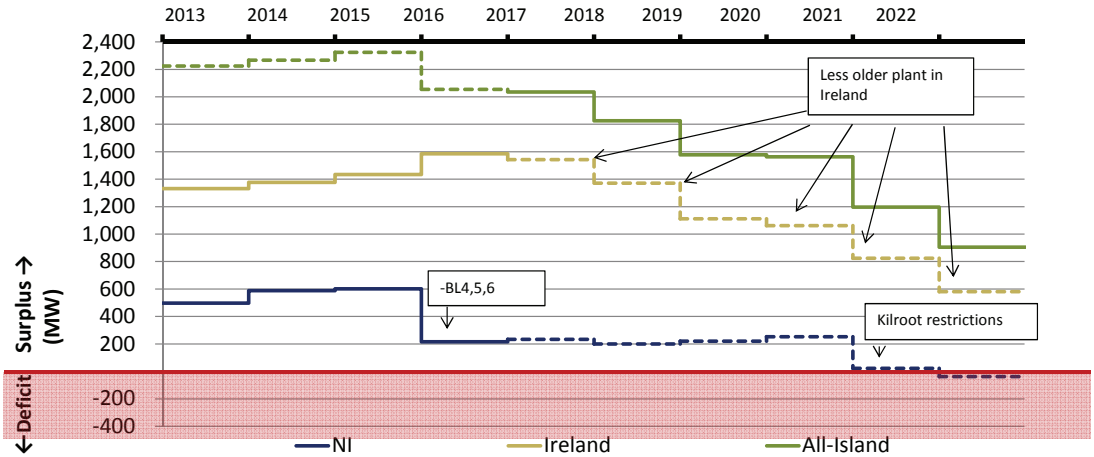
4

Generation capacity in Northern Ireland for the next 10 years

- No evidence of new conventional generators
- Ballylumford: generators withdrawn at end of 2015
- Kilroot: generators there will be limited run-hours due to severe emissions restrictions on coal from 2021
- Moyle interconnector: one pole unavailable, 250 MW import capability for base case in 2016
- Renewables assumed by 2020:
  - 1300 MW of wind
  - 150 MW of tidal
  - 130 MW bioenergy/waste

5

Security of Supply in Northern Ireland to 2022



- With increasing levels of wind generation, the flexibility of conventional generators becomes more important.
- While NI has security of supply risks the island of Ireland has a generation surplus.

6

Security of Supply in NI post 2015

- Ballylumford capacity to reduce by 510MW by end 2015.
- No clear plan to confirm future capacity of Moyle, capacity currently reduced by 250MW.
- Additional uncertainty - status of Kilroot
  - indications are that they intend to enter the UK Transitional National Plan (TNP) for emissions reduction that will limit run-hours per annum from 2021
- Impact of single long term outage of a generator
- The Northern Ireland generation adequacy margin will be tight until the commissioning of second North-South tie line.

EIRGRID semo SONI

7

Key Messages

- Demand remains subdued with no signs of a return to growth.
- Present network limitations mean that the surplus in Ireland cannot be utilised in Northern Ireland.
- In Ireland, a capacity surplus is forecast for the next 10 years.
- In Northern Ireland post 2015:
  - supply margin is forecast to be adequate but tight prior to the commissioning of second North-South tie line. If delayed beyond 2020, then there will be **deficits**.
  - no new generation is expected to connect out to 2022 other than renewables. There is greater uncertainty over the availability of Moyle and Kilroot (particularly **from 2021** when **restricted running hours apply to Kilroot Coal stack**).
  - a long-term outage of any large generator or Moyle in Northern Ireland will result in a supply deficit.
- The second North-South line is the only solution presently under consideration that will resolve the supply risks in Northern Ireland.

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Market Operator
SONI
System Operator for Northern Ireland

SONI All Island Generation statement 2012-2021

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All-Island Generation Capacity Statement 2012-2021

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This document incorporates the Generation Capacity Statement for Northern Ireland and the Generation Adequacy Report for Ireland.

For queries relating to this document or to request a copy contact Adrian.henning@soni.ltd.uk or Noelle.Ameijenda@EirGrid.com

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- The Convention Centre Dublin - the first convention centre in the world to receive the Trane "Energy Efficiency Leader Award," in recognition of The CCD's commitment to optimised building performance and sustainability. (Image courtesy of The CCD)

All-Island Generation Capacity Statement 2012-2021

FOREWORD

EirGrid and SONI, as Transmission System Operators (TSOs) for Ireland and Northern Ireland respectively, are pleased to present the All-island Generation Capacity Statement 2012-2021.

Last year, the first All-Island Generation Capacity Statement was published. Both TSOs have collaborated again to produce this year's all-island report on generation adequacy. Reflecting the structure of the Single Electricity Market, this builds on Government and regulatory policies of developing a harmonised approach to energy that supports energy sustainability and economic competitiveness in the north and south of the island. This document therefore assesses the generation adequacy situation for the period 2012 to 2021 for both Ireland and Northern Ireland, as well as on an all-island basis.

Both jurisdictions have experienced a drop in demand due to the economic downturn. Coupled with the connection of new generation and increased interconnection, this means that there is adequate capacity to meet demand in accordance with the loss of load standards over the next ten years. While this is not a guarantee that there will not be load shedding, it does mean that the probability is very low.

The amount of wind generation installed on the island has been increasing steadily, and is now approaching 2,000 MW. The record for instantaneous wind generation is 1474 MW in Ireland, 378 MW in Northern Ireland (November 2011). Both governments have committed to a target of achieving 40% of all energy from renewable sources by 2020. Much of this renewable energy will come from wind, but with the many benefits of wind power come the challenges. The management of large amounts of non-synchronous generation (essentially wind and High Voltage DC interconnection) on a relatively small island is a complex task.

Following on from previous studies, a new programme of work entitled 'Delivering a Secure Sustainable Electricity System' (DS3) has been initiated across SONI and EirGrid to investigate this area further. Its remit includes enhancing the portfolio performance, developing new operational policies and system tools to efficiently use the plant portfolio to the best of its capabilities, and regularly reviewing the needs of the system as the portfolio capability evolves. As an integral part of this programme, the TSOs have invited stakeholders to contribute through an Advisory Council. Please consult our website for further information.

Dermot Byrne

Chief Executive, EirGrid Group

December 2011

All-Island Generation Capacity Statement 2012-2021

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

KEY MESSAGES

All–island

- The all-island generation adequacy standard of 8 hours Loss Of Load Expectation (LOLE) is met for all study years, under all scenarios.
- The addition of the second high-voltage tie-line between Ireland and Northern Ireland improves security in both jurisdictions. This is planned to be operational by 2017.
- There will be a significant increase in wind generation capacity driven by both Governments' 40% renewables target in 2020. This, combined with the shutdown of older flexible conventional plant, highlights the likely requirement for a more flexible generation plant portfolio to enable both TSOs to deal with wind management issues.

Ireland

- The adequacy situation is positive for the next ten years, i.e. the adequacy standard of 8 hours LOLE is satisfied.
- The opening of the East-West Interconnector in 2012 will allow flows of up to 500 MW in both directions between Ireland and Great Britain.
- Other major portfolio additions assumed for this study include the opening of four new Open Cycle Gas Turbines (OCGT), one Combined Cycle Gas Turbine (CCGT) and two new Waste-to-Energy Projects.
- The oil units at Tarbert and Great Island are due to close over the next ten years.
- It is estimated that Ireland will need a total installed wind capacity of between 3,500 and 4,000 MW by 2020 to meet its 40% renewables target.

Northern Ireland

- The Northern Ireland Generation Security Standard of 4.9 hours Loss Of Load Expectation (LOLE) is met for all years in the base case scenario.
- Without additional tie-line capacity between Northern Ireland and Ireland, surpluses in Northern Ireland are reduced to modest levels of circa 100-200 MW.
- There is no new conventional generation currently planned for Northern Ireland over the next 10 years.
- 510 MW of conventional plant will be decommissioned from Ballylumford by 2016.
- More onerous scenarios, based on the assumption of a prolonged major outage of a large CCGT plant or of the Moyle Interconnector, could result in a deficit position for Northern Ireland. This is particularly true for a prolonged major outage of the Moyle Interconnector.
- It is estimated that Northern Ireland will need a total installed wind capacity of circa 1,300 MW by 2020 to meet its 40% renewables target.

All-Island Generation Capacity Statement 2012-2021

INTRODUCTION

This statement is produced in accordance with the requirements of Ireland's Electricity Regulation Act 1999 and Statutory Instrument No. 60 of 2005, European Communities (Internal Market in Electricity) Regulations. This statement also fulfils SONI's Licence obligation to prepare a seven year Generation Capacity Statement as set out under Condition 35 of SONI's Licence to participate in the Transmission of Electricity. It sets out estimates of the demand for electricity in the period 2012-2021 and the likely generation capacity that will be in place to meet this demand. This is then assessed against the generation adequacy standards for Ireland, Northern Ireland and on an all-island basis in terms of the overall supply/demand balance.

The general form and content of the document has been approved by the Commission for Energy Regulation (CER) and the Utility Regulator for Northern Ireland (URegNI). This report supersedes the joint EirGrid and SONI All-Island Generation Capacity Statement 2011-2020.

METHODOLOGY

Generation adequacy is essentially determined by comparing generation capacity with demand. To measure the imbalance between them, a statistical indicator called the Loss of Load Expectation (LOLE) is used. When this indicator is at an appropriate level, called the generation adequacy standard, the supply/demand balance is judged to be acceptable. The generation adequacy standard for Ireland is 8 hours LOLE per year, and 4.9 hours LOLE per year for Northern Ireland. When studying an all-island system, a standard of 8 hours is used. These standards have been agreed by the Regulatory Authorities in both jurisdictions.

The analysis presented here determines whether there is enough generation capacity to meet the adequacy standard. It establishes the amount of generation required when there is a deficit, or the amount of excess generation when there is a surplus. For example, when a surplus emerges in some years, the surplus is the amount of extra generation capacity that could be removed while still meeting the generation adequacy standard.

Currently, limited interconnection capacity between Ireland and Northern Ireland means that Ireland has a formal capacity reliance of 200 MW from Northern Ireland. Similarly, Northern Ireland has a formal capacity reliance of 100 MW from Ireland. However, with the commissioning of an additional tie-line between the two jurisdictions, adequacy will improve further.

Given the uncertainty that surrounds any forecast of generation and demand, the report examines a number of different scenarios. It is intended that the results from these scenarios would provide the reader with enough information to draw their own conclusions regarding future adequacy.

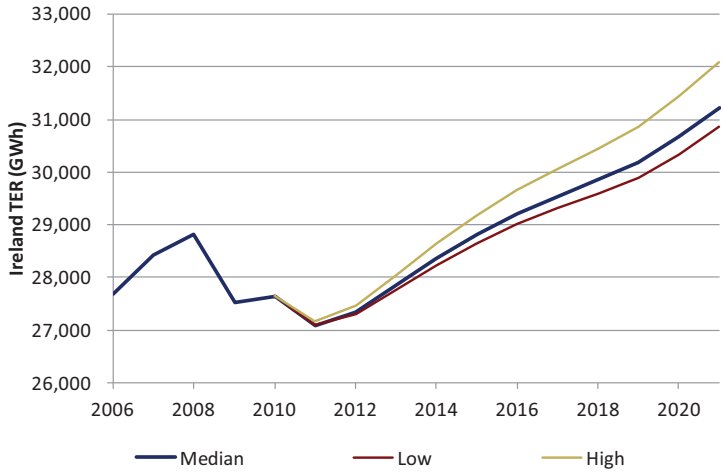
A key factor in the analysis is the treatment of generation plant availability. Plant can be out of service either for regular scheduled maintenance or due to an unplanned forced outage. Forced outages have a greater adverse impact on adequacy than scheduled outages, as they may coincide with each other in an unpredictable manner. The modelling technique utilised in this statement takes account of all combinations of generation forced outages for each half hour period in each year. Periods of scheduled maintenance are provided by the generators and are also accounted for.

Wind generation requires a special modelling approach to capture the effect of its variable nature. The approach used in this study bases estimated future wind performance on historical records of actual wind power output.

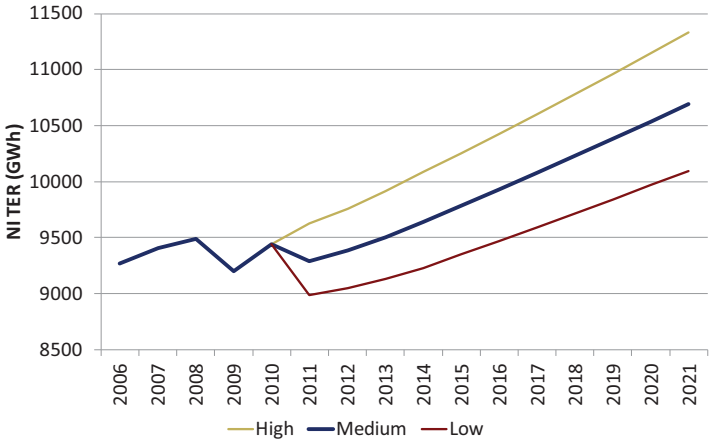
All-Island Generation Capacity Statement 2012-2021

DEMAND FORECAST

For both Ireland and Northern Ireland, the recession has led to a drop in demand in recent years. Although an increase was observed in 2010, the TSOs believe this was mainly due to the extreme inclement winters that affected both the beginning and the end of 2010. For both jurisdictions, low, median and high demand scenarios have been created to allow for uncertainty in forecasting, with the median forecast seen as most likely.



The forecast of Total Electricity Requirement (TER) for Ireland (see above) shows a relatively slow recovery compared to the growth rates seen over the last two decades. It is expected that demand will not return to 2008 levels until 2015 in the median forecast.



Northern Ireland's forecast (above), follows a similar pattern to that of Ireland's. With the ongoing economic difficulties, it is anticipated that the demand levels in 2012 will only rise moderately and it will be 2014 before demand levels gradually return to a steady growth rate of 1.5%.

All-Island Generation Capacity Statement 2012-2021

CONVENTIONAL GENERATION

The assumptions for the generation portfolio are based on information received from the generators and connection agreements in place at the data freeze (1st October 2011). A variety of scenarios have been studied, looking at different supply, demands, and availabilities.

Ireland

The East-West Interconnector is due to commission in 2012. It is the second transmission cable connecting the island of Ireland to Great Britain, and will be able to import or export 500 MW at any given moment. Based on the Interconnector Feasibility Report, this interconnector is assumed to add the equivalent of 440 MW additional generation capacity.

Four new OCGTs and one CCGT are due to connect, adding a generation capacity of 808 MW.

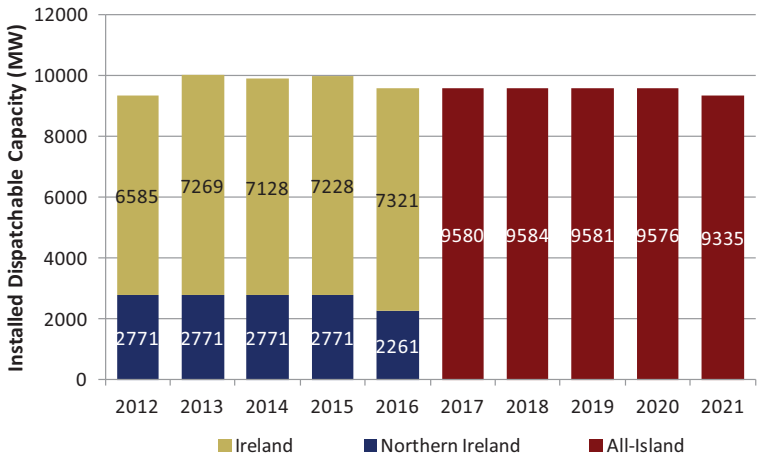
Generators powered by heavy fuel oil (HFO) are steadily disappearing from Ireland. In the next few years, all the units at Great Island and three of the units at Tarbert are due to close, leading to a reduction in capacity of 561 MW. The final Tarbert unit is due to decommission at the end of 2020, removing 241 MW from the system.

Northern Ireland

There is no new conventional generation currently planned for Northern Ireland over the next 10 years that this report covers[1].

Ballylumford Gas/HFO ST4, ST5 and ST6 are to be decommissioned by 2016. This is due to environmental constraints introduced by the Large Combustion Plant Directive and will give a reduction of 510 MW in capacity.

The graph below outlines the dispatchable capacity on the island over the next 10 years.



[1] Although Kilroot still hold a formal connection offer for additional generation capacity, they have been unable to confirm a commissioning date for this additional generation. Therefore, SONI has omitted any assumed capacity for this from the adequacy studies. It should be noted that this in no way affects the connection offer still held by Kilroot, and that they can still act upon the offer up to October 2012.

RENEWABLE ENERGY

The governments of both Ireland and Northern Ireland have set a target of 40% of electricity consumed to be produced from renewable sources by 2020. This will, in the most part, be achieved through wind generation, though other renewables will play a role.

Ireland

Using the median demand forecast, it has been calculated that between 3500 and 4000 MW of wind capacity needs to be installed in Ireland to generate 40% of electricity from renewables. This assumes average historical capacity factors, and a small percentage of wind generation being unusable for system security reasons.

In line with Ireland's National Renewable Energy Action Plan 2010, it is assumed that a modest amount of marine generation will appear in Ireland from 2017. There are also 77 MW of Waste to Energy projects connected or due to connect over the next few years. In addition, a significant growth in bioenergy is assumed.

Northern Ireland

A number of renewable generation projects are assumed to be commissioned by 2021 giving a total renewable generation capacity of 1482 MW in Northern Ireland. This includes onshore wind (1042 MW), offshore wind (300 MW), tidal (50 MW) and large scale biomass (90 MW).

These assumptions have been derived by referencing the Strategic Environmental Assessment (SEA)[2] and the Strategic Energy Framework[3] (SEF) produced by the Department of Enterprise, Trade and Investment (DETI). These DETI publications indicate that even higher amounts of renewable generation may connect over the next few years, however, SONI have taken a more conservative view on the amount that will be connected for the adequacy studies.

Information provided for onshore wind farm connections by Northern Ireland Electricity (NIE), the Northern Ireland Planning Service[4] indicate that there will be much more onshore wind connected by 2021. However, again SONI have taken a more conservative view on the amount of onshore wind connected for the adequacy studies, but are confident that at least enough onshore wind will connect to reach the 40% target in 2020.

It is estimated that Northern Ireland will need a total installed renewable capacity of circa 1,448 MW in 2020 to meet its 40% renewables target. Wind power will be the main contributor to this target, with 978 MW of onshore and 300 MW of offshore installed capacity in 2020.

[2] Strategic Environmental Assessment (www.offshorenergyni.co.uk). DETI is also developing an Onshore Renewable Electricity Action Plan (OREAP) for Northern Ireland. The OREAP considers the contribution of onshore renewable electricity technologies to the 40% renewable electricity target by 2020. A consultation is due to be launched on this at the end of October 2011. For More Information go to www.onshorerenewablesni.co.uk

[3] Strategic Energy Framework (www.detini.gov.uk/strategic_energy_framework_sef_2010_.pdf)

[4] http://www.planningni.gov.uk/index/advice/advice_apply/advice_renewable_energy/renewable_wind_farms.htm

All-Island Generation Capacity Statement 2012-2021

GENERATION ADEQUACY ASSESSMENTS

In determining future generation adequacy, the impact of varying demand growth and availability was examined. Also investigated were the potential effects of losing a CCGT in both Ireland and Northern Ireland, and the phased closure of older plant in Ireland. In another scenario, the possibility was explored whereby no energy could flow over the interconnectors to Great Britain – this could be due to the unavailability of both Moyle and East-West interconnectors, or due to market conditions in Great Britain.

Ireland

Generation Adequacy in Ireland is positive in all scenarios across all years. The only scenario where the surplus dips close to 200 MW is with the removal of older plant. However, as the assessment should be on an all-island basis by then, there should not be an adequacy issue were this scenario to arise.

Northern Ireland

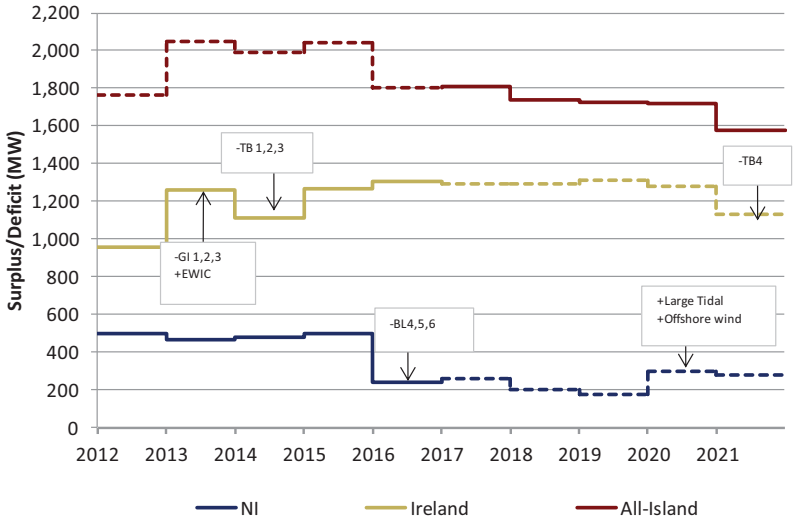
Without the introduction of an additional tie-line to Ireland, and following the decommissioning of older plant in Northern Ireland, by 2016 surpluses in Northern Ireland are reduced to circa 100-200 MW even with increasing levels of renewable generation capacity. The analysis has considered other more onerous scenarios for the loss of a large CCGT in Northern Ireland and the loss of the Moyle Interconnector with Great Britain. Both of these scenarios resulted in a deficit position for Northern Ireland.

This highlights the importance of the additional North-South tie-line project to maintain generation security standards in Northern Ireland.

All–Island

Following the introduction of the additional tie-line, the benefits are highlighted in the All-Island analysis, where surpluses of circa 1700-1800 MW are possible.

The results from the base case studies are shown below, with planned decommissionings and other changes to the portfolio indicated.



11

1 INTRODUCTION

All-Island Generation Capacity Statement 2012-2021

1 INTRODUCTION

This report is produced with the primary objective of informing market participants, regulatory agencies and policy makers of the likely generation capacity required to achieve an adequate supply and demand balance for electricity for the period up to 2021[5]. Generation adequacy is a measure of the capability of the electricity supply to meet the electricity demand on the system. The development, planning and connection of new generation capacity to the transmission or distribution systems can involve long lead times and high capital investment. Consequently, this report provides information covering a ten-year timeframe.

EirGrid, the Transmission System Operator (TSO) in Ireland, is required to publish forecast information about the power system, (as set out in Section 38 of the Electricity Regulation Act 1999 and Part 10 of S.I. No. 60 of 2005 European Communities (Internal Market in Electricity) Regulations). Similarly, SONI, the TSO in Northern Ireland, is required to produce an annual Generation Capacity Statement, in accordance with Condition 35 of the Licence to participate in the Transmission of Electricity granted to SONI Ltd by the Department of Enterprise Trade and Investment.

This report supersedes the joint EirGrid and SONI All-Island Generation Capacity Statement 2011-2020, published in December 2010.

All input data assumptions have been updated and reviewed. Any changes from the previous report, including those to the input data and consequential results, are identified and explained.

This report is structured as follows:

- Section 2 outlines the demand forecast methodology, and presents estimates of demand over the next ten years.
- Section 3 describes the assumptions in relation to electricity generation.
- Adequacy assessments are presented in Section 4.
- The report concludes with Section 5, which outlines the TSOs' joint Programme for a Secure Sustainable Power System - this examines the significant work that is required to manage the integration of very high levels of generation from non-synchronous sources (essentially wind generation and HVDC imports).
- Appendices which provide further detail on the data, results and methodology used in this study are included at the end of this report.

[5] EirGrid and SONI also publish a Winter Outlook Report which is focused on the following winter period, thus concentrating on the known, short-term plant position rather than the long-term outlook presented in the Generation Capacity Statement.

2 DEMAND FORECAST

2 DEMAND FORECAST

2.1 Introduction

The forecasting of electricity demand is an essential aspect of assessing generation adequacy. This task has become more complicated in recent years with the changing economic climate. Some sectors have been affected more than others.

Also to be considered is the significant impact of the recent severe winters. These effects need to be modelled with reference to actual weather data.

EirGrid and SONI use models based on historical trends and economic forecasts to predict future electricity demands, as well as future peaks. These models are outlined in this section, along with the results they produce.

As the economies and drivers for economic growth have historically varied considerably in both jurisdictions, forecasts are initially built separately for Ireland and Northern Ireland. These are then combined to produce an all-island energy and peak demand forecast which is used in the all-island adequacy studies.

Finally, information on typical load shapes is presented. Electrical energy, peak demand forecasts and load factor predictions are used to calculate future profiles

Forecasted demand figures are given in terms of Total Electricity Requirement (TER). All calculated TER and peak values are listed in Appendix 1.

2.2 Ireland's Annual Electricity Demand Forecast Model

2.2(a) Structure of the forecast model

The energy forecast model for Ireland is a multiple linear regression model which predicts electricity sales based on changes in the economic parameters of GDP[6] and PCGS[7]. However, before the econometric model is applied, the historic energy figures are corrected for the effect of temperature. Three electricity sales forecasts (high, median and low) are produced for Ireland for the next ten years.

Transporting electricity from the supplier to the customer invariably leads to losses. These losses must be added to the forecasted sales figures to give the amount of electricity needed to be generated. Based on analysis carried out by ESB networks, it is estimated that 8.3% of power produced is lost as it passes through the electricity transmission and distribution systems.

Some large-scale industrial customers produce and consume electricity on site. This electricity consumption, known as self-consumption, is not included in sales or transported across the network. Consequently, an estimate[8] of this quantity is added to the energy which must be exported by generators to meet sales. The resultant energy is known as the Total Electricity Requirement (TER). As

[6] Gross Domestic Product is the total value of goods and services produced in the country.

[7] Personal Consumption of Goods and Services measures consumer spending on goods and services, including such items as food, drink, cars, holidays, etc.

[8] Self-consumption represents approximately 2% of system demand. Therefore this estimation does not introduce significant error.

all generation sources are considered in the analysis, it is this TER that is utilised for generation adequacy calculations.

2.2(b) Training the forecast model

Historic demand data is initially corrected for temperature variations (using a simple model of past trends) - a colder than average year is corrected down, while a warm year is corrected up. When forecasting forwards, it is assumed that the weather is average, i.e. no temperature variations are applied.

Past economic data is sourced from the most recent Quarterly National Accounts of the Central Statistics Office. Data from the past 16 years is analysed to capture the most recent trends relating the economic parameters to demand patterns.

2.2(c) Forecasting causal inputs

In order for the trained energy model to make future predictions, forecasts of GDP and PCGS are required. These forecasts are provided by the ESRI, who have expertise in modelling the Irish economy and who were consulted during the process.

The forecast for 2012 comes from the Quarterly Economic Commentary published by the ESRI in August 2010. For 2013 and beyond, ESRI issued an updated forecast in November 2011[9] in conjunction with the Sustainable Energy Authority of Ireland (SEAI) using ESRI's HERMES model. The growth rates for the economic forecast are outlined in Table 2-1.

	GDP (volume)	Personal Consumption
2012	2.3%	0.0%
2013-2015	3.0%	0.2%
2016-2020	3.3%	2.9%

Table 2-1 Economic growth rates for Ireland used to build the median demand forecast

2.2(d) Uncertainty around the median forecast

The median demand forecast is the best estimate of what might happen in the future. However, in an effort to capture the uncertainty involved in any forecasting exercise, higher and lower forecasts have been made to bracket the median demand (by +0.25% and -0.13% respectively).

The low demand scenario should capture the possible effects of lower than expected economic growth, milder than average weather and more energy saved through energy efficiency measures (including the installation of smart meters).

Conversely, the high demand scenario could account for higher economic growth, colder weather, less energy efficiency savings and more power drawn by electric vehicles and/or heating load in the future.

2.3 Northern Ireland's Annual Electricity Demand Forecast Model

2.3(a) Historic Northern Ireland Methodology

In recent years the Northern Ireland energy forecast procedure was deterministic and used statistical regression analysis to establish the relationship between demand and other factors which influence demand. Growth rates were then established and applied to base year demands to establish future forecasts. These forecasts were then validated against econometric indices and predictions.

[9] This forecast was for the SEAI publication 'Energy Forecasts for Ireland to 2020'.

All-Island Generation Capacity Statement 2012-2021

2.3(b) Current Northern Ireland Methodology

The above procedure has been reasonably accurate and produced values close to the observed values. However, since 2008, there has been an increase in the difference between the predicted values and the actual values observed. SONI believe this is explained by the drastic downturn in the global economy that began during the second half of 2008. This ongoing economic downturn has had a major affect on both peak demand and energy consumption in Northern Ireland.

As the statistical analysis procedure looks back over historic time scales to maximise data correlation it means this technique is appropriate when considering general longer term trends in energy usage patterns. However, when sudden non-incremental swings occur, it is necessary to consider shorter term econometric indices and demand data analysis must be more granular in nature. It is for this reason the traditional forecasting approaches have been modified to increase accuracy in the short term.

It should be noted that the deterministic statistical regression is the preferred SONI forecasting method. Its forecast outputs will continue to be monitored closely as it is expected that they will become more accurate as future underlying growth returns to a steady year-on-year rate.

2.3(c) Temperature & Demand in NI

It is important to consider the effect of temperature on energy demand given the significant impact that the recent severe winters have had. Following on from last year's annual energy forecast, SONI have carried out further studies to allow the effect of temperature to be taken into consideration as part of the forecasting process. These studies have revealed a significant correlation between temperature and energy demand throughout the year and this has been used to forecast ahead based on average temperature years.[10] It also allows for average low temperature years and average high temperature years to be taken into consideration.

2.3(d) Demand Scenarios

Given the high degree of economic uncertainty into the future, SONI believe it prudent to consider three alternative scenarios for the economy, each of which can then be factored in to derive an estimate of energy production. The three scenarios will consist of a pessimistic, realistic and optimistic view that take account of current economic outlook predictions.

Combining both the temperature and economic scenarios allows for median, high and low demand forecasts to be formulated.

The median demand forecast is based on an average temperature year, with the realistic economic factor being applied and this is SONI's best estimate of what might happen in the future. The low demand forecast is based on an average high temperature year, with the pessimistic economic factor being applied. Conversely, the high demand forecast is based on an average low temperature year, with the optimistic economic factor being applied.

In July 2011, SONI published a document called "Forecast of Northern Ireland Energy Production and Peak Demand - July 2011"[11] where further details can be found regarding SONI's forecast.

[10] It should be noted that temperature has a lesser impact on annual electricity energy demand than it does on peak demand as the temperature effect is generally found to balance more over the course of a year.

[11] Forecast of Northern Ireland Energy Production and Peak Demand - July 2011 (http://www.soni.ltd.uk/upload/Forecast%20of%20Northern%20Ireland%20Energy%20Production%20&%20Peak%20Demand%20-%20July%202011.pdf)

2.3(e) Self Consumption and TER

Some industrial customers produce and consume electricity on site at varying times throughout the year[12]. As well as this, a growing amount of small scale embedded generation is appearing on the Northern Ireland system which also produces and consumes electricity on site. These include technologies such as small scale wind turbines, photo-voltaic and biofuels which serve domestic dwellings, community centres, farms, etc. This electricity consumption, known as self consumption, is not included in the SONI Sent-Out[13] annual energy.

In isolation each individual small scale embedded generator of this type does not have a significant effect on the demand profile; however they do become significant on a cumulative basis. SONI have recently obtained information from Northern Ireland Electricity (NIE) on the amount of this embedded generation that is connected on the Northern Ireland system. This has, for the first time, allowed SONI to make an informed estimate of the amount of energy contributed to the total demand by this self consumption which is then added to the energy which must be exported by generators to meet all demand, including this self consumption. The resultant energy is known as the Total Energy Requirement (TER). It is this TER that is utilised for generation adequacy calculations as the analysis needs to consider the ability to meet this total annual energy.[14]

SONI will continue to work closely with NIE in the future to ensure that as more of this self consumption is added to the Northern Ireland system, their estimations of such are updated accordingly.

In previous SONI Generation Capacity Statements TER was referred to as Sent-Out Energy (MWh). This Sent-Out Energy did not include an estimation for self-consumption.

2.4 Resultant Electricity Demand Forecasts

The models' forecast of the Total Electricity Requirement for each region over the next ten years are shown in Figure 2-1 and Figure 2-2 for Ireland and Northern Ireland respectively.

The 2011 median demand in Ireland is based on real data available to EirGrid through the National Control Centre. As only information up until October was available by the data freeze date, estimates were made for the remaining 3 months.

Northern Ireland's forecast follows a similar pattern to that of Ireland's. With the ongoing economic recession, it is anticipated that the demand levels in 2012 will only rise moderately and it will be 2014 before demand levels gradually return to a steady growth rate of 1.5%.

[12] SONI carry out an annual analysis to determine the amount of "Customer Private Generation" (CPG), where customers run their own generation effectively giving demand reduction.

[13] Exported = Net of Generator House Loads

[14] Self-consumption in Northern Ireland represents approximately 2.5% of TER.

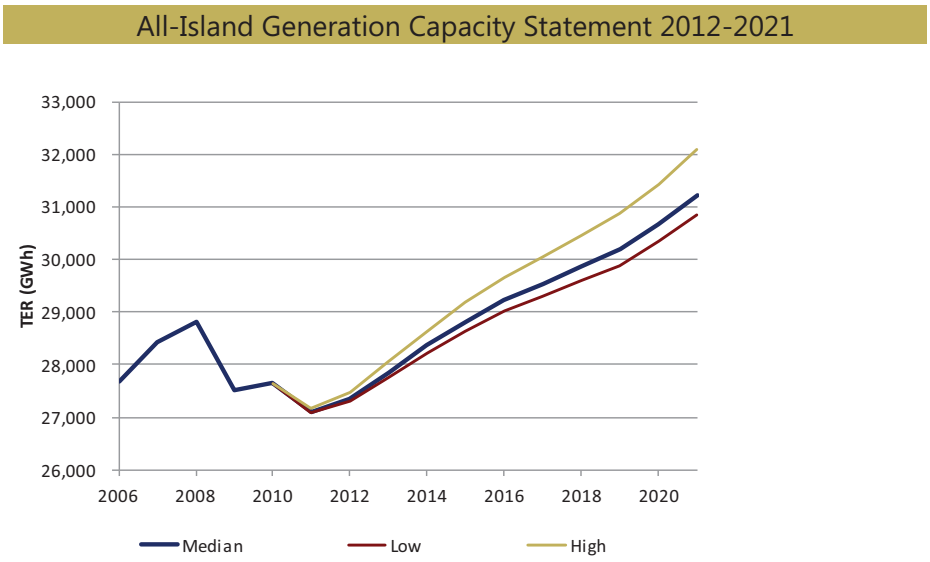


Figure 2-1 TER forecasts for Ireland

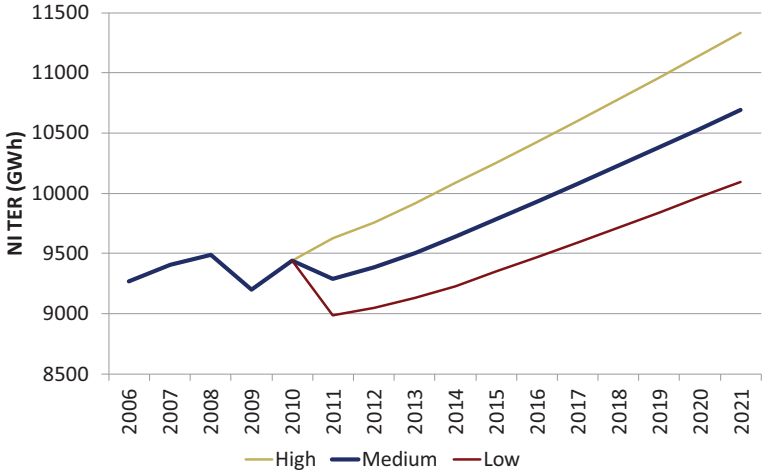


Figure 2-2 TER forecasts for Northern Ireland

The combined All-island TER Forecast for the two regions is shown in Figure 2-3.

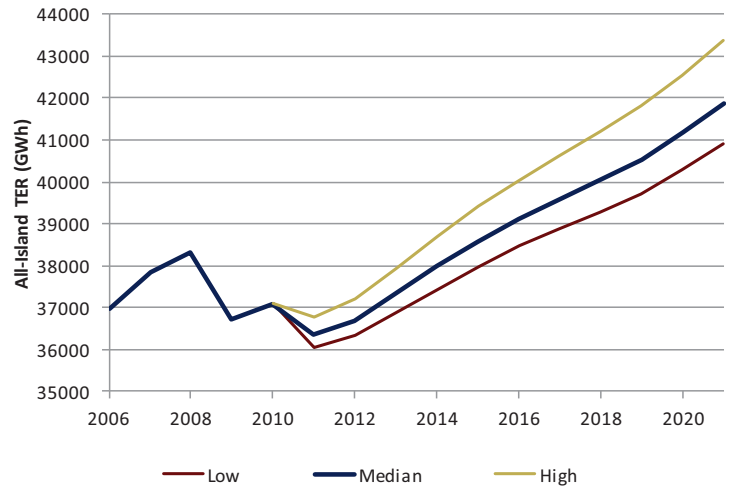


Figure 2-3 All-island TER forecasts

Further details on the demand forecast, including tabulated figures, can be found in APPENDIX 1.

2.5 Peak Demand Forecasting, Ireland

The peak demand model is based on the historical relationship between the annual electricity consumption and winter peak demand. This relationship is defined by the Annual Load Factor (ALF), which is simply the average load divided by the peak load.

Before applying this model, it is necessary to assess the other disparate factors which can affect the somewhat erratic winter peak, including

- temperature and weather conditions
- changing electricity usage patterns
- Demand-Side Management (DSM) schemes

As part of DSM measures, the winter peak is lowered by the Winter Peak Demand Reduction Scheme (WPDRS). This effect has been estimated and allowed for in the current model. Although this scheme is likely to change in the future, the resultant effect on adequacy should be small, given that the system is in large surplus. However its impact should be monitored.

Temperature has a most significant effect on electricity demand, as was particularly evident over the previous two severe winters when temperatures plunged and demand rose.

Detailed temperature records from four observing stations were obtained from Met Éireann, and analysis was carried out over the last ten winters. A statistically-relevant relationship was found between the normalised daily peaks and the weighted effective mean temperature for the day.

This was used to correct the past winter peak demands to a temperature standard known as Average Cold Spell (ACS) conditions, i.e. each winter peak was adjusted, using the temperature-load relationship, to what it would have been had an average temperature occurred. The average temperature was taken to be the median over 25 years of winter temperature minima.

This has the effect of 'smoothing out' the demand curve so that economic factors are the predominant remaining influences, see Figure 2-4.

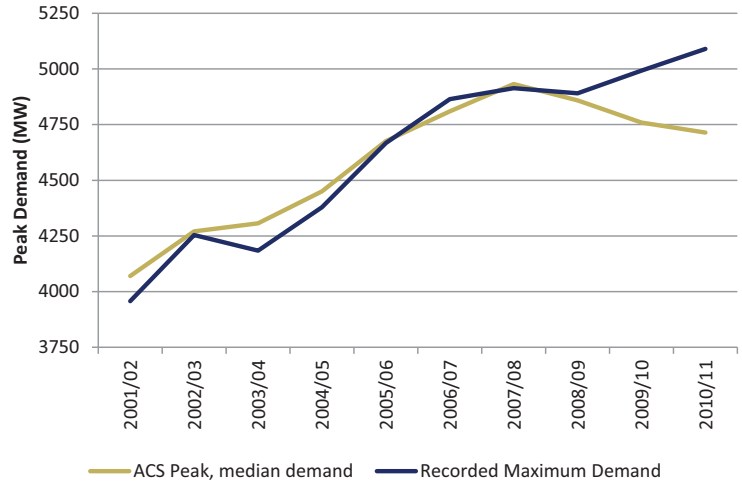


Figure 2-4 Past values of the recorded maximum demand in Ireland, and the ACS corrected values

2.6 Peak Demand Forecasting, Northern Ireland

The Northern Ireland peak demand forecast is carried out using similar methodology as the Ireland peak forecast described in Section 2.5.

Of all the meteorological elements it has been found that temperature has the greatest effect on the demand for electricity in Northern Ireland. For this reason, demand data is adjusted to ACS temperatures. ACS analysis produces a peak demand which would have occurred had conditions been averagely cold for the time of year.

The ACS adjustment to each winter peak removes any sudden changes caused by unexpected inclement weather conditions. Over each winter period of November through to February, temperature and demand data is collated to enable the annual winter calculation of the ACS effective mean temperature which represents the temperature conditions that prevailed during that particular winter.

Analysis can then be carried out using historical temperature data. The average cold spell effective mean temperature is determined from an assessment of the effective mean temperatures for each winter over the last 25 years. The winter peak demands are then corrected to this historical average.

Statistical analysis is carried out to determine the relationship between demand, temperature and day of the week using multivariate regression analysis over the winter periods. The resultant relationships are then applied to the current winter data to establish the adjusted ACS winter demand.

The demand peaks over the last decade reflect Customer Private Generation (CPG)[15], consisting of customers running private embedded diesel generation. Analysis was carried out over the 2010/11 winter period to calculate the amount of CPG that was actually running and was found to be 68 MW.

[15] Some customers reduce their demand at peak hours, thus lessening the actual peak that needs to be supplied. In some cases this is achieved by the use of diesel generators to supply their own load.

This has the effect of suppressing the peak and is assumed to continue over the ten years of this report.

In recent previous years the CPG figure was much higher. However, SONI believe this has reduced significantly due a number of reasons including;

- the effect of the ongoing recession resulting in the closure of businesses and factories;
- the overall tariff signal that gave financial incentives to businesses and factories to reduce their demand at peak times has now been removed[16];
- the establishment of a dispatchable Aggregated Generating Unit (AGU) in Northern Ireland which consists of a number of individual diesel generators grouping together to make available their combined capacity to the market. These diesel generators may have previously contributed to CPG

The Northern Ireland 2010/11 generated winter peak which occurred on 21st December 2010 @ 17:30 consisted of the following data:

CDGU + Interconnectors	= 1851 MW
Renewable + Small Scale	= 16 MW
Customer Private Generation	= 68 MW
TOTAL GENERATED PEAK	**=1935 MW**

When average cold spell temperature correction (ACS) is applied using the methodology as described above, the figure of 1935 MW is corrected down by 78 MW, providing an ACS corrected figure of 1857 MW for the 2010/11 winter period, see Figure 2-5.

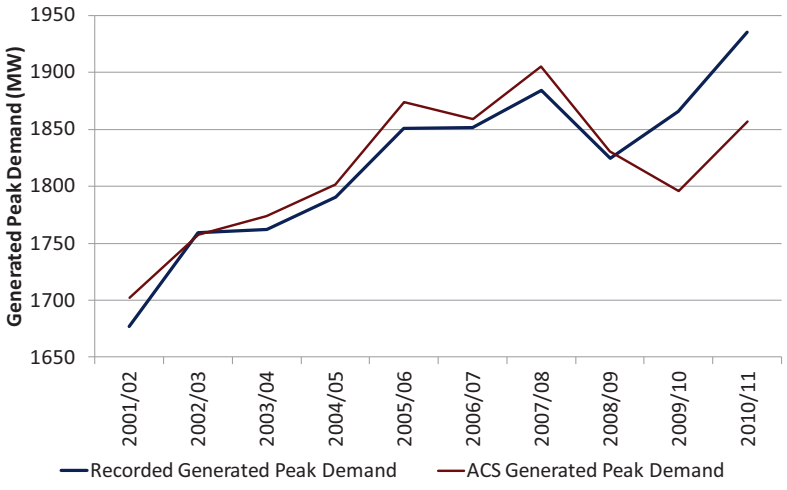


Figure 2-5 Actual and ACS-adjusted generated peaks for Northern Ireland

ACS Peak demand in Northern Ireland has generally seen steady incremental growth over the last fifteen years. During the 2008/09 winter, the ACS peak demand fell significantly due to the onset of the economic downturn. This decline in ACS peak demand continued into the 2009/10 winter before rising again in the 2010/11 winter. The ACS analysis has had the effect of reducing the recorded

[16] Arrangements between individual customers and their supplier may still exist where a financial incentive may still be available from the supplier to reduce the demand at peak times.

generated peak demand down by approximately 70 – 80 MW during the past two winters which were the most severe winters experienced in Northern Ireland for many years.

The Northern Ireland peak demand forecast had, until recently, used statistical regression analysis to produce future forecasts, which were validated against econometric indices and predictions. Since 2008, however, the economic crisis has had a major affect on both peak demand and energy in Northern Ireland.

As with the annual electricity usage forecast outlined in section 2.3, three peak forecast scenarios have been built. These consist of a pessimistic, realistic and optimistic view with adjustments that take account of current economic outlook predictions.

It should be noted that the generation adequacy assessment is based on the generation sent out (exported, net of house loads). In Northern Ireland the analysis for the peak demand forecast is carried out using Generated Peak Demand. Therefore a statistically derived conversion factor of 0.954 is applied to the generated peak demand forecasts to convert them to generated peak demand in sent out terms and is the equivalent to the Transmission Peak.

The TER Peak is then derived by adding a further estimation of the contribution to peak demand that the self consuming small scale generation makes as described in section 2.3(b). This has the effect of adding approximately 90 MW to the Transmission Peak.

In previous SONI Generation Capacity Statements TER Peak was referred to as Sent-Out Peak (MW). This Sent-Out Peak did not include an estimation for the contribution of self consuming units to the peak.

2.7 Peak Demand Forecast Results

For Ireland, the temperature-corrected peak curve is used in the ALF model which can then be forecast forwards using the previously-determined energy forecasts, see Figure 2-6.

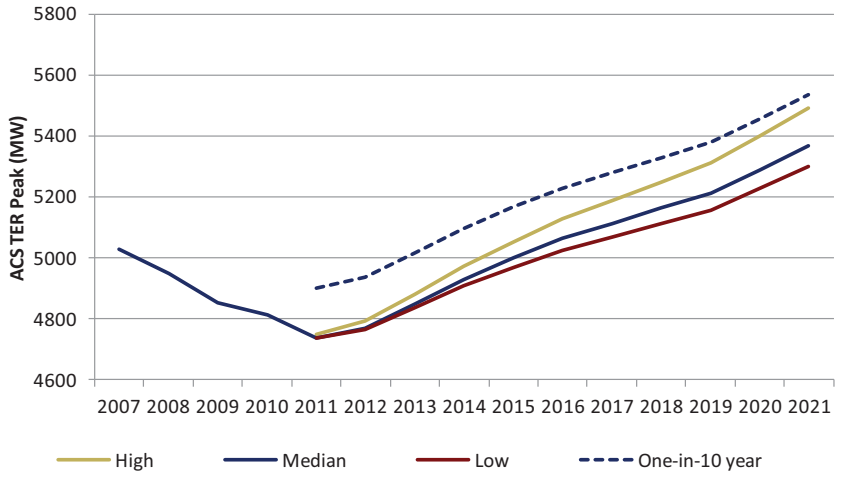


Figure 2-6 TER peak forecasts for Ireland

The ACS peak is made from the median energy demand scenario. Above and below that, an ACS peak is built from the high and low energy demand scenarios. These three scenarios assume typical, ACS conditions. An alternative upper margin comes from assuming not ACS conditions, but rather a lower

temperature (lowest expected once in 10 years) and median demand. The outturn peak is most likely to lie within these bounds.

Figure 2-7 shows the resultant TER peak forecast for Northern Ireland for the next 10 years. In the median scenario it is not expected that the normal 1.5%[17] growth rate will return until the 2014/15 winter and it is then expected continue on at this normal 1.5% growth year on year from then.

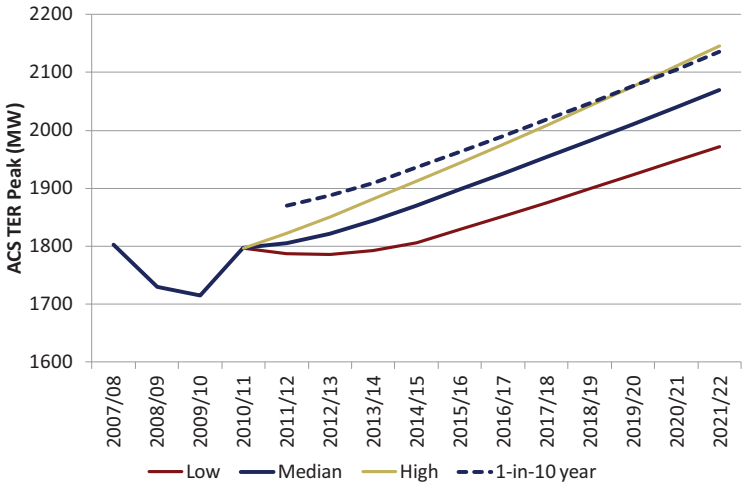


Figure 2-7 TER peak forecasts for Northern Ireland

2.8 All-Island Peak Forecasts

The annual peaks for Ireland and Northern Ireland do not generally coincide. In Northern Ireland, annual peaks may occur at the start or at the end of the year, whereas in Ireland peaks tend to occur in December. To create all-island peaks, future demand profiles have been built for both regions based on the actual 2007 demand shape. This gives yearly all-island peaks which are less than the sum of the equivalent peaks for each region – just one of the benefits of switching to an all-island system. The forecasted all-island peaks are shown in Figure 2-8.

[17] Before the ongoing economic downturn began towards the end of 2008 the Peak Demand in Northern Ireland had an underlying year-on-year growth of ~1.5%.

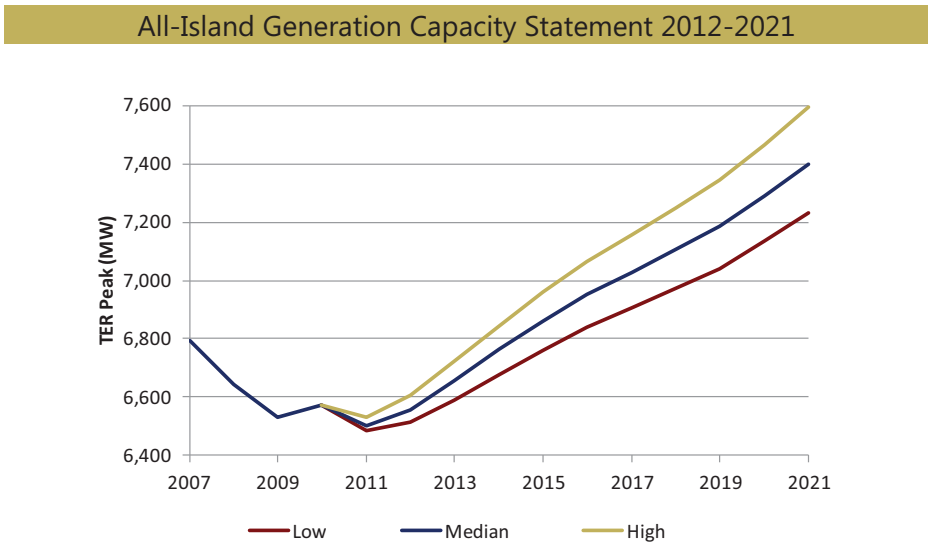


Figure 2-8 The all-island TER peak forecast

Tabulated figures of the peak demand forecasts can be found in APPENDIX 1.

2.9 Annual Load Shape and Demand Profiles

To create future demand profiles for our studies, it is necessary to use an appropriate base year profile which provides a representative demand profile of both jurisdictions. This profile is then progressively scaled up using forecasts of energy peak and demand. The base year chosen for the profile creation was 2007 for both jurisdictions.

The 2008 profile was not used as a base year as it was deemed to be an abnormal year. This is due to both economies entering a recession, reducing growth in electricity demand as the year progressed. Likewise, the 2009 and 2010 demand profiles have been deemed as abnormal as the recession continued to affect both demand profiles. The 2010 profile was also affected by the prolonged cold spells both at the beginning and end of the year.

Electricity usage generally follows some predictable patterns. For example, the peak demand occurs during winter weekday evenings while minimum usage occurs during summer weekend night-time hours. Peak demand during summer months occurs much earlier in the day than it does in the winter period.

Figure 2-9 shows typical daily demand profiles for a recent winter weekday. Many factors impact on this electricity usage pattern throughout the year. Examples include weather, sporting or social events, holidays, and customer demand management.

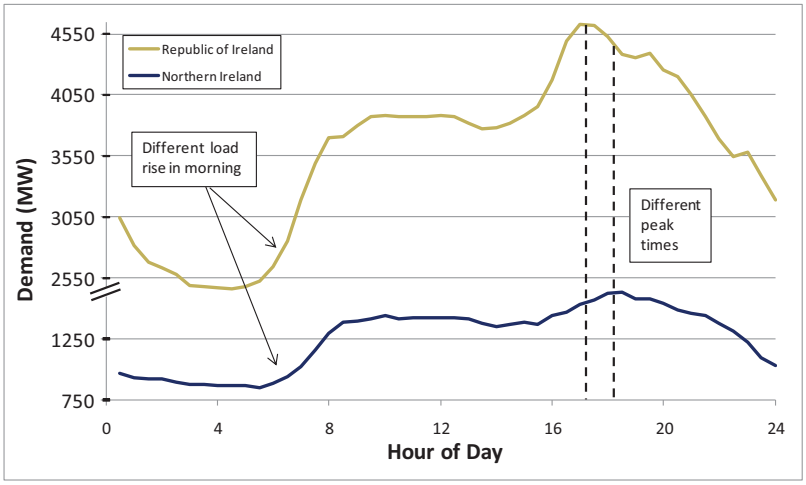


Figure 2-9 Typical winter day profile.

2.10 Changes in Future Demand Patterns

The Government of Ireland has a plan to increase energy efficiency by 20% by 2020. This includes such actions as replacing existing lighting with energy efficient sources, and increasing the thermal insulation standards for newly built housing, as well as government grants for retrofitting existing houses to improve their efficiency[18]. This will undoubtedly have an effect on the demand profile.

Developments in electric vehicles and the roll out of smart-metering will also have an influence on the demand shape in Ireland. While the exact effect is yet uncertain, EirGrid have carried out studies investigating the potential changes[19].

Similarly, the Northern Ireland Government, through the Department of Enterprise, Trade and Investment (DETI) have set targets of contributing to the 1% year-on-year energy efficiency savings target for the UK as set out in the Strategic Framework for Northern Ireland[20]. It is envisaged that they will be able to achieve this through a number of different schemes. These include for example, the introduction of Energy Performance Certificates, amending building regulations to progressively improve the thermal performance of buildings, and providing services through the Government's regional business development agency (Invest NI[21]) to help businesses identify and implement significant energy efficiencies.

[18] http://www.seai.ie/Grants/Home_Energy_Saving_Scheme/, http://www.seai.ie/Grants/Warmer_Homes_Scheme/

[19] See for e.g. GAR 2009-2015, GAR 2008-2014

[20] http://www.detini.gov.uk/strategic_energy_framework__sef_2010_.pdf

[21] http://www.investni.com/index/already/maximising/managing_energy_and_waste.htm, http://www.nibusinessinfo.co.uk/bdotg/action/layer?site=191&topicId=1079068363

3 ELECTRICITY GENERATION

3 ELECTRICITY GENERATION

3.1 Introduction

Generation adequacy describes the balance between demand and generation supply. This section describes all significant sources of electricity generation connected to the systems in Ireland and Northern Ireland, and how these will change over the next 10 years, as summarised in Table 3-1. Issues that affect security of generation supply, such as installed capacity, plant availability, and capacity credit of wind, are examined.

In predicting the future of electricity generation supply in Ireland and Northern Ireland, EirGrid and SONI have endeavoured to use the most up-to-date information available at the time of the data freeze for this report (1st October 2011).

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Capacity Removed (NI)					510					
Capacity added (Ireland) [22]		459	215	98	98					
Capacity Removed (Ireland)		212	351							243
Minor degradation		-3	-5	2	-5	-2	4	-3	-5	2
EWIC		440								
Net Impact		684	-141	100	-417	-2	4	-3	-5	-241
Total Dispatchable capacity	9356	10040	9899	9999	9582	9580	9584	9581	9576	9335

Table 3-1 Changes in dispatchable capacity on the island over the next 10 years. All figures are in MW.

Interconnection will continue to play an important role in future generation supply security. The East-West Interconnector, connecting the transmission systems of Ireland and Wales, is due for completion in 2012. This will be able to transmit 500 MW in either direction. Along with the existing Moyle Interconnector[23] that connects the transmission systems of Northern Ireland and Scotland, this will significantly enhance the overall interconnection between the island of Ireland and Great Britain.

The second major North-South tie-line connecting Northern Ireland and Ireland will lead to a more secure, stable, and efficient all-island system. The North-South tie-line is planned to be operational by 2017.

[22] There is no new conventional generation currently planned for NI over the next 10 years.

[23] Capacity of Moyle Interconnector:
Import = 450 MW Nov-Mar & 410MW Apr-Oct. Export = 295MW Sep-Apr & 287MW May-Aug as per the Moyle Interconnector Capacity Statement, September 2011 (http://www.mutual-energy.com/Download/110930%20MIL%20SONI%20NG%20Capacity%20Calc%20combined%20Sept%202011.pdf).

All-Island Generation Capacity Statement 2012-2021

3.2 Generation Portfolio changes in Ireland

- Four new open cycle gas turbine (OCGT) power stations have signed to connect to the system over the next four years, giving an additional capacity of 349 MW.
- A Waste-to-Energy converter, located in Dublin, will be able to supply 62 MW. A smaller 15 MW Waste-to-Energy converter in Meath has commissioned in 2011.
- All Great Island units will be decommissioned, reducing capacity by 212 MW. Endesa plan to replace this with a new CCGT.
- All units in Tarbert are due to decommission by 2021, resulting in a reduction of 592 MW.
- There will be a large amount of wind generation installed in Ireland over the next ten years. While the exact amount is uncertain, to reach the renewable target (40% of energy from renewable sources by 2020), installed wind capacity is projected to grow by between 1,900 to 2,400 MW

3.3 Generation Portfolio changes in Northern Ireland

- There is no new conventional generation currently planned for Northern Ireland over the next 10 years.
- Ballylumford Gas/HFO ST4, ST5 and ST6 are to be decommissioned by 2016. This is due to environmental constraints introduced by the Large Combustion Plant Directive and will give a reduction of 510 MW in capacity.
- A number of renewable generation projects are assumed to be in place by 2021 in Northern Ireland. These will consist of onshore wind (1042 MW), offshore wind (300 MW), tidal (50 MW) and large scale biomass (90 MW).

  These assumptions have been derived by referencing the Strategic Environmental Assessment (SEA)[24] and the Strategic Energy Framework[25] (SEF) produced by the Department of Enterprise, Trade and Investment (DETI) along with information provided on wind farm connections by Northern Ireland Electricity (NIE), and the Northern Ireland Planning Service[26].

  They are also based on the assumption that the Government target for Northern Ireland of 40% of electricity production from renewable sources as set out in the SEF will be met by 2020. The 40% target takes into account a contribution from all renewables, but the main contribution will be made up from onshore wind. It is estimated that an installed onshore wind capacity of 978 MW will be enough to achieve the 40% figure in 2020.

  The DETI publications, NIE information and Planning Service information indicate that even higher amounts of renewable generation will connect over the next number of years which would result in exceeding the 40% target in 2020. However, for the adequacy studies, SONI have taken a more conservative view on the amount that will be connected, but are confident that at least enough will be connected to reach the 40% target.

[24] Strategic Environmental Assessment (www.offshorenergyni.co.uk). DETI is also developing an Onshore Renewable Electricity Action Plan (OREAP) for Northern Ireland. The OREAP considers the contribution of onshore renewable electricity technologies to the 40% renewable electricity target by 2020. A consultation is due to be launched on this at the end of October 2011. For more information go to www.onshorerenewablesni.co.uk

[25] Strategic Energy Framework (www.detini.gov.uk/strategic_energy_framework_sef_2010_.pdf)

[26] http://www.planningni.gov.uk/index/advice/advice_apply/advice_renewable_energy/renewable_wind_farms.htm

3.4 Plant Types

One of the most important characteristics of a generator, from a TSO perspective, is whether or not the plant is 'fully dispatchable'. For a plant to be fully dispatchable, EirGrid or SONI must be able to monitor and control its output from their control centres. Since customer demand is also monitored from the control centres, EirGrid and SONI can adjust the output of fully-dispatchable plant in order to meet this demand.

Although fully-dispatchable plant normally consists of the larger units on the system, smaller units can also be fully-dispatchable if they wish to take part in the market, for example, in Northern Ireland there are now three 3 MW gas units operated by Contour Global, and a 26 MW Aggregated Generating Unit operated by iPower.

There is an amount of generation connected whose output is not currently monitored in the control centres and whose operation cannot be controlled. This non-dispatchable plant, known as embedded generation, has historically been connected to the lower voltage distribution system and has been made up of many units of small individual size.

Large wind farms fall into a different category. Since the maximum output from wind farms is determined by wind strength, they are not fully controllable, i.e. they may not be dispatched up to their maximum registered capacity if the wind strength is too low to allow this. However, their output can be reduced by EirGrid or SONI if required (for example, due to transmission constraints), and they are therefore categorised as being partially dispatchable. In accordance with the EirGrid Grid Code[27] and the Distribution Code[28] in Ireland, wind farms with an installed capacity greater than 5 MW must be partially dispatchable.

In accordance with the SONI Grid Code[29] and the Distribution Code[30] in Northern Ireland, a wind farm with a registered capacity of 5 MW or more must be controllable by the TSO and is defined as a "Controllable Wind Farm Power Station" (CWFPS). A "Dispatchable Wind Farm Power Station" is further defined as a DWFPS which must have a control facility in order to be dispatched via an electronic interface by the TSO. In both cases these would be categorised as being partially dispatchable.

3.5 Changes in Conventional Generation

This section describes the changes in fully dispatchable plant capacities which are forecast to occur over the next ten years. Plant closures and additions are documented. In Ireland, only new generators which have a signed connection agreement with EirGrid[31] or SONI, and have indicated a commissioning date by the data freeze date are included in adequacy assessments. Also, only planned decommissionings that EirGrid or SONI have been officially notified of by the data freeze date are considered in the base case studies.

3.5(a) Plant Commissionings

Table 3-2 lists thermal generators that have signed agreements and confirmed dates to connect to the island over the next ten years.

27 www.eirgrid.com/operations/gridcode/

28 www.esb.ie/esbnetworks/en/about-us/our_networks/distribution_code.jsp

29 www.soni.ltd.uk/gridcode.asp

30 www.nie.co.uk/suppliers/distribution.htm

31 i.e. a signed Connection Offer has been accepted and any conditions precedent fulfilled.

All-Island Generation Capacity Statement 2012-2021

Plant	Export Capacity (MW)
Great Island CCGT	459
Nore Power	98
Caulstown	55
Dublin Waste to Energy	62
Cuilleen OCGT	98
Suir OCGT	98

Table 3-2 Confirmed contracted conventional generation capacity for the island up to 2021

It should also be noted that a connection offer for a 440 MW CCGT generator in Co. Louth has been signed. However, as a commissioning date has not been given for this project, it has not been included in these studies.

Endesa plans to commission new plant immediately after the closure of the existing units at Great Island (see section 3.5(b)). The Firm Access Quantity (FAQ) at this site is assumed to be initially 216 MW, until an additional FAQ of 215 MW is assigned in 2021.

The closure of Tarbert 4, and the opening of a new OCGT there, is dependent on market conditions – therefore Eirgrid will not be including a new unit at Tarbert in its base case.

Although Kilroot still hold a formal connection offer for additional generation capacity, they have been unable to confirm a commissioning date for this additional generation. It had been assumed in previous SONI Seven Year Statements that the additional capacity would consist of a new 400 MW CCGT. As AES have been unable to provide a firm commissioning date, SONI has omitted this capacity from the adequacy studies in order to present as accurate a forecast as possible. It should be noted that this in no way affects the connection offer still held by Kilroot, and that they can still act upon the offer up to October 2012.

In Ireland, two large CCGTs have recently commissioned in the Cork region. Network reinforcements are required to enable all thermal generation to be exported from the Cork region. In the absence of such reinforcement, the output of generation in this region will have to be constrained from time to time. This would impact on the capacity benefit of this generation.

Works are currently underway in the Cork region. It is thought that this will allow Whitegate to export its full capacity, while there will be a collective export limit of 690 MW from the Aghada site. This site comprises of Aghada AD1 (258 MW), Aghada CT 1, 2 and 4 (3 X 90MW), and the new Aghada AD2 (432 MW), with a total export capacity of 960 MW.

Likewise in Northern Ireland, transmission network capacity limitations can restrict the amount of power that can be exported onto the transmission network to the east of the province at Islandmagee. Under these conditions it is not possible to export the total plant capacity at Islandmagee.

To model this within the adequacy studies, only two units from Unit 4, Unit 5 or Unit 6 at Ballylumford are included each year. A lower predicted Forced Outage Probability (FOP) for the two units that have been included in the studies is used to reflect that fact that if one of them is forced out due to a fault, the third unit can be run in its place.[32]

[32] Please note that in terms of availability, all 3 units 4, 5 and 6 at Ballylumford are normally available for dispatch. There are also exceptions to all 3 units not being able to export fully at the same time, for example, all 3 of these Ballylumford units can export when the Moyle Interconnector is on an outage. It should be further noted that Unit 5 is a non-firm unit.

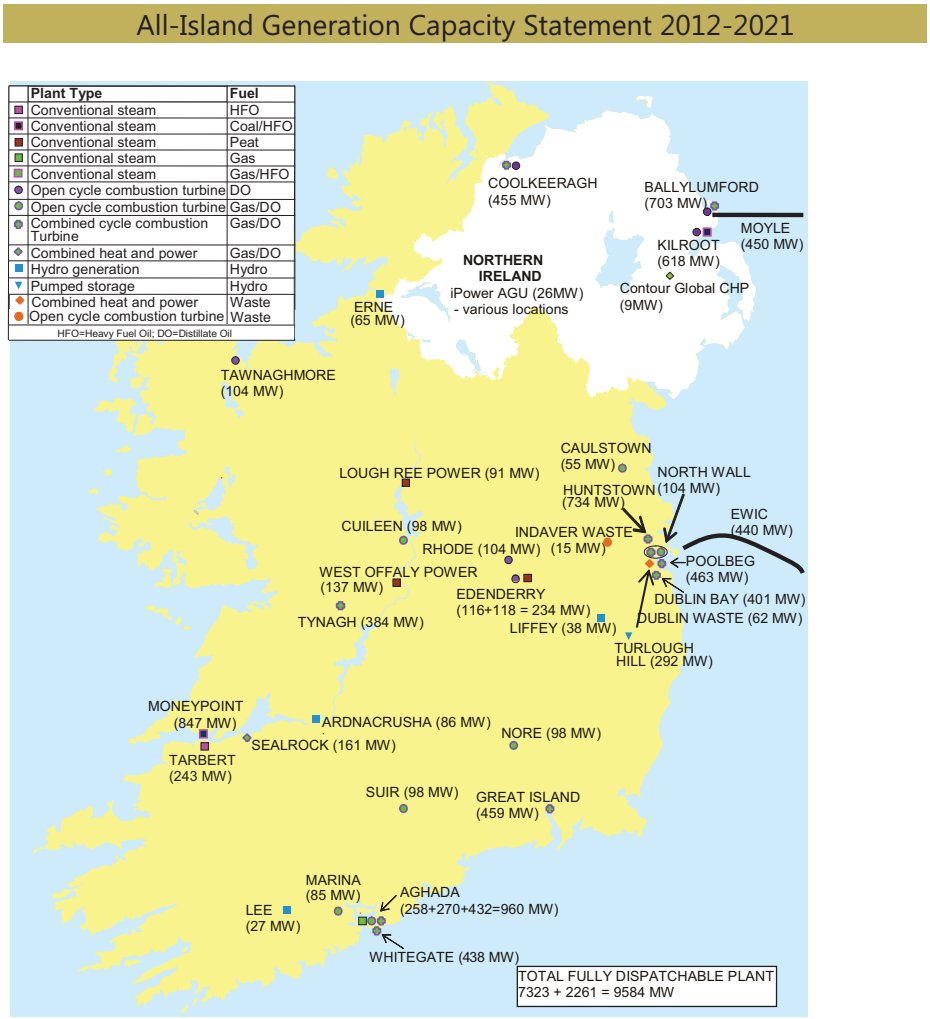


Figure 3-1 Fully dispatchable plant installed in 2018, at exported capacities. All figures shown are maximum export capacities – generators may often operate at a lower export capacity.

3.5(b) Plant Decommissionings

As well as the new plant mentioned above, some older generators will come to the end of their lifetimes over the next ten years. Confirmed decommissionings are shown in Table 3-3.

Plant	Export Capacity (MW)
Great Island 1,2,3	212
Tarbert 1 & 2	108
Tarbert 3	241
BL 4,5,6	510
Tarbert 4	241

Table 3-3 Confirmed closures of conventional generators to 2021

In addition to the closures above, the OCGT at Marina in Cork has a limited number of run hours permitted before it needs to be either shut down or upgraded. Current running regimes mean that this will occur shortly. This will remove 85 MW from the island's generation capacity. As ESB Energy International have the option to upgrade the plant, it has not been removed it from the base case studies (though a scenario is examined where it and other older plant are not included).

ESB Energy International has not provided a date for return-to-service of the North Wall CCGT, and therefore EirGrid has omitted this plant in these adequacy studies.

3.6 Interconnection

Interconnection allows the transport of electrical power between two transmission systems. Interconnection with Great Britain over the Moyle interconnector and the planned East-West interconnector provides significant capacity benefit. Further transmission links between Ireland and Northern Ireland will enhance generation adequacy in both jurisdictions.

3.6(a) North-South Tie-line

With the completion of the second high capacity transmission link between Ireland and Northern Ireland, an all-island generation adequacy assessment has been carried out from 2017 onward. In this all-island assessment, the demand and generation portfolios for Northern Ireland and Ireland are aggregated.

Prior to the completion of the additional North-South tie-line project, the existing tie-line arrangement between the two regions creates a physical constraint that affects the level of support that can be provided by each system to the other. On this basis it has been agreed that each TSO is obliged to help the other in times of shortfall.

With this joint operational approach to capacity shortfalls, it was agreed that the level of spinning reserve would be maintained by modifying the interconnector flow. Further reductions in reserve would be followed by load shedding by both parties as a final step to maintaining system integrity.

Generation adequacy assessments for each region are carried out with a formal degree of capacity interdependence from the other region. This is an interim arrangement until the additional tie-line removes this physical constraint. The capacity reliance and actual transfer capacity values on the existing tie-line are shown in Table 3-4.

	North to South	South to North
Total Transfer Capacity[33]	430 MW	380 MW
Net Transfer Capacity	330 MW	170 MW
Capacity Reliance	200 MW	100 MW

Table 3-4 Transfer capacity and capacity reliance at present on the existing North-South tie-line

It should be noted that although the capacity reliance used in the studies limits the North-South flow to 200 MW and South-North flow to 100 MW, flows in excess of this can take place during real time operations.

3.6(b) Moyle Interconnector between Northern Ireland and Scotland

The Moyle Interconnector is a dual monopole HVDC link with 2 coaxial undersea cables from Ballycronanmore (Islandmagee) to Auchencrosh (Ayrshire). The total installed capacity of the link is 500 MW.

[33] As per SONI 7 Year Transmission Statement 2011/12 -2017/18, http://www.soni.ltd.uk/upload/2011_TSCS_PRINT_VERSION.pdf

The current available Net Transfer Capacity (NTC) import from Great Britain to Northern Ireland is 450 MW during the winter and 410 MW from April to October inclusive.[34] An emergency flow of up to 50 MW is available should the frequency in Ireland reach 49.6Hz and a further 25 MW available at 49.5Hz. All interconnector capacity is auctioned by the SONI on behalf of Mutual Energy Limited[35]. This capacity is purchased by market participants. In the SEM the unused capacity can, in emergency situations, be used solely to meet peak demand. It is for this reason that this capacity assessment assumes the capacity of the Moyle Interconnector as a maximum of 450 MW.

The Balancing & Services Agreement between SONI and the TSO in GB, National Grid (NG), facilitates energy purchases including emergency assistance up to the appropriate NTC of the interconnector. The availability level attributed to the Moyle interconnector includes an assumption that there would be capacity available in the GB system, which has 83 GW[36] of installed net generating capacity.

It should also be noted that there have been occasions when energy has not been available during a capacity shortfall either for balancing trades or emergency assistance. A 450 MW import capability on Moyle tends to project a healthy position with respect to capacity adequacy in NI. The achievement of high levels of generation capacity security in NI in practice comes with a large degree of operational complexity and uncertainty in the commercial markets SONI now operate in. As flows are difficult to predict, margins can be tight and complex to manage in operational timescales.

National Grid's current Seven Year Statement[37] assumes that exports of 400-500 MW at peak times are expected to flow to Northern Ireland via the Moyle Interconnector. In line with the SONI assumption of modelling the Moyle Interconnector as 450 MW of available capacity in the generation adequacy studies, this is conversely treated as negative generation by National Grid in their studies. Even with the 400-500 MW treated as negative generation by National Grid, their plant margins are still within acceptable standards.

At the time of writing this report, the Moyle Interconnector was on a prolonged forced outage due to undersea cable faults on both of its cables. This follows a previous prolonged fault that affected one of the two cables in the last quarter of 2010. Therefore in the adequacy studies carried out for this report, the Forced Outage Probability[38] (FOP) for the Moyle has been adjusted accordingly to reflect this.

3.6(c) East West HVDC Interconnection between Ireland and Wales

The East-West interconnector (EWIC) will connect the transmission systems of Ireland and Wales, and is due to be completed in 2012. The interconnector will be able to carry up to 500 MW in either direction. However, it is not easy to predict whether or not imports for the full 500 MW will be available at all times. Based on analysis[39], EirGrid has estimated the capacity value of the interconnector to be 440 MW for these generation adequacy studies. Similar to the Moyle, EWIC is treated as negative generation in National Grid's current Seven Year Statement. It also states that it is expected that exports of 400-500 MW to Ireland via EWIC will occur even at peak times. This is in line with the estimations EirGrid have for modelling EWIC in the generation adequacy studies.

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[34] Moyle Export from Northern Ireland to Great Britain = 295 MW Sep-Apr & 287 MW May-Aug as per the Moyle Interconnector Capacity Statement, September 2011 (http://www.mutual-energy.com/Download/110930%20MIL%20SONI%20NG%20Capacity%20Calc%20combined%20Sept%202011.pdf).

[35] www.mutual-energy.com

[36] Source: www.entsoe.eu

[37] http://www.nationalgrid.com/uk/Electricity/SYS/current/

[38] Forced Outage Probability (FOP) is the time a generator is on forced outage as a proportion of the time it is not on scheduled outages.

[39] Interconnection Economic Feasibility Report: http://www.eirgrid.com/media/47693_EG_Interconnect09.pdf

A FOP similar to that for the Moyle interconnector has been used for the adequacy studies.

3.7 Wind Capacity & Renewables Targets

In both Ireland and Northern Ireland, government policy exists which makes targets of the amount of electricity sourced from renewables. Biofuels, hydro and marine energy will make an important contribution to these targets (see sections 3.8(c), 3.8(d)3.8(a) and 3.8(e)). However, it is assumed that these renewable targets will be achieved largely through the deployment of additional wind powered generation. Figure 3-10 shows the location of existing and planned wind generation on the island.

Wind generation does not produce the same amount of energy all year round due to varying wind strength. The wind capacity factor gives the amount of energy actually produced in a year relative to the maximum that could have been produced, had windfarms been generating at full capacity all year.

3.7(a) Ireland

In October 2009 the Government announced a target of 40% of electricity production from renewable sources by 2020. This is part of the Government's strategy to meet an overall target of achieving 16% of all energy from renewable sources by 2020.

Installed capacity of wind generation has grown from 145 MW at the end of 2002 to nearly 1,600 MW at the time of writing. This value is set to increase over the next few years as Ireland endeavours to meet its renewables target in 2020. The actual amount of renewable energy this requires will depend on the demand in future years (the forecast of which has, of course, decreased due to the economic downturn). Also, the assumptions made for other renewable generation will have a bearing on how much wind energy will need to be generated to reach the 40% target. Lastly, a small amount of potential energy from wind cannot be used due to transmission constraints or system curtailment – the exact amount has to be estimated, and is therefore another source of potential error.

With these uncertainties in mind, not one figure but a band of possible outcomes was estimated for wind capacity in 2020. Figure 3-2 indicates these targets between about 3500 MW and 4000 MW. A certain amount of this contribution is from offshore wind generation, as set out in Ireland's National Renewable Energy Action Plan (NREAP[40]). There are a number of offshore projects in the Gate 3 Connection Offer Process.

Based on historical records, it is assumed that onshore wind has a capacity factor of 31%, and offshore 37%. As a reference point, the energy obtained from wind generation over the past nine years is shown in Figure 3-3.

[40] http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division/Renewable+Energy+Directive+and+National+Renewable+Energy+Action+Plan.htm

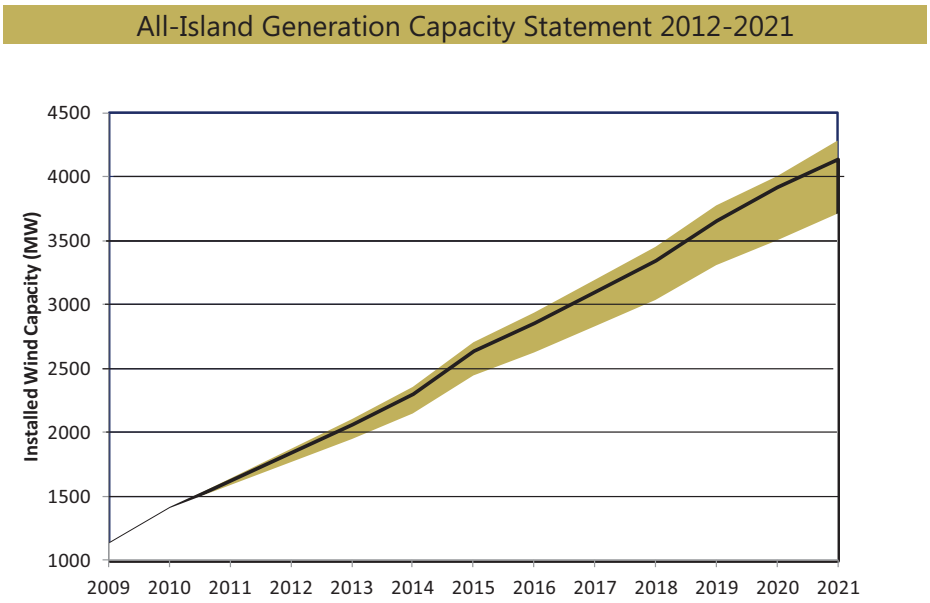

Figure 3-2 Band of predictions for Wind capacity levels in Ireland assumed for this report, determined using a linear projection of installed wind capacity required to meet 2020 targets.

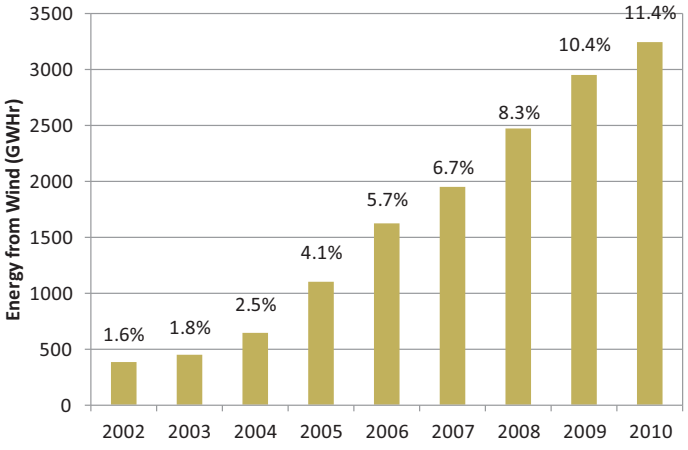

Figure 3-3 Historical wind generation in annual energy terms for Ireland (normalised), also given as a percentage of total electrical energy produced that year.

Historical wind capacity factors are shown in Figure 3-4. 2007 was considered to be a poor wind year in terms of nationwide average wind speeds. Wind conditions recovered in 2008 and 2009, but 2010 was the worst performance of the decade. An average capacity factor of 30.6% was used for future wind years for this report.

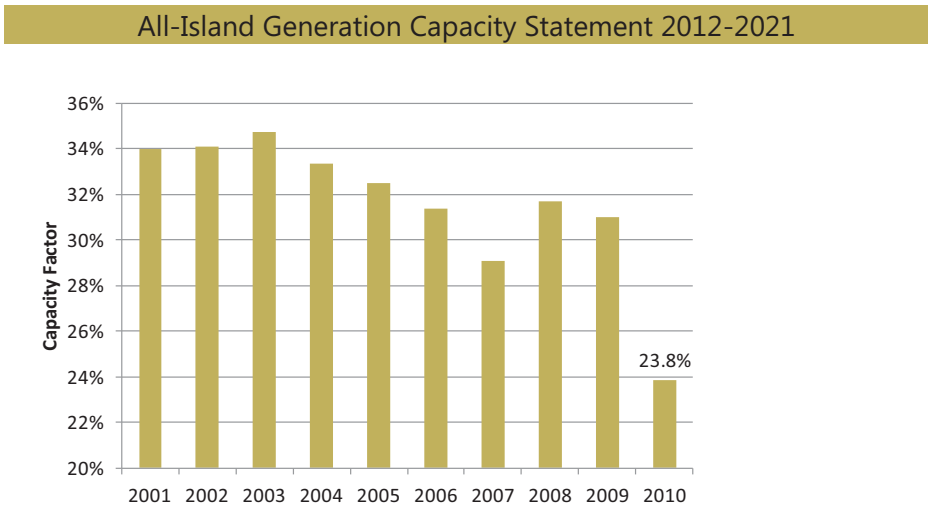

Figure 3-4 Historical wind capacity factors for Ireland.

The Government's White Paper on renewable energy[41] declared that 15% of electricity should be produced from renewable sources by 2010. Though Ireland has enough wind generation to achieve this target on a typical wind year, the wind capacity factor for 2010 was low, and only 14% of energy came from renewables.

3.7(b) Northern Ireland

The Strategic Energy Framework for Northern Ireland[42] restated the current target of 12% of electricity consumption from renewable resources by 2012 with a new additional target of 40% of electricity consumption from renewable resources by 2020. For 2010, 7.93% of electricity consumption was from renewable sources in NI. This is seen as relatively low, mainly due to the wind being the main contributor of the renewable generation portfolio and 2010 being a poor wind year.

Installed capacity of wind generation has grown from 37 MW in 2002 to 398 MW at the time of writing (see APPENDIX 2). This is set to increase rapidly over the next number of years as increasing levels of planning applications[43] for new wind farms are made. It is this increasing level of wind that is expected to be the main contributor to achieving the 40% target.

While the exact amount is as yet uncertain, for the purposes of the studies for this report SONI assume that by 2021 there will be an installed wind capacity of 1342 MW in NI (1042 MW of onshore and 300 MW of offshore). This is based on the assumption that the Government target for NI of 40% of electricity production from renewable sources will be met by 2020. The 40% target also takes into account a contribution from other renewables, such as tidal and biomass as outlined below.

However, the main contribution will be made up from wind. It is estimated that an installed wind capacity of circa 1278 MW will be enough to achieve the 40% figure by 2020. (978 MW of onshore and 300 MW of offshore).

The figures for the amount of onshore wind in each study year have been derived by incrementing the amount of connected onshore wind each year which will allow this target of 978 MW to be met by 2020.

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[41] Energy White Paper 2007 'Delivering a Sustainable Energy Future for Ireland', March 2007.

[42] Strategic Energy Framework (www.detini.gov.uk/strategic_energy_framework_sef_2010_.pdf)

[43] Information of current wind farm applications can be found on the Northern Ireland Planning Service website (http://www.planningni.gov.uk/index/advice/advice_apply/advice_renewable_energy/renewable_wind_farms.htm)

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Information provided on wind farm connections by Northern Ireland Electricity (NIE), the Northern Ireland Planning Service[44], along with assumptions made on what amount of wind capacity will actually receive the planning permission required indicate that there will be much more onshore wind connected by 2020. However, SONI have taken a more conservative view on the amount of onshore wind connected for the adequacy studies, but are confident that at least enough onshore wind will connect to reach the 40% target.

This assumes that onshore wind has a capacity factor[45] of 30%, offshore wind 35%, tidal 20% and large scale biomass 80%. It should be noted that the actual amount of renewable energy required to meet the 40% target by 2020 will depend on the demand in future years as the 40% is based on electricity consumption and not on installed capacity.

Figure 3-5 below illustrates the wind levels in Northern Ireland assumed for this report. Most of this wind will be built in the west of Northern Ireland, and transmission reinforcements will be required to transport it to the east, where demand is highest. To avoid extensive potential wind energy constraints, and to enable Northern Ireland to meet Government renewable targets, considerable investment is now urgently required on the Northern Ireland transmission system. The levels of connected wind capacity as shown in Figure 3-5 are dependent on a number of key transmission corridors being reinforced by the asset owner, Northern Ireland Electricity.

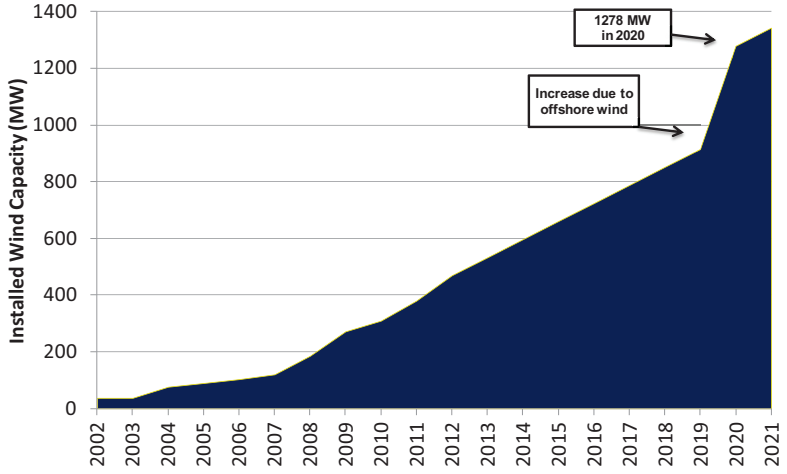

Figure 3-5 Northern Ireland wind levels assumed for this report

Figure 3-6 shows the increase in energy supplied from wind generation in recent years. In 2005, just 3.4% of Northern Ireland's electricity needs came from wind generation. This share had grown to 8.7% by the end of 2009, before falling to 7.2% in 2010, which is generally considered a poor wind year.

[44] http://www.planningni.gov.uk/index/advice/advice_apply/advice_renewable_energy/renewable_wind_farms.htm

[45] Capacity factor gives the amount of energy actually produced in a year relative to the maximum that could have been produced, had a generator been generating at full capacity all year.

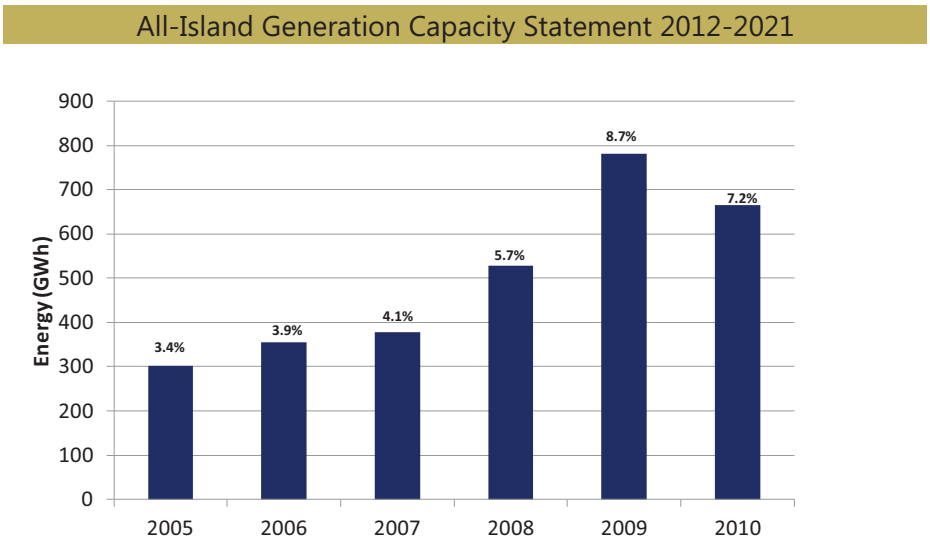

Figure 3-6 Historical wind generation in annual energy terms for Northern Ireland, also given as a percentage of total electrical energy produced that year

Historical capacity factors for Northern Ireland are shown in Figure 3-7. The average wind capacity factor for the last 6 years is 31.5%. Again, it can be seen that in 2010 the wind capacity factor is much lower than in the previous 5 years due to 2010 being a poor wind year.

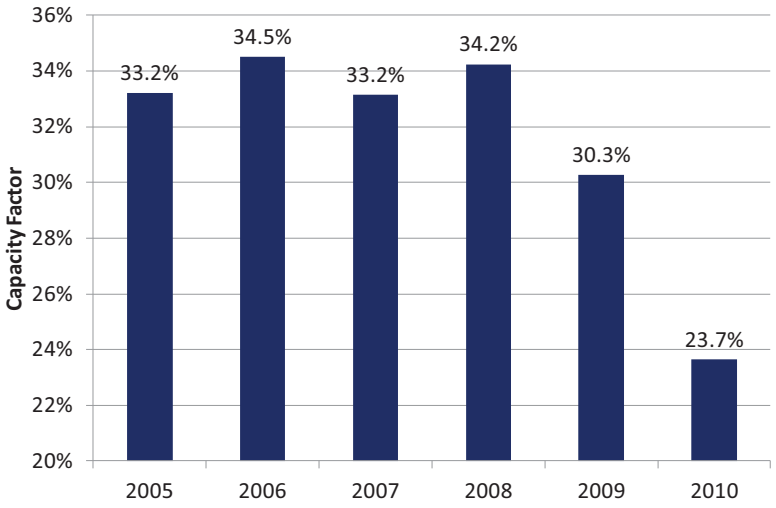

Figure 3-7 Historical wind capacity factors for Northern Ireland

The Strategic Energy Framework for Northern Ireland restated the target of 12% of electricity produced from renewable sources by 2012. This target is achievable, however only if a typical wind year occurs, and with a contribution from other small scale renewable generation sources. The wind capacity factor for 2010 was very low relative to previous years and is the worst year on record. If 2012 experiences the same wind profile as 2010, then this 12% target will not be met. 2011 to date has seen an improvement from 2010. An estimate of the monthly capacity factors for 2011 to the end of October is shown in Figure 3-8.

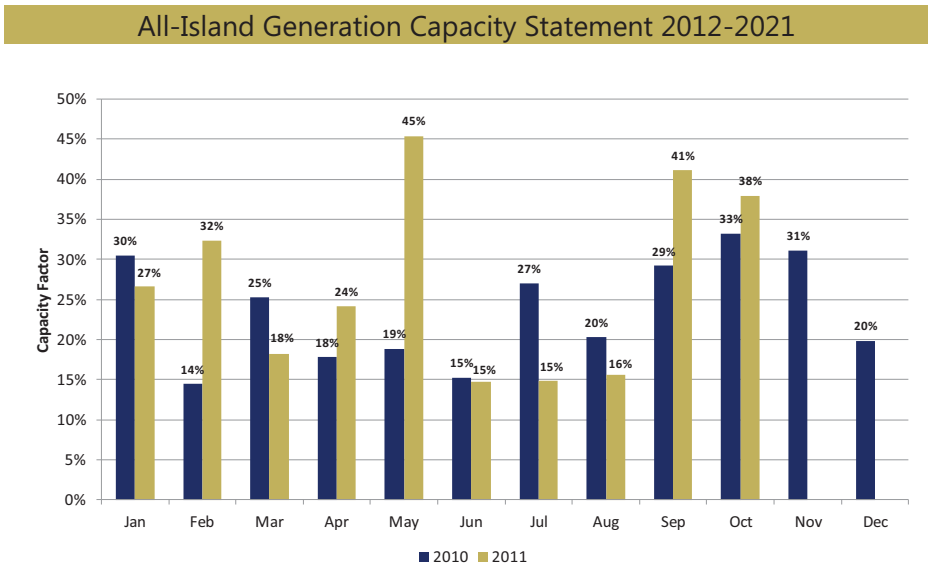

Figure 3-8 Monthly wind capacity factors in Northern Ireland for 2010 and 2011.

3.7(c) Wind Capacity Credit

Due to its relatively small geographical size, wind levels are strongly correlated across the island. Wind generation across the island tends to act more or less in unison as wind speeds rise and fall. The probability that all wind generation will cease generation for a period of time limits its ability to ensure continuity of supply and thus its benefit from a generation adequacy perspective.

The contribution of wind generation to generation adequacy is referred to as the **capacity credit** of wind. In our studies, capacity credit has been determined by subtracting a forecast of wind's half hourly generated output from the electricity demand curve. The use of this lower demand curve results in an improved adequacy position. This improvement can be given in terms of extra megawatts of installed conventional capacity. This MW value is taken to be the capacity credit of wind.

The capacity credit of wind will vary from year to year, depending on whether there is a large amount of wind generation when it is needed most. Analysis showed the behaviour of the 2009 profile to be close to average in terms of capacity credit. 2010 was considered a poor wind year, and so was not used for these studies.

It can be seen in Figure 3-9 that there is a benefit to the capacity credit of wind when it is determined on an all-island basis. The reason for this is that a greater geographic area gives greater wind speed variability at any given time. If the wind drops off in the south, it may not drop off in the north, or at the very least there will be a time lag. The result is that the variation in wind increases and the capacity contribution improves.

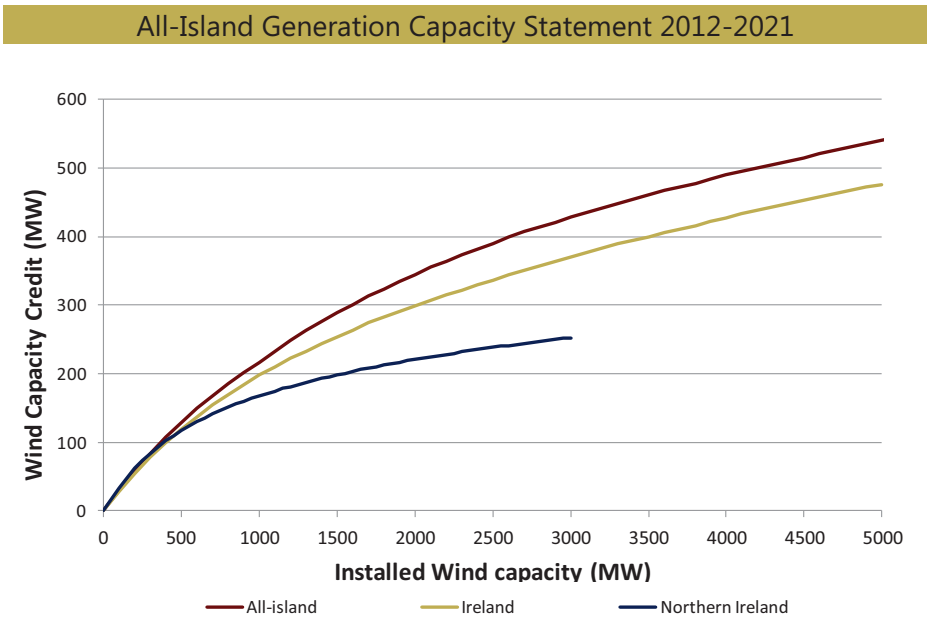

Figure 3-9 Capacity credit of wind generation for Ireland and Northern Ireland, compared to the all-island situation. For Ireland, the wind profiles were taken from 2009, the most recent, typical year. (2010, was considered a poor year for wind.) The curve for Northern Ireland is based on an average over several years.

Despite its limited contribution towards generation adequacy, wind generation has other favourable characteristics, such as:

- The ability to provide sustainable energy
- Zero carbon emissions
- Utilisation of an indigenous, free energy resource
- Relatively mature renewable-energy technology

This, combined with excellent natural wind resources in both Ireland and Northern Ireland, will ensure that wind generation will be developed extensively to meet the two Governments' renewable energy targets for 2020 in both jurisdictions.

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Figure 3-10 Existing and planned wind farms, as of October 2011. 'Planned' refers to wind farms that have signed a connection agreement with EirGrid in Ireland, or that have received planning approval in Northern Ireland.

3.8 Changes in other Non-Conventional Generation

This section discusses expected developments in demand side generation, CHP, biofuels, small scale hydro and marine energy over the next 10 years. All assumptions regarding this non-conventional generation are tabulated in APPENDIX 2. Though relatively small, this sector is growing and making an increasing contribution towards generation adequacy.

3.8(a) Demand-side generation

Industrial generation refers to generation, usually powered by diesel engines, located on industrial or commercial premises, to act as on-site supply during peak demand and emergency periods. The condition and mode of operation of this plant is uncertain, as some of these units would fall outside the jurisdiction of the TSOs.

Demand-side generation has been ascribed a capacity of 9 MW in Ireland for the purposes of this report.

In Northern Ireland, it is assumed that industrial generation has a capacity of 1 MW from 2015, rising to 4 MW in 2021. This is an estimation of the amount of small scale industrial generation that is capable of exporting onto the system.

As discussed in Section 2.3, SONI have obtained information from NIE on the estimated amount of embedded generation that is present on the Northern Ireland system. SONI assumptions based on this NIE information estimates circa 118 MW[46] of this small scale generation on the Northern Ireland system. It is assumed that this is used only for self consumption.

A dispatchable Aggregated Generating Unit (AGU) also operates in Northern Ireland which consists of a number of individual diesel generators grouping together to make available their combined capacity to the market. It should be noted that this is an exportable capacity and is not considered as demand side generation in this context.

3.8(b) Small-scale Combined Heat and Power (CHP)

Combined Heat and Power utilises generation plant to simultaneously create both electricity and useful heat. Due to the high overall efficiency of CHP plant, often in excess of 80%, its operation provides benefits in terms of reducing fossil fuel consumption and CO_2 emissions.

Estimates give a current installed CHP capacity (mostly gas-fired) of roughly 141 MW in Ireland (not including the 161 MW centrally dispatched CHP plant operated by Aughinish Alumina). The target for total CHP in Ireland[47] was 400 MW by 2010, whereas what was achieved was in the region of 300 MW. With the withdrawal of government incentives for fossil fuelled CHP, this area is not likely to grow much more.

In Northern Ireland, there is currently an estimated 8 MW of small scale CHP connected to the distribution system. Without detailed public information an assumption has been made that for the purposes of this statement, the estimated 8 MW in 2011 will rise to 17 MW by 2021 in Northern Ireland.

Currently CHP is promoted in accordance with the European Directive 2004/8/EC. The Strategic Energy Framework[48] for Northern Ireland acknowledges that the uptake of CHP in the region has been limited and therefore DETI have decided to encourage greater scope for combined heat and power in Northern Ireland.

[46] Mainly includes Diesel Generators, CHP and Small Scale Wind but also PV, Gas, Hydro, Biofuels and Land Fill Gas

[47] Energy White Paper 2007 'Delivering a Sustainable Energy Future for Ireland', March 2007.

[48] www.detini.gov.uk/strategic_energy_framework__sef_2010_.pdf

3.8(c) Biofuel

There are a number of different types of biofuel-powered generation plant on the island.

In Ireland, there is currently an estimated 38 MW of landfill gas powered generation. The peat plant at Edenderry aims to power 30% of its output using biomass by 2015. A new incentive (REFIT 3)[49] for Biomass-fuelled CHP plant aims to have 150 MW installed by 2020. With some of this plant already planned, it has been assumed for the purpose of this report that the whole 150 MW will be achieved on time. This plant makes a significant contribution to the 40% RES target.

Currently in Northern Ireland, there is an estimated 1.5 MW of small scale biofuels (Biomass & Biogas) and 11 MW of landfill gas powered generation. For the purposes of this report, and in the absence of detailed public information, it has been assumed that by 2021 the small scale biofuels capacity will rise to 2 MW while landfill gas powered generation capacity will reach 25 MW. It should be noted that DETI has recently revised the Northern Ireland Renewable Obligation (NIRO)[50] to increase support to developing technologies such as bioenergy.

For the studies it is also assumed in Northern Ireland that 90 MW of large scale biomass will be commissioned and that this will connect from 2015 onwards at 3 separate sites, each of which will have a capacity of 30 MW. These may be dispatchable due to their size, although at this stage there are no signed agreements or target connection dates in place.

3.8(d) Small-scale hydro

It is estimated that there is currently 21 MW of small-scale hydro capacity installed in rivers and streams across Ireland, with a further 4 MW in Northern Ireland. Such plant would generate roughly 60 GWh per year, making up approximately 0.1% of total annual generation. While this is a mature technology, the lack of suitable new locations limits increased contribution from this source. It is assumed that there are no further increases in small hydro capacity over the remaining years of the study.

3.8(e) Marine Energy

The marine energy assumptions for Ireland are taken from the NREAP report. This assumes that the currently developing technology will be deployed on a commercial basis from 2017, rising to 75 MW in 2020.

In Northern Ireland the Strategic Environmental Assessment (SEA)[51] proposes a target of 300 MW from tidal generation by 2020. It is unclear at this stage as to which tidal technology will be used to achieve this. Therefore, for the purposes of this report SONI have used a conservative assumption for tidal generation of 50 MW by 2020.

3.9 Plant Availability

It is unlikely that all of the generation capacity connected to the system is available at any particular instant. Plant may be scheduled out of service for maintenance, or forced out of service due to mechanical or electrical failure. Forced outages have a much greater negative impact on generation adequacy than scheduled outages, due to their unpredictability.

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[49] http://www.dcenr.gov.ie/Energy/Sustainable+and+Renewable+Energy+Division/REFIT.htm

[50] The Northern Ireland Renewables Obligation (NIRO) is the main support mechanism for encouraging the generation of electricity from renewable energy sources in Northern Ireland. More information is available at http://www.detini.gov.uk/deti-energy-index.htm

[51] Strategic Environmental Assessment (www.offshorenergyni.co.uk). DETI is also developing an Onshore Renewable Electricity Action Plan (OREAP) for Northern Ireland. (www.onshorerenewablesni.co.uk)

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The base case availability scenario used in this report combines the most likely availability scenario as considered by each TSO: EirGrid-calculated availability for Ireland, and the high availability forecasted by SONI for Northern Ireland. While this is the most likely scenario, other availability scenarios have been examined to prepare for a range of possible outcomes.

3.9(a) Ireland

Figure 3-11 shows the system-wide forced-outage rates (FOR)[52] for Ireland since 1998, as well as predicted values for the study period of this report. After rising steadily in the years up to 2007, FORs in Ireland have started to drop in the past few years. One cause for this improvement is the introduction of new generators and removal of old generators. Another contributing factor is reduced demand, which means older peaking units are called on less often, giving them less of an opportunity to fail. However it must be noted that two major impact events[53] have led to poorer availability in 2010 and 2011.

The operators of fully-dispatchable generators have provided forecasts of their availability performance for the ten year period 2012 to 2021. However, in the past these forecasts have not given an accurate representation of the amount of outages on the system. This is primarily due to the effect high-impact low-probability (HILP) events.

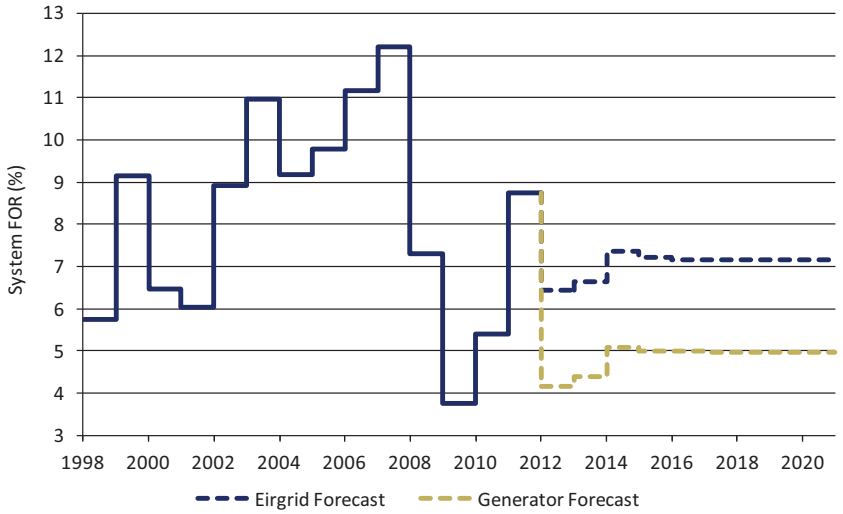

Figure 3-11 Historic and predicted Forced Outage Rates for Ireland. Future rates as predicted by both EirGrid and the generators are shown. Due to its atypical outage rates, Poolbeg Unit 3 has been excluded from historic calculations.

HILP events are unforeseen occurrences that don't often transpire but, when they do, will have a significant adverse impact on a generator's availability performance, taking it out of commission for several weeks. The probability of this occurring to an individual generator is low. However, when dealing with the system as a whole, there is a reasonable chance that at least one generator is

[52] The FOR is the percentage of time in a year that a plant is unavailable due to forced outages.

[53] Both Turlough Hill and North Wall CC are currently experiencing major outages

undergoing such an event at any given time. EirGrid studies[54] have indicated that HILPs will make up around one third of forced outages on average.

EirGrid has incorporated these HILPs to create a more realistic system availability forecast. This EirGrid availability forecast is used as the base case for these studies.

3.9(b) Northern Ireland

Generators are obligated to provide SONI with planned outage information in accordance with the Grid Code (Operating Code 2). Each power station provides this information for individual generating units indicating the expected start and finish dates of required maintenance outages for 7 years ahead. For the purposes of this report, a further 3 years has been assumed by SONI based on the maintenance cycles for each generating unit to enable this statement to look 10 years ahead.

SONI has concerns that these patterns may change as a result of increased two shifting. Two shifting is where a generator is taken off overnight or at minimum load times. This will occur more frequently with increased penetration of wind generation, and will result in the requirement for additional maintenance and increased Scheduled Outage Days (SODs). SONI will continue to monitor the operation of plant and the impact of this on availability.

Future FOR predictions are based on the historic performance of generators and the Moyle Interconnector or by making comparisons with similar units for newly commissioned plant.

Figure 3-12 shows the system forced-outage rates (FOR) for Northern Ireland since 2003, as well as predicted values for the study period of this report. This analysis is focused on fully dispatchable plant and does not include the Moyle Interconnector. After rising steadily in the years up to 2007, FORs in Northern Ireland have started to fall over the past few years. This coincides with the introduction of the Single Electricity Market (SEM) where incentives have been put in place to encourage better generator availability. Another contributing factor is reduced demand resulting from the ongoing economic downturn, which means older peaking units are called on less often, giving them less of an opportunity to fail.

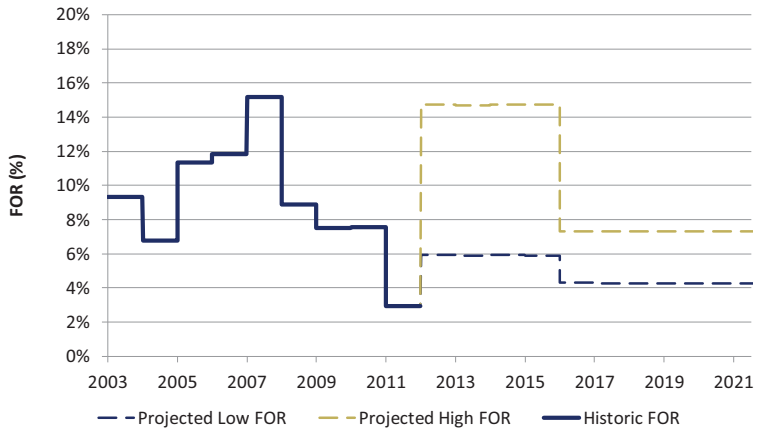

Figure 3-12 Historic and predicted Forced Outage Rates for Northern Ireland (not including the Moyle Interconnector)

[54] see GAR 2009-2015

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It is possible to derive availability figures on an overall system basis. This is achieved by calculating the amount of MWh unavailable as a result of FOPs and SODs. The actual availability is the remaining potential MWh available to meet customer demand.

Figure 3-13 shows the historic availabilities in Northern Ireland along with the projected high and low availabilities. The average high availability over the 10-year period is 90.7% and the low availability figure is 85.3%. This analysis is focused on fully dispatchable plant and does not include the Moyle Interconnector.

Historically the availability of Moyle has been much higher than conventional generation. However, at the time of writing this report, the Moyle Interconnector was on a prolonged forced outage due to undersea cable faults on both of its cables. This follows a previous prolonged fault that affected one of the two cables in the last quarter of 2010. Therefore in the adequacy studies carried out for this report, the FOR for the Moyle has been adjusted accordingly to reflect this.

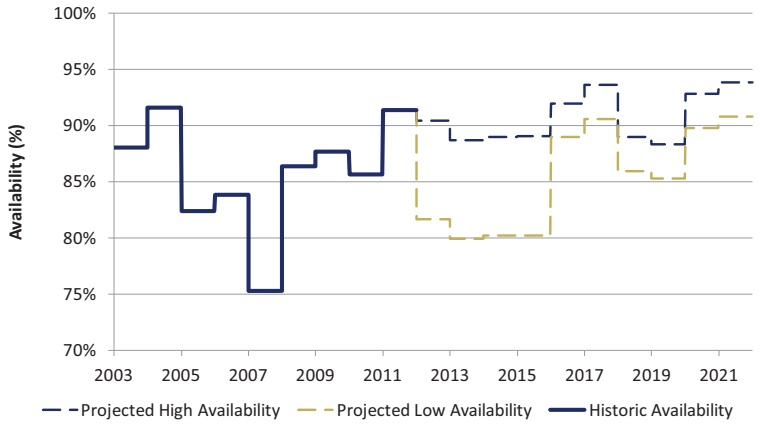

Figure 3-13 Historic and predicted Plant Availabilities in Northern Ireland (without Moyle)

It is necessary to present a range of availability scenarios for the future. The high availability scenario is based on the actual historic performance of generators in Northern Ireland, which historically are considered good. The low availability has been calculated with a pessimistic view of FORs, where the performance of all generators drops to a level corresponding to the worst performing unit connected on the system during each study year.

4 GENERATION ADEQUACY ASSESSMENTS

4 GENERATION ADEQUACY ASSESSMENTS

4.1 Introduction

This section presents the results from the adequacy studies, given in terms of the plant surplus or deficit (see APPENDIX 3 for information on the methodology used). Generation adequacy assessments are shown in three ways: on an Ireland, Northern Ireland, and all-island basis. The adequacy position in both jurisdictions improves on completion of the additional North-South tie-line.

All-island studies for the years prior to the commissioning of the additional North-South tie line are shown as dashed lines for illustrative purposes only, i.e. to show what could be the case if the tie line was completed earlier than 2017. Conversely, single area studies (for Ireland or Northern Ireland alone) are dashed lines after 2017, to portray the situation if the additional tie line was delayed.

Different demand growth and plant availability scenarios are examined to illustrate their effect on generation adequacy. Also considered are the effects of the loss of a CCGT in each jurisdiction, the unavailability of interconnector flows between the island of Ireland and Great Britain, and also the loss of aging plant in Ireland. All results are presented in full tabular form in APPENDIX 4.

4.2 Base Case

The results from the base case scenario to 2021 are shown in *Figure 4-1*. The base case assumes median demand growth in both jurisdictions, the EirGrid-calculated availability for the generation portfolio in Ireland, and high availability (based on historic performance) for the Northern Ireland generation portfolio.

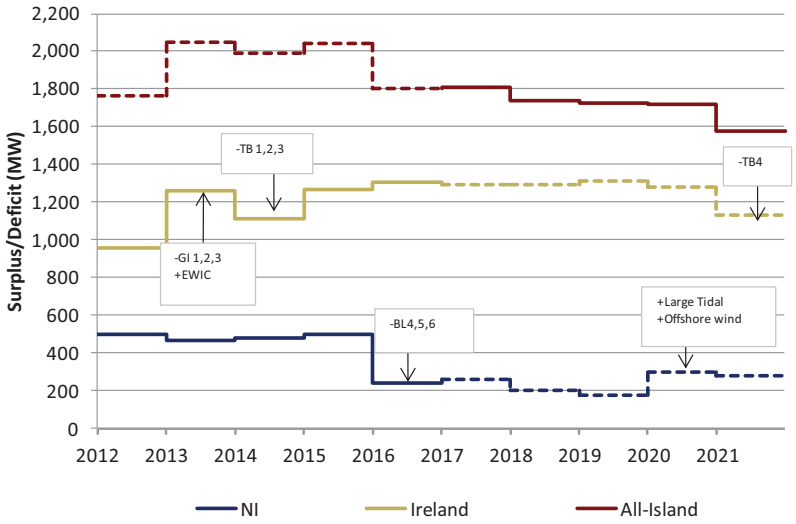

Figure 4-1 Adequacy results for the base case scenario, shown for Ireland, Northern Ireland, and on an all-island basis. Dashed lines convey the results if the additional North-South tie line is completed earlier or later than 2017.

Plant decommissionings and the introduction of the East-West interconnector are indicated. In addition to these, demand growth, plant additions and increased wind penetration will cause shifts from year to year. *Figure 4-1* shows the adequacy results for Ireland, Northern Ireland, and on an all-island basis. As mentioned in Section 3.6(a), single area studies for Ireland include a reliance on Northern Ireland of 200 MW. Similarly, Northern Ireland can rely on Ireland for 100 MW in their single area studies.

Ireland is in surplus for all years in the study. The main drivers for this are reduced demand due to the recession, the addition of new generators, and improved generator availability. The surplus is well over 1200 MW for most years, with the closure of old plant more than compensated for by additional interconnection and new plant.

In Northern Ireland there is a surplus for all years of the study. However, without additional interconnection capacity, surpluses in Northern Ireland are at modest levels of circa 200 MW from 2016 to 2019. This highlights the importance of additional interconnection capacity to enable SONI to maintain generation security standards in Northern Ireland.

All surpluses are enhanced on switching to an all-island system, see red line.

4.3 Impact of Demand Growth

4.3(a) Economic-driven changes to demand growth

Changing demand will have a significant impact on generation adequacy. The effect of a higher demand forecast on the adequacy situation is illustrated in Figure 4-2, with base-case availability (where the EirGrid calculated availability is assumed for the generation portfolio in Ireland, and the high availability for the Northern Ireland generation portfolio).

As expected, the high demand scenario leads to reduced adequacy when compared with the base case. In Ireland, even the high demand scenario consistently shows positive adequacy, with a generation surplus of about 1200 MW.

In the Northern Ireland high demand scenario, the surplus dips to 150 MW in 2016, again highlighting the importance of additional interconnection capacity to enable SONI to maintain generation security standards in Northern Ireland.

For the all-island case, the average difference that the high demand makes is 180 MW.

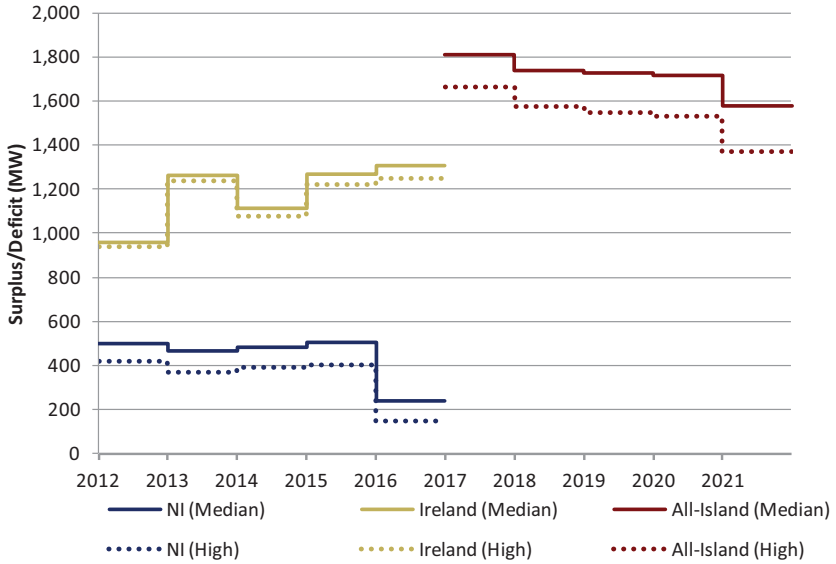

Figure 4-2 The solid lines show the base cases with median demand, while the effect of high demand growth is shown with dotted lines. (All with base-case availability.)

4.3(b) Increase in demand due to a severe winter

Figure 4-3 illustrates the effect of a severe winter, where the demand has been increased in every year. (Not every year is expected to have a severe winter, but the effect is shown for each year individually.) The extra demand models the effect of having the coldest conditions experienced in ten years.

For Ireland, the surplus decreases by an average of 100 MW as compared with the normal median demand scenario.

For Northern Ireland, the One-in-10 winter conditions have a smaller detrimental effect on the adequacy situation, averaging 26 MW.

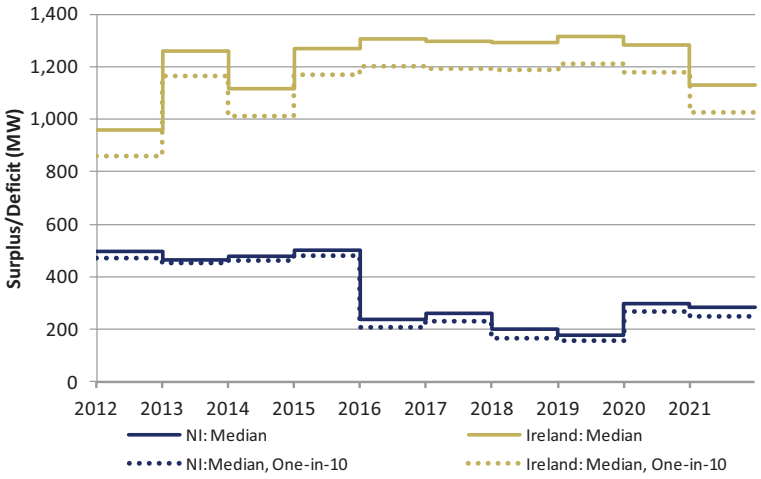

Figure 4-3 The solid lines show the base cases with median demand, while the effect of imposing severe winter conditions (One-in-10 year) on the median demand scenario is shown in dotted lines. (All with base case availability.)

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4.4 Availability

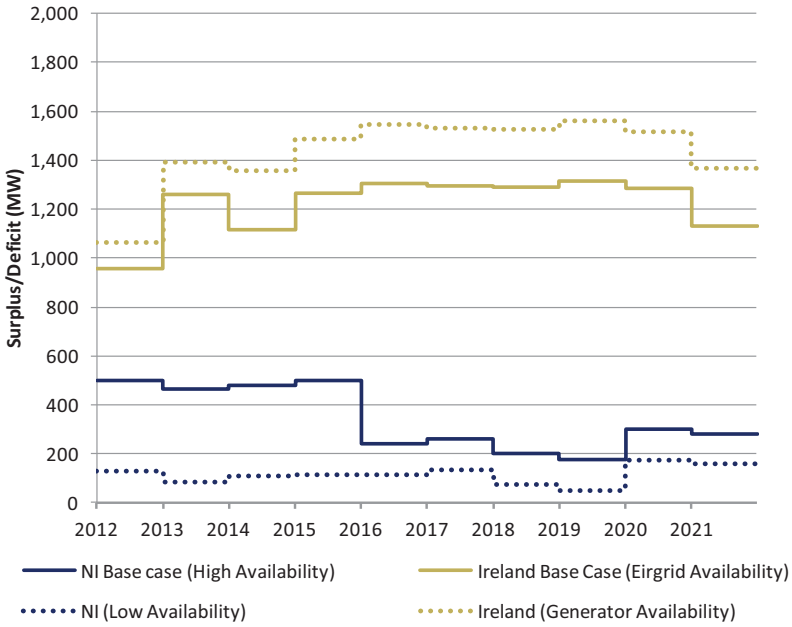

Figure 4-4 Comparison of availability scenarios for Ireland and Northern Ireland

If the Generator's own availability scenario is utilised for Ireland (i.e. if the generator's perform to their own standard rather than a more realistic outcome as estimated by Eirgrid), then Figure 4-4 shows that the increase in the surplus is of the order of 200 MW.

The impact of plant availability for Northern Ireland is also shown in Figure 4-4. For the first four years of the study, the difference between the surplus for the high and low availability cases is circa 400 MW, as shown. This difference reduces from 2016 onwards due to the methodology used to determine the low availability case in Northern Ireland.

In the low availability case, all units are given the same availability as the worst performing unit on the system at any one time. Units may be added or removed each year, which may change the availability which is applied to all units, as the unit that is added or removed may be the worst performing unit. Thus, in the low availability scenario, the drop in surplus from 2015 to 2016 is not as noticeable as it is in the base case.

4.5 Loss of a CCGT in each Jurisdiction

In order to run a stable and secure power, it is prudent to examine the effect of major events which could have serious consequences to electricity supply. A scenario has been considered where a major combined cycle generator is out of action in both Northern Ireland and Ireland. To see how the systems would cope under major stress, this scenario was run with high demand and low availability.

Because of the large amount of other plant available, Ireland remains in surplus in this situation.

However, with this onerous scenario, Northern Ireland is in a deficit situation for all years, see Figure 4-5. This analysis highlights the importance of the additional North-South tie-line capacity (and/or additional conventional generation capacity) to enable SONI to maintain generation security standards in Northern Ireland. It should be noted that if the additional North-South tie-line should not be in place until 2017, then this situation would leave Northern Ireland below the 4.9 hours/year LOLE standard and in a capacity deficit under this scenario.

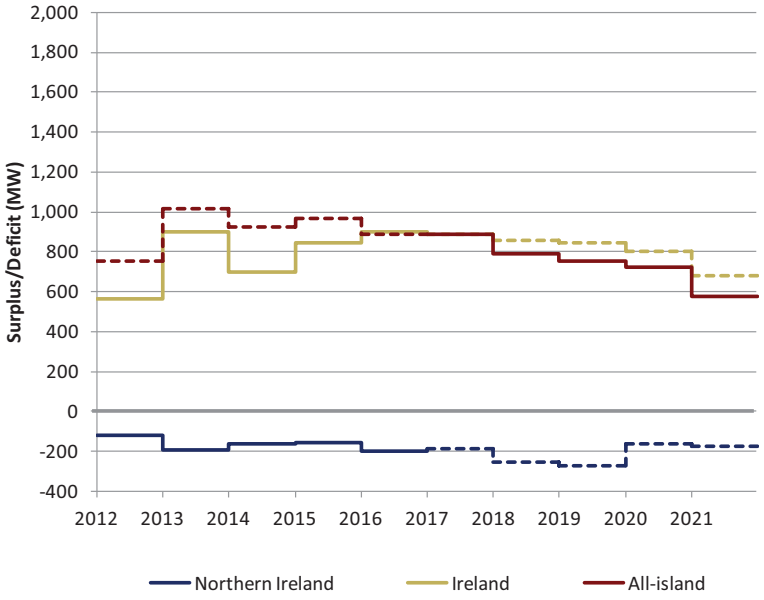

Figure 4-5 This shows the loss of two CCGTs for the high demand scenario and low availability. Dashed lines convey the results if the additional North-South tie line is completed earlier or later than 2017.

4.6 Loss of Interconnection with Great Britain

Due to the recent long-term forced outage on the Moyle interconnector, it was thought prudent to examine a situation where both undersea interconnectors with Great Britain (Moyle and the East-West) are unavailable. Figure 4-6 shows how the surplus reduces dramatically from the base case scenarios. In particular, Northern Ireland would be in deficit from 2016. This again shows the importance of the planned extra North-South tie-line to enable SONI to maintain generation security standards in Northern Ireland.

This study also highlights the implications if energy is unavailable to import from Great Britain to either Ireland via EWIC or Northern Ireland via Moyle due to any capacity shortfall or market conditions that may occur in GB. However, as discussed in Section 3.6, National Grid's current Seven Year Statement treats both the EWIC and Moyle as negative generation even at peak demand times. Even when the interconnectors are treated this way by National Grid in their studies, their plant margins are still within acceptable standards.

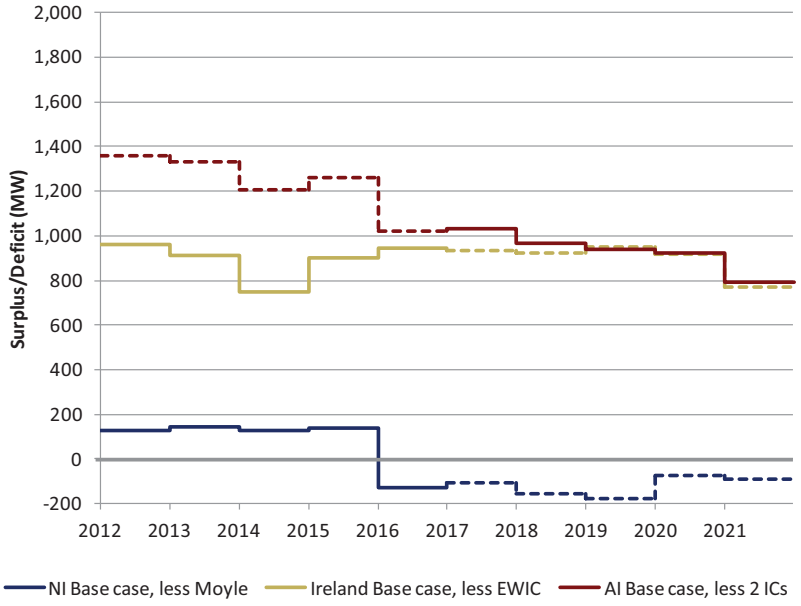

Figure 4-6 The effect of losing the benefit of the 2 undersea interconnectors from the Base Cases

4.7 Closure of old plant in Ireland

The introduction of European legislation[55] means that generators must adhere to strict emission limits. Recently, further legislation[56] has made these emission limits even more stringent. Ireland has a National Emissions Reduction Plan which controls the maximum emissions from older generators until

[55] Large Combustion Plant Directive, see http://europa.eu/legislation_summaries/environment/air_pollution/l28028_en.htm

[56] Industrial Emissions Directive, see http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/1985&format=HTML&aged=0&language=EN&guiLanguage=en

2016. After this, some of these generators must either be improved to reduce their emissions, or shut down.

A scenario has been developed in which these older generators are phased out of commission in a gradual fashion. While EirGrid has not been notified of any plant decommissionings other than those listed in Table 3-3, it must prepare against uncertainties which may have severe consequences on security of supply. For this scenario, EirGrid has therefore made its own best estimation on which generators to phase out and when.

In addition, the Public Service Obligation levy that benefitted the peat-burning units will start to cease to be effective from 2016, and so this scenario includes their shutdown.

In Northern Ireland, plant is covered under the UK's National Emissions Reduction Plan which forms part of the Large Combustion Plants Directive (2001/80/EC). It is expected that this will not require any upgrades or closures of existing plant within the time period covered by this report, apart from Ballylumford Units ST4, ST5 and ST6 as mentioned in section 3.5(b). The baseline scenario has therefore been used for Northern Ireland.

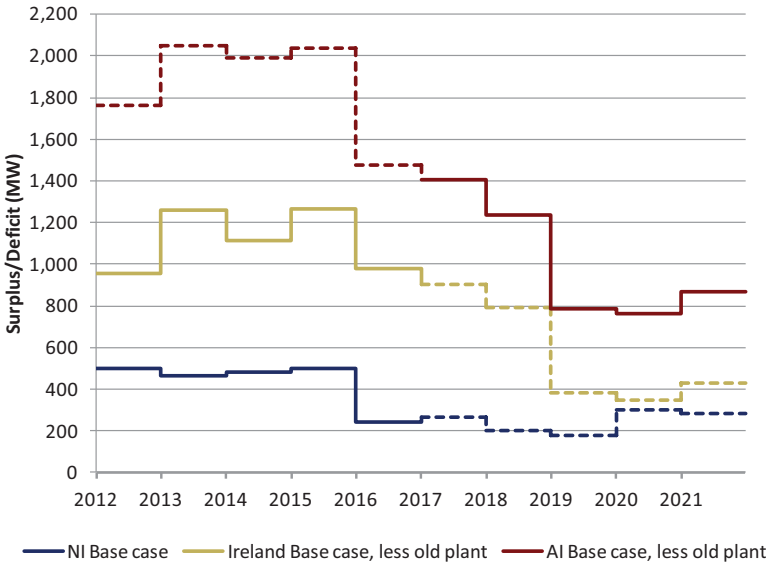

Figure 4-7 Median demand, base-case availability, with older plant removed.

With the loss of plant, the surplus for Ireland drops dramatically but to manageable levels of approximately 400 MW by 2019, as shown in Figure 4-7 for the base-case demand and availability.

5 DELIVERING A SECURE SUSTAINABLE ELECTRICITY SYSTEM (DS3)

5 DELIVERING A SECURE SUSTAINABLE ELECTRICITY SYSTEM (DS3)

5.1 Background

As previously stated in Chapter 3, both governments in Ireland and Northern Ireland have set the challenging target of 40% electricity consumption to be generated from renewable sources by 2020. On the basis of current demand forecasts[57] this equates to approximately 16,500 GWh an all-island basis by 2020. Along with other renewable generators, the installed wind capacity will need to rise to between 4,800 to 5,300 MW to meet these targets. This level of wind power plant penetration is unprecedented in a single system (see Figure 5-1) and poses significant challenges to the real-time operation of the power system.

EirGrid and SONI have carried out pioneering studies over the past number of years to better understand the changing behaviour of the power system and examine the technical challenges with integrating significant volumes of wind power generation. The results of these studies can be found in the 'Facilitation of Renewables'[58] and 'Ensuring a Secure, Reliable and Efficient Power System in a Changing Environment'[59] reports. The key message from these studies is that the 2020 renewables targets are achievable; however, significant challenges to the operation of the system will have to be overcome.

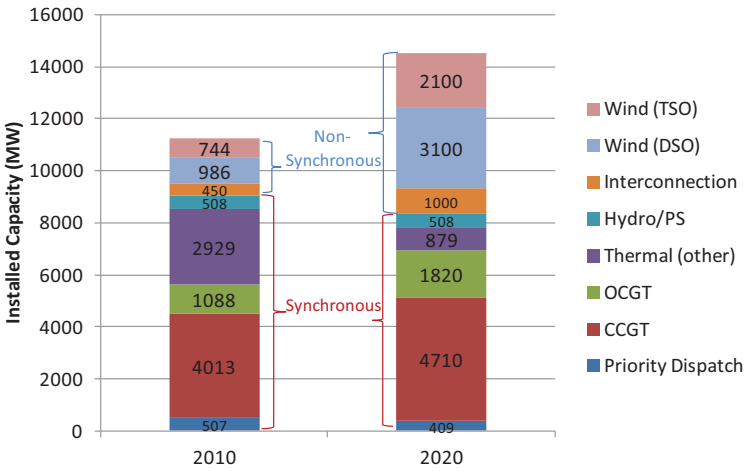

Figure 5-1 All-Island portfolio breakdown by generation type - 2010 and 2020

[57] See the All-Island TER in Table A-1
[58] http://www.eirgrid.com/media/FacilitationRenewablesFinalStudyReport.pdf
[59] http://www.eirgrid.com/media/Ensuring_a_Secure_Reliable_and_Efficient_Power_System_Report.pdf

In particular, the 'Facilitation of Renewables' studies showed that it is possible today to securely operate the power system with up to 50% of generation coming from non-synchronous sources (essentially HVDC imports and wind generation) [Green Zone - Figure 5-2]. In addition, the studies indicated that it was possible to operate the system with up to 75% of non-synchronous generation [Amber Zone -Figure 5-2] but mitigating actions would be required to resolve a number of technical challenges. The studies indicated that secure operation beyond a 75% level of non-synchronous generation was not possible given the capabilities of known technology.

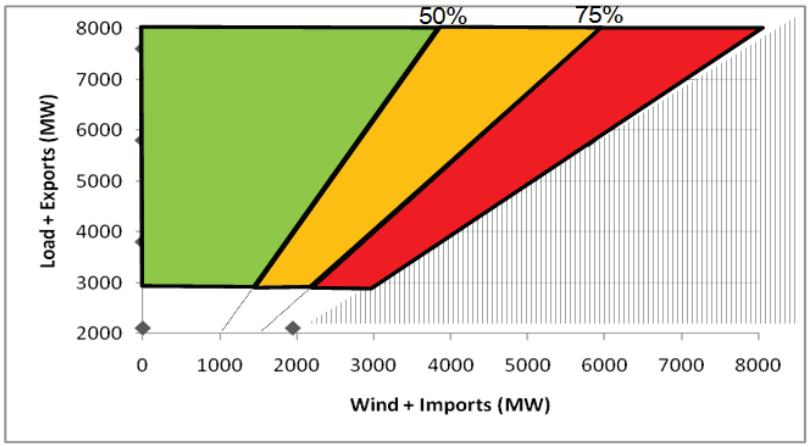

Figure 5-2 Zones in the Ireland and Northern Ireland Power System ('Facilitation of Renewables' studies, 2010)

An all-island programme of work entitled 'Delivering a Secure Sustainable Electricity System (DS3)' has been developed by EirGrid and SONI to resolve the technical challenges associated with having up to 75% of generation from non-synchronous sources. This is in order to ensure a secure, efficient and reliable power system which meets both Governments' targets of 40% electricity consumption from renewable sources by 2020.

5.2 Programme Objectives

The key objectives of the all-island DS3 programme are as follows:

- to ensure continued security of supply on the island in the context of a changing plant portfolio.
- to assist in the delivery of the 2020 renewable policy targets set out in the Renewables Directive 2009/29/EC and detailed in legislation by minimising curtailment of renewable generation.

There are three main work areas within the programme:

1. System Performance and Incentivisation: Identifying and incentivising the necessary system portfolio capability and performance required to operate a secure power system with increasing penetration of renewables. This includes enhancing existing performance monitoring processes, ensuring Grid Code compliance and reviewing system services arrangements.

2. System Operational Policies: The development and updating of the necessary operational policies to ensure system security primarily in respect of frequency and voltage over various time periods,

including but not limited to operating reserves, ramping services, management of uncertainty and TSO-DSO voltage co-ordination.

3. System Tools: The design, development and implementation of enhanced system tools in order to manage the increased operational complexity and provide decision support tools consistent with the changing needs of the power system.

5.3 Programme Workstreams

In order to achieve the deliverables in the DS3 programme, the programme is further broken down into eleven workstreams; Frequency Control, Voltage Control, System Services Review, Demand Side Management (DSM), Grid Code, Performance Monitoring, Rate of Change of Frequency (RoCoF), Model Development & System Studies, Renewable Data, Wind Security Assessment Tool (WSAT) and Control Centre Tools & Capabilities.

From an industry perspective, the three most pertinent workstreams are:

System Services Review: The changing nature of the power system due to increasing renewable penetration has significant implications for the needs of the power system, particularly in respect of system services. A comprehensive review of system services is now required. This review will include:

- an identification of system needs – now and projected for the future
- a review of the effectiveness of existing services and payment structures
- the potential development of new services and new/revised payment structures to foster a continued focus on performance and where appropriate to drive investment

A multi-stage consultation process approach is proposed. The initial consultation will be high level and seek views from the industry on the scope of the review, the structures for system services, eligibility considerations, the contractual arrangements and the degree of interaction with the other components of the wholesale market.

Demand-Side Management (DSM): There is provision within the SEM for demand side participation in the form of Demand Side Units (DSUs) and Aggregator Generator Units (AGUs). Units like these could assist with the operational integration of renewable generation by providing system services. The regulatory authorities have undertaken a programme of work to develop a Strategic Demand Response Programme for the island of Ireland. In this regard, a Decision Paper entitled 'Demand Side Vision for 2020'[60] was published in May 2011. Key areas of work within this workstream include the Grid Code, System Services, Contracts & Licensing and overall readiness for the efficient operation of such units.

Grid Code: The Grid Codes set the (minimum) standards relating to the operation and use of the Transmission System for plant or apparatus connected to the Transmission or Distribution Systems. Recent technical studies carried out by EirGrid and its consultants have shown that very high wind penetrations will necessitate further Grid Code changes to ensure system stability. These changes form a key part of the DS3 programme. The modifications to the Grid and Distribution Codes will include wind farm performance standards, RoCoF standards, demand side management and new technologies.

5.4 Wind Farm Performance

The 'Facilitation of Renewables' studies indicated that at high system non-synchronous penetration levels the transient stability of the system will be significantly compromised (Figure 5-3). This arises

[60] http://www.cer.ie/GetAttachment.aspx?id=5c03dac7-a347-44e9-b4da-978b30e8de35

since, with fewer on-line synchronous generating units, there is a reduction in synchronising torque (the forces that keep generators operating in unison). As the instantaneous penetration of wind increases relative to system demand (plus exports), the percentage of contingencies with a critical clearance time (CCT) less than 200ms increases. Since critical clearance time is a measure of the transient stability of the system (with higher CCT denoting greater stability), this means that the system becomes less transiently stable at high wind penetration relative to system demand.

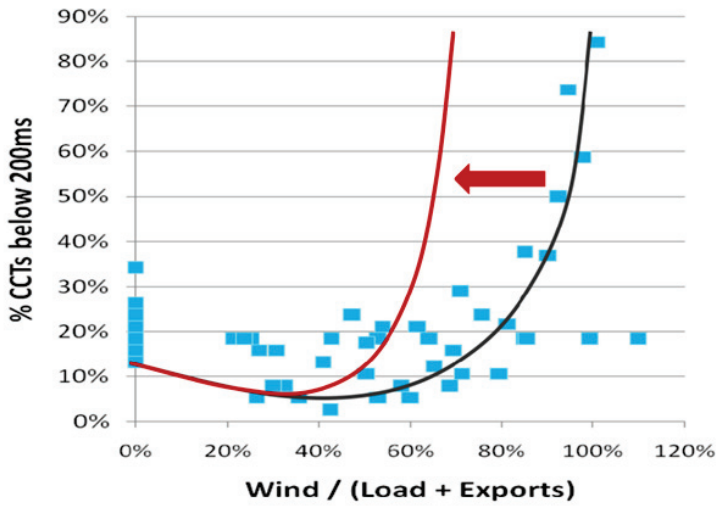

Figure 5-3 Percentage of contingencies causing Critical Clearance Times (CCT) lower than 200ms vs SNSP ('Facilitation of Renewables', 2010). Potential impact (red curve) on transient stability if wind farms' dynamic reactive power capability is not clarified in the Grid Code

Provision of dynamic reactive power in a measured fashion from network devices (e.g. wind farms) during voltage disturbances could be used to mitigate many, if not all, of these issues. These mitigation strategies rely on wind farms and other devices being able to provide significant reactive current during voltage disturbances. Currently it is not clear from the Grid Code exactly what capability is required. This is one of the issues the Grid Code workstream will tackle.

5.5 Stakeholder Engagement

The broad nature and strategic importance of this work means that input and engagement is needed from all relevant industry stakeholders and EirGrid and SONI are working to facilitate open communication and co-ordination at all stages of this process. An Advisory Council has been established to ensure that the views of industry are represented. The purpose of the Advisory Council is to provide a forum to discuss stakeholder views and concerns on those issues which may impact on the implementation of the programme.

To ensure the successful delivery of the DS3 programme, CER, the Utility Regulator NI, EirGrid and SONI will work closely together. The objective of all parties is to ensure that the 2020 40% renewable policy targets are delivered in a cost efficient manner without adversely affecting security of supply of the all-island power system. Further information on the DS3 programme can be found at www.eirgrid.com/renewables.

APPENDICES

All-Island Generation Capacity Statement 2012-2021

APPENDIX 1 DEMAND FORECAST

Median	TER (GWh)						TER Peak (MW)						Transmission Peak (MW)					
Year	Ireland		Northern Ireland		All-island		Ireland		Northern Ireland		All-island		Ireland		Northern Ireland		All-island	
2011	27,096	-2.0	9,268	Δ%	36,363	Δ%	4,736	Δ%	1,805	Δ%	6,504	Δ%	4,626	Δ%	1,715	Δ%	6,304	Δ%
2012	27,336	0.9	9,360	1.0	36,696	0.9	4,771	0.7	1,822	1.0	6,556	0.8	4,653	0.6	1,731	1.0	6,348	0.7
2013	27,846	1.9	9,476	1.2	37,323	1.7	4,850	1.7	1,844	1.2	6,657	1.5	4,726	1.6	1,753	1.2	6,441	1.5
2014	28,359	1.8	9,617	1.5	37,977	1.8	4,931	1.7	1,871	1.4	6,763	1.6	4,799	1.5	1,779	1.5	6,540	1.5
2015	28,819	1.6	9,760	1.5	38,579	1.6	5,002	1.5	1,898	1.5	6,861	1.5	4,863	1.3	1,806	1.5	6,630	1.4
2016	29,219	1.4	9,906	1.5	39,125	1.4	5,064	1.2	1,925	1.5	6,950	1.3	4,918	1.1	1,833	1.5	6,711	1.2
2017	29,536	1.1	10,053	1.5	39,589	1.2	5,113	1.0	1,953	1.5	7,027	1.1	4,959	0.8	1,861	1.5	6,780	1.0
2018	29,859	1.1	10,203	1.5	40,061	1.2	5,163	1.0	1,982	1.5	7,105	1.1	5,002	0.9	1,889	1.5	6,851	1.0
2019	30,186	1.1	10,354	1.5	40,541	1.2	5,214	1.0	2,011	1.5	7,184	1.1	5,046	0.9	1,917	1.5	6,922	1.0
2020	30,668	1.6	10,508	1.5	41,176	1.6	5,290	1.4	2,040	1.5	7,288	1.5	5,114	1.4	1,946	1.5	7,019	1.4
2021	31,222	1.8	10,665	1.5	41,887	1.7	5,370	1.5	2,070	1.5	7,398	1.5	5,194	1.6	1,976	1.5	7,128	1.6

Table A-1 Median Electricity Demand forecast – all figures are for a 52 week year

Low	TER (GWh)						TER Peak (MW)						Transmission Peak (MW)					
Year	Ireland		Northern Ireland		All-island		Ireland		Northern Ireland		All-island		Ireland		Northern Ireland		All-island	
2011	27,096	-2.0	8,960	Δ%	36,055	Δ%	4,736	Δ%	1,787	Δ%	6,486	Δ%	4,626	Δ%	1,697	Δ%	6,286	Δ%
2012	27,295	0.7	9,023	0.7	36,318	0.7	4,764	0.6	1,786	-0.1	6,513	0.4	4,647	0.4	1,695	-0.1	6,305	0.3
2013	27,764	1.7	9,104	0.9	36,868	1.5	4,835	1.5	1,792	0.4	6,590	1.2	4,711	1.4	1,701	0.4	6,374	1.1
2014	28,234	1.7	9,204	1.1	37,438	1.5	4,907	1.5	1,806	0.8	6,676	1.3	4,775	1.4	1,715	0.8	6,452	1.2
2015	28,649	1.5	9,323	1.3	37,972	1.4	4,970	1.3	1,829	1.3	6,761	1.3	4,831	1.2	1,737	1.3	6,530	1.2
2016	29,018	1.3	9,443	1.3	38,462	1.3	5,026	1.1	1,852	1.3	6,840	1.2	4,880	1.0	1,760	1.3	6,601	1.1
2017	29,304	1.0	9,566	1.3	38,870	1.1	5,069	0.9	1,875	1.3	6,906	1.0	4,916	0.7	1,783	1.3	6,659	0.9
2018	29,595	1.0	9,689	1.3	39,284	1.1	5,114	0.9	1,899	1.3	6,973	1.0	4,952	0.7	1,806	1.3	6,719	0.9
2019	29,890	1.0	9,814	1.3	39,704	1.1	5,158	0.9	1,923	1.3	7,041	1.0	4,990	0.8	1,829	1.3	6,779	0.9
2020	30,337	1.5	9,941	1.3	40,278	1.4	5,227	1.3	1,947	1.3	7,134	1.3	5,051	1.2	1,853	1.3	6,864	1.3
2021	30,855	1.7	10,070	1.3	40,925	1.6	5,300	1.4	1,971	1.3	7,230	1.4	5,124	1.4	1,877	1.3	6,960	1.4

Table A-2 Low Electricity Demand forecast

All-Island Generation Capacity Statement 2012-2021

High	TER (GWh)						TER Peak (MW)						Transmission Peak (MW)					
Year	Ireland		Northern Ireland		All-island		Ireland		Northern Ireland		All-island		Ireland		Northern Ireland		All-island	
2011	27,165	Δ%	9,604	Δ%	36,768	Δ%	4,747	Δ%	1,823	Δ%	6,533	Δ%	4,637	Δ%	1,732	Δ%	6,332	Δ%
2012	27,473	1.1	9,728	1.3	37,201	1.2	4,792	1.0	1,851	1.5	6,606	1.1	4,675	0.8	1,760	1.6	6,398	1.0
2013	28,055	2.1	9,891	1.7	37,946	2.0	4,882	1.9	1,881	1.6	6,725	1.8	4,757	1.8	1,790	1.7	6,509	1.7
2014	28,642	2.1	10,058	1.7	38,700	2.0	4,972	1.8	1,912	1.6	6,845	1.8	4,840	1.7	1,821	1.7	6,622	1.7
2015	29,178	1.9	10,227	1.7	39,405	1.8	5,054	1.7	1,944	1.7	6,958	1.7	4,915	1.6	1,852	1.7	6,728	1.6
2016	29,656	1.6	10,399	1.7	40,055	1.7	5,127	1.4	1,976	1.7	7,063	1.5	4,981	1.3	1,884	1.7	6,824	1.4
2017	30,052	1.3	10,574	1.7	40,626	1.4	5,187	1.2	2,009	1.7	7,155	1.3	5,034	1.1	1,916	1.7	6,909	1.2
2018	30,456	1.3	10,752	1.7	41,208	1.4	5,249	1.2	2,042	1.7	7,250	1.3	5,088	1.1	1,949	1.7	6,996	1.3
2019	30,866	1.3	10,933	1.7	41,799	1.4	5,312	1.2	2,076	1.7	7,346	1.3	5,143	1.1	1,982	1.7	7,084	1.3
2020	31,435	1.8	11,118	1.7	42,553	1.8	5,400	1.7	2,110	1.7	7,467	1.7	5,224	1.6	2,016	1.7	7,198	1.6
2021	32,082	2.1	11,305	1.7	43,387	2.0	5,492	1.7	2,145	1.7	7,594	1.7	5,316	1.8	2,051	1.7	7,324	1.8

Table A-3 High Electricity Demand forecast

MEDIAN, One-in-10	TER Peak (MW)	
Year	Ireland	N Ireland
2011	4,901	1,870
2012	4,936	1,887
2013	5,016	1,909
2014	5,096	1,936
2015	5,168	1,963
2016	5,230	1,990
2017	5,279	2,018
2018	5,329	2,047
2019	5,380	2,076
2020	5,455	2,105
2021	5,535	2,135

Table A-4 Median Electricity Demand forecast, with one-in-10 year weather conditions.

Notes: Electricity sales are measured at the customer level. To convert this to Total Electricity Requirement (TER), it is brought to exported level by applying a loss factor (for both transmission and distribution) and adding on an estimate of self-consumption.

The Transmission Peak (or Exported peak) is the maximum demand met by centrally-dispatched generation, measured at exported level by the Control Centre. To calculate the TER Peak, an estimation of the contribution from embedded generation is added to the Transmission peak. When forecasting the transmission peak, it is assumed that the wind contribution is zero

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APPENDIX 2 GENERATION PLANT INFORMATION

Year end:	ID	Fuel Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Aghada	AD1	Gas	258	258	258	258	258	258	258	258	258	258
	AT1	Gas/DO	90	90	90	90	90	90	90	90	90	90
	AT2	Gas/DO	90	90	90	90	90	90	90	90	90	90
	AT4	Gas/DO	90	90	90	90	90	90	90	90	90	90
	ADC	Gas/DO	432	432	432	432	432	432	432	432	432	432
Dublin Bay	DB1	Gas/DO	403	401	399	402	400	398	401	399	397	400
Edenderry	ED1	Milled peat/biomass	118	118	118	118	118	118	118	118	118	118
Edenderry OCGT	ED3,5	DO	116	116	116	116	116	116	116	116	116	116
Great Island	GI1	HFO	54	0	0	0	0	0	0	0	0	0
	GI2	HFO	49	0	0	0	0	0	0	0	0	0
	GI3	HFO	109	0	0	0	0	0	0	0	0	0
Huntstown	HN1	Gas/DO	341	341	340	340	339	339	338	338	337	337
	HN2	Gas/DO	399	399	398	398	397	397	396	396	395	395
Indaver Waste	IW1	Waste	15	15	15	15	15	15	15	15	15	15
Lough Ree	LR4	Peat	91	91	91	91	91	91	91	91	91	91
Marina CC	MRT	Gas/DO	85	85	85	85	85	85	85	85	85	85
Moneypoint	MP1	Coal/HFO	282	282	282	282	282	282	282	282	282	282
	MP2	Coal/HFO	283	283	283	283	283	283	283	283	283	283
	MP3	Coal/HFO	282	282	282	282	282	282	282	282	282	282
North Wall CT	NW5	Gas/DO	104	104	104	104	104	104	104	104	104	104
Poolbeg CC	PBC	Gas/DO	463	463	463	463	463	463	463	463	463	463
Rhode	RP1	DO	52	52	52	52	52	52	52	52	52	52
	RP2	DO	52	52	52	52	52	52	52	52	52	52
Sealrock	SK3	Gas/DO	80	80	80	80	80	80	80	80	80	80
	SK4	Gas/DO	81	81	81	81	81	81	81	81	81	81
Tarbert	TB1	HFO	54	54	0	0	0	0	0	0	0	0
	TB2	HFO	54	54	0	0	0	0	0	0	0	0
	TB3	HFO	243	243	0	0	0	0	0	0	0	0
	TB4	HFO	243	243	243	243	243	243	243	243	243	0
Tawnaghmore	TP1	DO	52	52	52	52	52	52	52	52	52	52
	TP3	DO	52	52	52	52	52	52	52	52	52	52
Tynagh	TY1	Gas/DO	384	384	384	384	384	384	384	384	384	384
West Offaly	WO4	Peat	137	137	137	137	137	137	137	137	137	137
Whitegate	WG1	Gas/DO	439	438	437	436	435	435	438	437	436	435
Ardnacrusha	AA1-4	Hydro	86	86	86	86	86	86	86	86	86	86
Erne 1	ER1-4	Hydro	65	65	65	65	65	65	65	65	65	65
Lee	LE1-3	Hydro	27	27	27	27	27	27	27	27	27	27
Liffey	LI1,2,4,5	Hydro	38	38	38	38	38	38	38	38	38	38
Turlough Hill	TH1-4	Pumped storage	292	292	292	292	292	292	292	292	292	292
EWIC		DC Interconnector		440	440	440	440	440	440	440	440	440
*Extra planned generation**				*459*	*674*	*772*	*870*	*870*	*870*	*870*	*870*	*870*
		Total Dispatchable	**6585**	**7269**	**7128**	**7228**	**7321**	**7319**	**7323**	**7320**	**7315**	**7074**
		Year end:	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**

Table A-5 Dispatchable generation capacity in Ireland. HFO: Heavy Fuel Oil; DO: Distillate Oil.
**Note- The figures for planned generation are based on assumptions derived from generator information, and do not constitute Eirgrid's formal acceptance of commissioning dates.*
Some plant capacities include minor degradation over the years.

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Year End:		Fuel Type	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Ballylumford	ST4	Gas* / Heavy Fuel Oil	170	170	170	170	-	-	-	-	-	-
	ST5	Gas* / Heavy Fuel Oil	170	170	170	170	-	-	-	-	-	-
	ST6	Gas* / Heavy Fuel Oil	170	170	170	170	-	-	-	-	-	-
	B10	Gas* / Distillate Oil	97	97	97	97	97	97	97	97	97	97
	B31	Gas* / Distillate Oil	245	245	245	245	245	245	245	245	245	245
	B32	Gas* / Distillate Oil	245	245	245	245	245	245	245	245	245	245
	GT7 (GT1)	Distillate Oil	58	58	58	58	58	58	58	58	58	58
	GT8 (GT2)	Distillate Oil	58	58	58	58	58	58	58	58	58	58
Kilroot	ST1	Heavy Fuel Oil* / Coal	238	238	238	238	238	238	238	238	238	238
	ST2	Heavy Fuel Oil* / Coal	238	238	238	238	238	238	238	238	238	238
	KGT1	Distillate Oil	29	29	29	29	29	29	29	29	29	29
	KGT2	Distillate Oil	29	29	29	29	29	29	29	29	29	29
	KGT3	Distillate Oil	42	42	42	42	42	42	42	42	42	42
	KGT4	Distillate Oil	42	42	42	42	42	42	42	42	42	42
Coolkeeragh	GT8	Distillate Oil	53	53	53	53	53	53	53	53	53	53
	C30	Gas* / Distillate Oil	402	402	402	402	402	402	402	402	402	402
Moyle Interconnector	Moyle	DC Link #	450	450	450	450	450	450	450	450	450	450
Contour Global (CHP)	CGC3	Gas	3	3	3	3	3	3	3	3	3	3
	CGC4	Gas	3	3	3	3	3	3	3	3	3	3
	CGC5	Gas	3	3	3	3	3	3	3	3	3	3
iPower AGU	AGU	Distillate Oil	26	26	26	26	26	26	26	26	26	26
Total Dispatchable			**2771**	**2771**	**2771**	**2771**	**2261**	**2261**	**2261**	**2261**	**2261**	**2261**

Table A-6 Fully dispatchable plant in Northern Ireland.
** Where dual fuel capability exists, this indicates the fuel type utilised to meet peak demand.*
 # Moyle Interconnector Capacity: 450 MW Nov-Mar & 410MW Apr-Oct

Year end:	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Wind-Onshore	1629	1847	2065	2284	2502	2720	2939	3157	3375	3593	3812
Wind-Offshore	0	0	0	20	137	137	162	189	281	325	325
Wind-Total	**1629**	**1847**	**2065**	**2303**	**2639**	**2858**	**3101**	**3346**	**3656**	**3918#**	**4137**
Small-scale Hydro	21	21	21	21	21	21	21	21	21	21	21
Waste (50% renewable)	0	15	15	15	77	77	77	77	77	77	77
Biomass/Landfill gas*	56	79	102	125	148	165	181	198	215	231	231
Tidal/Wave	0	0	0	0	0	0	13	25	38	75	125
Industrial	9	9	9	9	9	9	9	9	9	9	9
CHP	141	141	141	141	141	141	141	141	141	141	141
Total	**1856**	**2112**	**2353**	**2614**	**3035**	**3270**	**3543**	**3816**	**4156**	**4472**	**4741**

Table A-7 Partially/non-dispatchable plant in Ireland.
** Includes 150 MW Biomass CHP by 2020, and a 35 MW contribution from Edenderry.*
 # Due to uncertainties associated with wind and other renewable sources, a spread of possible figures for installed wind capacity are estimated between 3500 and 4000 MW to meet the 40% RES target in 2020. The central figure only is indicated in this table.

Partially/Non-Dispatchable Plant in Northern Ireland											
Year end:	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Onshore Wind	405	469	532	596	660	723	787	851	914	978	1042
Offshore Wind	0	0	0	0	0	0	0	0	0	300	300
Small Scale Hydro	4	4	4	4	4	4	4	4	4	4	4
Small Scale Biofuels	1	1	1	2	2	2	2	2	2	2	2
Landfill Gas	11	12	13	14	15	17	18	19	21	23	25
Large scale Biomass	0	0	0	0	30	60	90	90	90	90	90
CHP	7	8	9	10	11	12	13	14	15	16	17
Industrial/DSU	0	0	0	0	1	1	2	2	3	3	4
Tidal/Wave	1	1	1	1	1	1	1	1	1	51	51
Total	**429**	**495**	**560**	**627**	**724**	**820**	**917**	**983**	**1050**	**1467**	**1535**

Table A-8 Partially/non-dispatchable plant in Northern Ireland

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NI Wind Farm		MEC (MW)
Transmission connected	Slieve Kirk	27.6
Distribution connected	Corkey	5
	Rigged Hill	5
	Elliott's Hill	5
	Bessy Bell	5
	Owenreagh	5.5
	Lendrum's Bridge	5.94
	Lendrum's Bridge2	7.26
	Altahullion	26
	Tappaghan	19.5
	Snugborough	13.5
	Callagheen	16.9
	Lough Hill	7.8
	Bin Mountain	9
	Wolf Bog	10
	Slieve Rushen 2a	27
	Altahullion Extension	11.7
	Bessy Bell 2	9
	Slieve Rushen 2b	27
	Owenreagh Ext	5.1
	Slieve Divena	30
	Garves	15
	Gruig	25
	Tappaghan Ext	9
	Hunters Hill	20
	Crockagarran	15
	Screggagh	20
	Curryfree	15
Total		**397.8**

Table A-9 Existing Windfarms in Northern Ireland, as of 31st October 2011

Wind Farm	Phase	MEC (MW)	Wind Farm	Phase	MEC (MW)
Ballywater	1	31.5	Garvagh	1	26.7
Ballywater	2	10.5	Garvagh	1	31.53
Boggeragh	1	57	Glanlee	1	29.8
Booltiagh	1	19.45	Golagh	1	15
Castledockrell	1	41.4	Kingsmountain	1	23.75
Clahane	1	37.8	Kingsmountain	2	11.05
Coomacheo	1	41.225	Lisheen	1	55
Coomacheo	2	18	Meentycat	1	70.96
Coomagearlahy	1	42.5	Meentycat	2	14
Coomagearlahy	2	30	Mountain Lodge	1	24.8
Coomagearlahy	3	8.5	Mountain Lodge	3	5.82
Derrybrien	1	59.5	Rathrussan/Bindoo	1	48
Dromada	1	28.5			
			Transmission connected total		**782**

Table A-10 Transmission connected windfarms in Ireland as of 1 Oct 2011

All-Island Generation Capacity Statement 2012-2021

Wind Farm	Phase	MEC (MW)	Wind Farm	Phase	MEC (MW)
Altagowlan	1	7.65	Grouse Lodge	1	15
Anarget	1	1.98	Inis Meain	1	0.66
Anarget	2	0.02	Inverin (Knock South)	1	3.3
Arklow Banks	1	25.2	Inverin (Knock South)	2	0.66
Ballincollig Hill	1	15	Kealkil	1	8.5
Ballinlough	1	2.55	Kilbranish (Greenoge)	1	4.9
Ballinveny	1	2.55	Killybegs	1	2.55
Beale	1	1.65	Kilronan	1	5
Beale	2	2.55	Kilvinane	1	4.5
Beallough	1	1.7	Knockastanna	1	7.5
Beam Hill	1	14	Knockawarriga	1	22.5
Beenageeha	1	3.96	Lackan	1	6
Bellacorrick	1	6.45	Lahanaght Hill	1	4.25
Black Banks	1	3.4	Largan Hill	1	5.94
Black Banks	2	6.8	Lenanavea	2	2.55
Burtonport	1	0.66	Lenanavea / Burren	1	2.1
Caranne Hill	1	3.4	Lios na Carraige	1	0.02
Cark	1	15	Loughderryduff	1	7.65
Carnsore	1	11.9	Lurganboy	1	4.99
Carraigcannon	1	20	Mace Upper	1	2.55
Carrig	1	2.55	Meenachullalan	1	11.9
Carrons	1	2.5	Meenadreen	1	3.4
Carrons	2	2.49	Meenakeeragh	1	4.2
Coomatallin	1	5.95	Meenanilta	1	2.55
Corkermore	1	15	Meenanilta	2	2.45
Corneen	1	3	Mienvee	1	0.66
Corrie Mountain	1	4.8	Mienvee	2	0.19
County Crest	1	0.5	Milane Hill	1	5.94
Crocane	1	1.7	Moanmore	1	12.6
Crockahenny	1	5	Moneenatieve	1	3.96
Cronaloght	1	4.98	Mount Eagle	1	5.1
Cronelea	1	4.99	Mount Eagle	2	1.7
Cronelea	2	4.5	Mountain Lodge	1	3
Cronelea Upper	1	2.55	Muingnaminanne	1	15.3
Cronelea Upper	2	1.7	Mullinanalt	1	7.5
Cuillalea	1	3.4	Owenstown	1	0.018
Cuillalea	2	1.59	Raheen Barr	1	18.7
Culliagh	1	11.88	Raheen Barr	2	8.5
Curabwee	1	4.62	Rahora	1	4.25
Curraghgraigue	1	2.55	Rathcahill	1	12.5
Donaghmede Fr Collins Park	1	0.25	Reenascreena	1	4.5
Dromdeeveen	1	10.5	Richfield	1	20.25
Dromdeeveen	2	16.5	Richfield	2	6.75
Drumlough Hill	1	4.8	Shannagh	1	2.55
Drumlough Hill	2	9.99	Skehanagh	1	4.25
Dundalk IT	1	0.5	Slievereagh	1	3
Dunmore	1	1.7	Sonnagh Old	1	7.65
Flughland	2	9.2	Sorne Hill	1	31.5
Gartnaneane	1	10	Sorne Hill	2	7.4
Gartnaneane	2	5	Spion Kop	1	1.2
Geevagh	1	4.95	Taurbeg	1	26
Glackmore	1	0.6	Tournafulla	1	7.5
Glackmore	2	0.3	Tournafulla	2	17.5
Glackmore	3	1.4	Tullow Mushroom Growers Ltd	1	0.133
Glanta Commons	1	19.55	Tullynamoyle	1	9
Glanta Commons	2	8.4	Tursillagh	1	15
Glenough	1	33	Tursillagh	2	6.8
Gneeves	1	9.35	WEDcross	1	4.5
Gortahile	1	21	**Distribution Connected Total**		**811**

Table A-11 Distribution connected windfarms in Ireland as of 1 Oct 2011

APPENDIX 3 METHODOLOGY

GENERATION ADEQUACY & SECURITY STANDARD

Generation adequacy is assessed by determining the likelihood of there being sufficient generation to meet customer demand. It does not take into account any limitations imposed by the transmission system, reserve requirements or the energy markets.

In practice, when there is not enough supply to meet load, the load must be reduced. This is achieved by cutting off electricity from customers. In adequacy calculations, if there is predicted to be a supply shortage at any time, there is a Loss Of Load Expectation (LOLE) for that period. In reality load shedding due to generation shortages is a very rare event.

LOLE can be used to set a security standard. Ireland has an agreed standard of 8 hours LOLE per annum, and Northern Ireland has 4.9 hours. If this is exceeded in either jurisdiction, it indicates the system has a higher than acceptable level of risk. The security standard used for all-island calculations is 8 hours.

It is important to make a further comparison of the proportional Expected Unserved Energy (EUE). LOLE is concerned only with the likely number of hours of shortage; EUE goes further and takes account also of the extent of shortages.

System	LOLE hrs/year	EUE per million
Ireland	8.0	34.5
Northern Ireland	4.9	33.8

Table A-12 Expected Unserved Energy (EUE) for both jurisdictions

The comparison of Ireland and Northern Ireland standards in terms of EUE suggests that the standard in Northern Ireland when expressed in LOLE terms is appropriate for a relatively small system with relatively large unit sizes. The standard in Northern Ireland, taken in conjunction with the larger proportional failures, results in a comparable EUE to Ireland.

With any generator, there is always a risk that it may suddenly and unexpectedly be unable to generate electricity (due to equipment failure, for example). Such events are called forced outages, and the proportion of time a generator is out of action due to such an event gives its forced outage rate (FOR).

Forced outages mean that the available generation in a system at any future period is never certain. At any particular time, several units may fail simultaneously, or there may be no such failures at all. There is therefore a probabilistic aspect to supply, and to the LOLE. The model used for these studies works out the *probability* of load loss for each half-hour period – it is these that are then summed to get the yearly LOLE, which is then compared to the security standard.

It is assumed that forced outages of generators are independent events, and that one generator failing does not influence the failure of another.

LOSS OF LOAD EXPECTATION (LOLE)

AdCal software in used to calculate LOLE. The probability of supply not meeting demand is calculated for each hour of each study year. The annual LOLE is the sum of the contributions from each hour.

Consider now the simplest case of a single-system study, with a deterministic load model (that is, with only one value used for each load), and no scheduled maintenance, so that there is one generation availability distribution for the entire year. If

L_{hd} = load at hour h on day d
G = generation plant available
H = number loads/day to be examined (i.e. 1, 24 or 48)
D = total number of days in year to be examined

then the annual LOLE is given by

$$\text{LOLE} = \sum_{d=1,D} \sum_{h=1,H} \text{Prob.}\left[G < L_{h,d}\right]$$

This equation is used in the following practical example.

SIMPLIFIED EXAMPLE OF LOLE CALCULATION

Consider a system consisting of just three generation units, as in Table A-13.

	Capacity (MW)	Forced outage probability	Probability of being available
Unit A	10	0.05	0.95
Unit B	20	0.08	0.92
Unit C	50	0.10	0.90
Total	80		

Table A-13 System for LOLE example

If the load to be served in a particular hour is 55 MW, what is the probability of this load being met in this hour? To calculate this, the following steps are followed:

1) How many different states can the system be in, i.e. if all units are available, if one is forced out, if two are forced out, or all three?
2) How many megawatts are in service for each of these states?
3) What is the probability of each of these states occurring?
4) Add up the probabilities for the states where the load cannot be met.
5) Calculate expectation.

1)	1)	2)	3)	3)	4)	4)
State	**Units in service**	**Capacity in service (MW)**	**Probability for (A*B*C)**	**Probability**	**Ability to meet 55 MW demand**	**Expectation of Failure (LOLE)**
1	A, B, C	80	0.95*0.92*0.90 =	0.7866	Pass	0
2	B, C	70	0.05*0.92*0.90 =	0.0414	Pass	0
3	A, C	60	0.95*0.08*0.90 =	0.0684	Pass	0
4	C	50	0.05*0.08*0.90 =	0.0036	Fail	0.0036
5	A, B	30	0.95*0.92*0.10 =	0.0874	Fail	0.0874
6	B	20	0.05*0.92*0.10 =	0.0046	Fail	0.0046
7	A	10	0.95*0.08*0.10 =	0.0076	Fail	0.0076
8	none	0	0.05*0.08*0.10 =	0.0004	Fail	0.0004
Total				**1.0000**		**0.1036**

Table A-14 Probability table

Only states 1, 2 and 3 are providing enough generation to meet the demand of 55 MW. The probabilities for the other five *failing* states are added up to give a total probability of 0.1036. So in this particular hour, there is a chance of approximately 10% that there will not be enough generation to meet the load. It can be said that this hour is contributing about 6 minutes (10% of 1 hour) to the total LOLE for the year. This is then summed for each hour of the year.

All-Island Generation Capacity Statement 2012-2021

INTERPRETATION OF RESULTS

While the use of LOLE allows a sophisticated, repeatable and technically accurate assessment of generation adequacy to be undertaken, understanding and interpreting the results may not be completely intuitive. If, for example, in a sample year, the analysis shows that there is a loss of load expectation of 16 hours, this does not mean that all customers will be without supply for 16 hours or that, if there is a supply shortage, it will last for 16 consecutive hours.

It does mean that if the sample year could be replayed many times and each unique outcome averaged, that demand could be expected to exceed supply for an annual average duration of 16 hours. If such circumstances arose, typically only a small number of customers would be affected for a short period. Normal practice would be to maintain supply to industry, and to use a rolling process to ensure that any burden is spread.

In addition, results expressed in LOLE terms do not give an intuitive feel for the scale of the plant shortage or surplus. This effect is accentuated by the fact that the relationship between LOLE and plant shortage/surplus is highly non-linear. In other words, it does not take twice as much plant to return a system to the 8 hour standard from 24 hours LOLE as it would from 16 hours.

The adequacy calculation assumes that forced outages are independent, and that if one generator trips it does not affect the likelihood of another generator tripping. In reality this is not always true. In extreme weather, for example, generators are more likely to fail simultaneously. This can lead to supply shortages during periods when the balance of probability would have suggested a supply surplus.

SURPLUS & DEFICIT

In order to assist understanding and interpretation of results, a further calculation is made which indicates the amount of plant required to return the system to standard. This effectively translates the gap between the LOLE projected for a given year and the standard into an equivalent plant capacity (in MW). If the system is in surplus, this value indicates how much plant can be removed from the system without breaching the LOLE standard. Conversely, if the system is in breach of the LOLE standard, the calculation indicates how much plant should be added to the system to maintain security.

The exact amount of plant that could be added or removed would depend on the particular size and availability of any new plant to be added. The amount of surplus or deficit plant is therefore given in terms of Perfect Plant. Perfect Plant may be thought of as a conventional generator with no outages. In reality, no plant is perfect, and the amount of real plant in surplus or deficit will always be higher.

It should be noted that actual loss of load as a result of a supply shortage does not represent a catastrophic failure of the power system[61]. In all probability such shortages, or loss of load, would not result in widespread interruptions to customers. Rather, it would likely take the form of supply outages to a small number of customers for a period in the order of an hour or two. This would be done in a controlled fashion, to ensure that critical services are not affected.

[61] In line with international practice, some risk of such supply shortages are accepted to avoid the unreasonably high cost associated with reducing this risk to a negligible level.

APPENDIX 4 ADEQUACY ASSESSMENTS

This section shows the results from the adequacy studies as presented in Section 0.

Median	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	498	466	480	501	240	262	201	178	298	282
	Ireland	958	1261	1115	1268	1304	1295	1291	1316	1283	1131
	All-island	1764	2050	1990	2041	1803	1811	1741	1725	1716	1578

*Table A-15 The surplus of plant for each year for the **base-case scenario**, i.e. Median demand growth, and availability as calculated by EirGrid for the generation in Ireland, and the high availability scenario for the Northern Ireland portfolio. All figures are given in MW of perfect plant. See section 4.2 for details.*

Low	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	540	516	539	562	304	331	274	256	381	370
	Ireland	964	1273	1133	1294	1334	1330	1331	1361	1335	1185
	All-island	1811	2113	2069	2130	1903	1920	1856	1851	1855	1727

*Table A-16 **Low demand** with Base case Availability.*

High	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	419	366	390	404	148	171	95	67	197	178
	Ireland	941	1235	1078	1223	1248	1232	1216	1228	1183	1024
	All-island	1672	1942	1883	1917	1670	1664	1573	1547	1531	1373

*Table A-17 **High demand** with Base case Availability.*

	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Northern Ireland	High Availability	498	466	480	501	240	262	201	178	298	282
	Low Availability	129	82	107	115	115	136	74	51	174	158
Ireland	Generator Availability	1064	1393	1356	1488	1544	1532	1525	1559	1515	1369
	Eirgrid Availability	958	1261	1115	1268	1304	1295	1291	1316	1283	1131

*Table A-18 Comparison of **different availability** scenarios. Median demand in all cases.*

All-Island Generation Capacity Statement 2012-2021

	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	276	255	261	282	27	44	(11)	(20)	77	64
	Ireland	584	928	737	893	953	951	934	935	902	787
	All-island	1,052	1,357	1,277	1,330	1,103	1,114	1,042	1,015	990	868

*Table A-19 The Base case with one **CCGT removed** from each jurisdiction. Shading indicates deficit of plant.*

	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	(119)	(192)	(160)	(156)	(197)	(185)	(254)	(274)	(162)	(177)
	Ireland	566	902	700	848	897	886	858	847	800	679
	All-island	756	1014	927	967	890	887	790	751	722	579

*Table A-20 High demand, and low availability in Northern Ireland, with one **CCGT removed** from each jurisdiction*

Median	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	127	142	128	139	(130)	(108)	(155)	(178)	(73)	(91)
	Ireland	958	913	746	902	942	935	925	952	915	771
	All-island	1,361	1,332	1,205	1,263	1,022	1,029	964	941	923	793

*Table A-21 The Base Case scenarios, with the two undersea **interconnectors unavailable***

	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Surplus (Deficit)	Northern Ireland	498	466	480	501	240	262	201	178	298	282
	Ireland	958	1,261	1,115	1,268	979	900	794	384	344	430
	All-island	1,764	2,050	1,990	2,041	1,474	1,404	1,237	784	765	869

*Table A-22 The Base Case, with **older plant removed** from 2016*

	Year:	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Northern Ireland	Median	498	466	480	501	240	262	201	178	298	282
	One-in-10	472	452	460	479	209	231	168	158	266	249
Ireland	Median	958	1261	1115	1268	1304	1295	1291	1316	1283	1131
	One-in-10	858	1,164	1,014	1,167	1,201	1,194	1,189	1,211	1,178	1026

*Table A-23 The base case, with **One-in-10 winter** conditions*

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Utility Regulator Written Submission 1

Utility Regulator
ELECTRICITY GAS WATER

Energy Issues briefing

ETI Committee, 6 June 2013

Utility Regulator
ELECTRICITY GAS WATER

Presentation outline

- Electricity prices
  - I. UR's recent comparative electricity prices report
  - II. Power NI tariff announcement
- What can be done?
- The security of supply issue

2

UR's recent comparative electricity prices report

Utility Regulator
ELECTRICITY GAS WATER

- Information paper presents for the first time comparative NI electricity prices for business customers:
  - Information is comparable across EU 15
  - Enables transparency and seeks debate
- Domestic prices around EU average
- Prices for small business customers also around the EU average. These customers account for the majority (70%) of business customers
- For remaining 30% of customers in NI (annual consumption >20 MWh) prices were among the highest of the comparators

3

NI electricity prices: data and comparisons

Utility Regulator
ELECTRICITY GAS WATER

- To initiate debate, we suggest there may be three main groups of drivers of jurisdictional price variances:
  - Market size/economy of scale issues
  - Fuel mix at the wholesale level
  - Impact of energy policy (including taxation) and regulation
- The consultation period on our paper has ended
- UR currently assessing feedback on the issues identified in the paper before deciding on next steps

4

Power NI tariff increase

Utility Regulator
ELECTRICITY GAS WATER

- Tariff changes largely driven by wholesale and generation cost changes
- Tariffs back to what they were a year ago (fell by 14% last Autumn)
- We monitor costs monthly and will move quickly to pass through any cost reductions to customers

5

Wholesale element of the tariff has the primary impact on tariffs

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Applicable Tariff Date	Percentage Increase/decrease	Wholesale Costs & Corrections	Other
October 2009	**-16%**	-20%	5%
October 2010	**0%**	n/a	n/a
October 2011	**19%**	16%	3%
October 2012	**-14%**	-16%	3%
July 2013	**18%**	15%	3%

Table showing % of tariff movement applicable to 'wholesale costs & Corrections' and 'Other'
NB: Figures in table 'rounded'

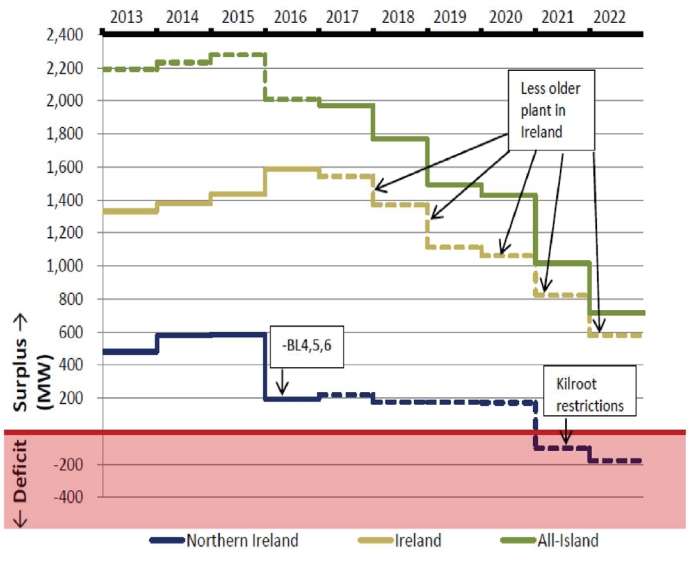
- Wholesale element always has significant impact on the tariff change
- Inevitably tariffs move up and down with underlying input costs

6

What can be done?

- Regulation
  - SEM → Regional Integration
  - Networks
    - price controls
    - cost allocation
  - Retail
- Energy policy

The security of supply issue



There is a heightened risk to security of supply in NI from 2016.

This risk exists because of the delay in the North-South Interconnector which was assumed in the DETI Strategic Energy Framework to be delivered in 2013/14.

In addition to providing an ample surplus of supply the North-South Interconnector will also deliver annual savings to consumers in NI of the order of £7m per year.

The security of supply issue

Utility Regulator
ELECTRICITY GAS WATER

The risk

From 2016, NI surplus margin reduces from c600MW to c200MW which means that in the event of a prolonged outage of a large generation plan or of the Moyle interconnector there is a risk to supply.

From 2021, NI has a deficit in supply.

Three compounding factors

1. The delay in delivering the planned North / South interconnector;

2. The requirement to comply with EU Emissions Directive from 2016;

3. A fault on the Moyle Interconnector whose capacity has been halved and is unlikely to be permanently restored to full and reliable capacity until 2017.

.

The security of supply issue

Utility Regulator
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Short-term options from 2016

1. Interim repair of the Moyle interconnector prior to 2016;
2. The introduction of additional generating capacity in NI before 2016;
3. Scope for a derogation to EU Emissions Directive.

Long-term requirements

1. Delivery of the North South Interconnector
2. Permanent repair of Moyle Interconnector

Utility Regulator Written Submission 2

Utility Regulator
ELECTRICITY GAS WATER

UR briefing to ETI Committee on electricity prices and security of supply

5 November 2013

UR briefing to ETI Committee

Utility Regulator
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Security of Supply

Jo Aston

Director: Water and Security of Supply

Security of Supply

Utility Regulator
ELECTRICITY GAS WATER

The RISK :

From 2016, NI surplus margin is projected to reduce from c600MW to c200MW which means that in the event of a prolonged outage of a large generation plan or of the Moyle interconnector there is a risk to supply.

From 2021, NI is projected to have a deficit in supply.

Three compounding factors:

1. The delay in delivering the planned North / South interconnector
2. The requirement to comply with EU Emissions Directive from 2016
3. A fault on the Moyle Interconnector whose capacity has been significantly reduced and is unlikely to be permanently restored to full and reliable capacity until 2017

Security of Supply

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Managing the Risk:

1. DOE Minister confirmed no scope for derogation from EU Dir
2. Interim repairs to Moyle interconnector
3. Working with system operator to assess the risk
4. System operator advised additional demand side and renewables not significant in timeframe to mitigate the risk
5. Working with system operator to develop options to address generation capacity shortfall and liaising with DETI

Long Term Requirements

1. Delivery of the North South Interconnector
2. Permanent reliable repair of Moyle Interconnector

UR briefing to ETI Committee

Utility Regulator
ELECTRICITY GAS WATER

Electricity Prices

Kevin Shiels

Director: Retail and Consumer Protection

5

Energy - Competing Priorities

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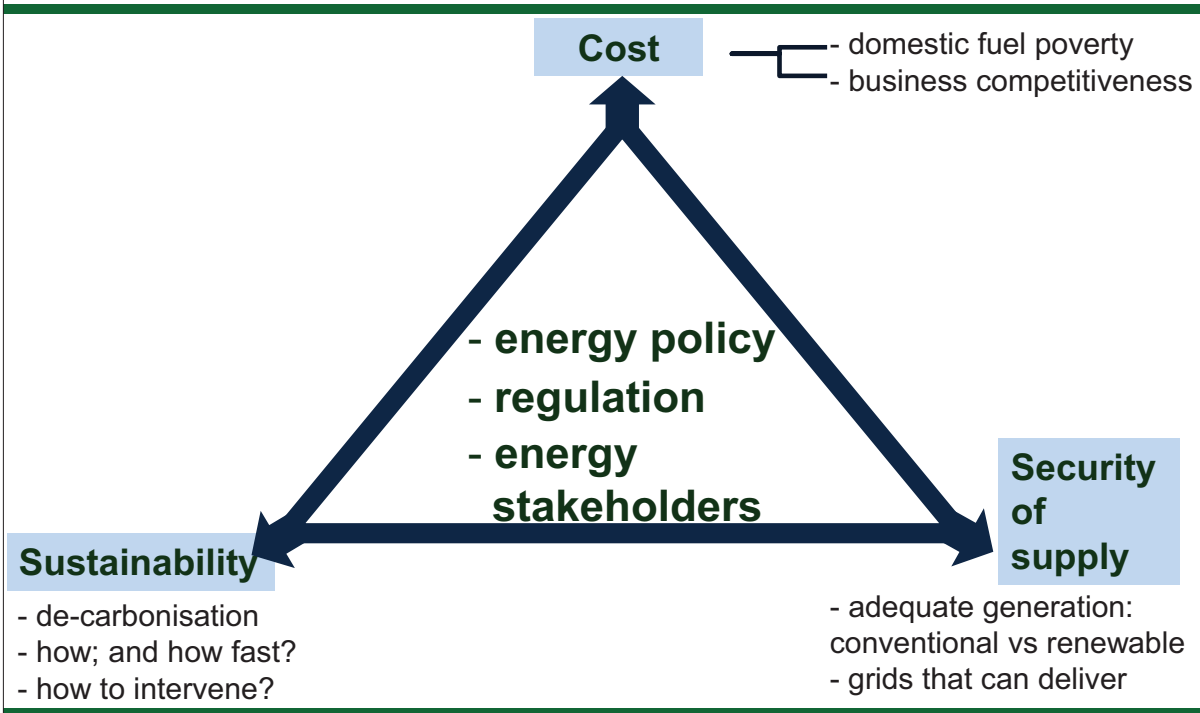


6

Shared Responsibilities

Utility Regulator
ELECTRICITY GAS WATER

1. Role of the Government	- strategy & policy - targets - legislation - Choices – evidence based
2. Role of the Regulator	- independent viewpoint - regulate to protect customers - expertise to provide transparency to aid evidence-based debate and decisions
3. Role of industry	- to explain - provide transparency } e.g. inform the 'profit level' debate - lend their expertise to the debate
4. Role of consumers	- to become aware and educated - to be active and shop around

7

Where have we got to?

Utility Regulator
ELECTRICITY GAS WATER

- March 2013 paper
  - Provided new data (now updated to 2012).
  - Domestic & small non-dom: prices just above EU average
  - Larger non-domestic: high relative to others
- ETI Committee review announced.
- UR follow up paper - Key issues:
  - SEM overall positive; but wholesale prices higher than in GB
  - Network costs allocations
  - Impact of renewable generation → SEM, Subsidy framework, Impact on grid
  - Retail market regulation

8

Utility Regulator Written Submission 3

Committee for Enterprise, Trade & Investment

Additional Questions for NIAUR Following Oral Evidence to the Committee on 4th November 2013

Security of Supply

1) What additional capacity would be gained from: making Ballylumford B station compliant; and

2) making Kilroot compliant?
Would either be considered sufficient, on its own, to alleviate the Security of Supply issues?

The B-station at Ballylumford has a total capacity of 510MW. Making Ballylumford compliant would result in all of this capacity continuing to be available.

The coal-units at Kilroot have a total capacity of 476MW. However, the Industrial Emissions Directive will restrict the combined output of these units to approximately 45-50% of this from 2016 and reduce the running hours of the plant to around 1,500 hours from 2020. Therefore, Kilroot should still be available, but on a limited basis. Making Kilroot fully compliant would result in its full capacity being available.

The impact of the restriction in Kilroot's capacity is most significant from 2020. The second North-South interconnector is scheduled to be completed by this time and hence this should alleviate any security of supply concerns.

If the Ballylumford B station was made compliant from 2016 there should be sufficient capacity until delivery of the second North-South interconnector.

3) AES suggested to the Committee that, for the period when surplus margin may be compromised, an ancillary service contract, adjusted to reflect a capacity support mechanism, could be offered to AES to upgrade its Ballylumford B Station. Is a capacity contract for AES an option which may be considered by the Utility Regulator?

Ancillary services are products, other than energy, that are required to ensure the secure operation of the transmission system. It is not the UR's role to contract for ancillary services. This is the role of the transmission system operator, who we continue to engage with on the provision of existing and new services.

4) AES informed the Committee that the regulators, north and south are leading a project which will change the market. They state that this creates difficulties for them in deciding a way forward for Ballylumford B Station as it is, "difficult to understand where the regulators will land in the future." When will this work be completed and what are the expected findings?

The reference is to the EU-driven "Regional Integration" project. Changes to the current arrangements for trading wholesale electricity on the island of Ireland will be required in order to comply with EU requirements aimed at facilitating better integration of electricity markets across Europe. As part of this market integration project a consultation paper on a new high level market design will be published in February 2014 and a final decision paper in August 2014. The full project implementation is due to be complete by the end of 2016.

Throughout this process there will continue to be regular and structured engagement with interested parties such as AES. At this stage, a number of options have been identified but

they will require full consideration so it is therefore too early in the process to indicate what the expected findings will be.

Suggested Line of Questions – Electricity Pricing

5) The Utility Regulator states (page 11) that there has been debate on aspects of the SEM market design, including the role of System Marginal Price and capacity payments:

a) Is it appropriate that wind generators receive capacity payments even though they are always called upon and despite them not always having capacity if the wind is not blowing?

All generators only receive capacity payments when they are capable of generating. Payments to wind generators are based on their actual availability; if there is no wind, there is no payment. The same principle applies to conventional generation. For example, they do not receive capacity payments if they have a mechanical problem that prevent them from generating.

6) What is the cost of carbon to consumers and how is this charged? How much income do wind generators get from the cost of carbon?

Carbon dioxide is emitted when fossil fuels are burned. Under the EU Emissions Trading Scheme, generators must provide allowances for each tonne of carbon dioxide they emit. The cost of a carbon allowance is currently around €5/tonne. This cost is added to the cost of generation and hence will be reflected in the wholesale electricity price.

Because different fuels emit different amounts of carbon, it is difficult to calculate how much of the electricity price at any particular time is made up of the cost of carbon. However, based on a number of assumptions, initial calculations indicate that the impact of these carbon costs on wholesale electricity prices will add on average 3-4% to the revenue of wind generators.

7) How often does wind set the price of electricity?

Wind generation very rarely sets the price of wholesale electricity; this is generally set by a conventional generator. However, the level of wind generation will influence the price on a continual basis. For example, if at any point in time there is a lot of wind on the system, then the remaining demand will be met by the more efficient (and hence cheaper) conventional generators. This will generally lead to prices being set by a more competitive generator than would have otherwise been the case.

8) Figure 2 (page 17) outlines differences in network cost allocations between different jurisdictions:

It is stated that dispersion of end electricity prices across customer groups in Northern Ireland is similar to that seen in the rest of the UK. However, the table shows Northern Ireland to be higher than the wider UK market for all sizes of business users. Can the Utility Regulator explain this? It is stated earlier in the submission that Northern Ireland network cost allocations are based on the previous UK model, therefore why is the difference so significant?

The comment referred to related to the dispersion (i.e. spread) of prices across customer groups and jurisdictions, that is the relativities of customer prices, and it is our view that the spread in NI is similar to the UK, certainly in comparison to the very different spread in RoI and EU-median. The NI and UK dispersions were even closer in the 2011 data (published in our information paper in 2011) although some of the divergences in the 2012 data have opened up somewhat. The key point to focus on is that the spread between domestic and LEU is much greater in RoI and EU-median than in NI and the UK

The earlier submission comment referred to here, is with respect to the technical model used by NIE to allocate network costs to different users. NIE have informed us that their cost allocation model is cost reflective and was originally taken from an electricity network cost model used in the UK. That said, there will still be differences between NI dispersion and UK dispersion for two reasons: first, because other Network operators in UK may now be using amended versions of the model; second, it is important to note that the data in Figure 2 relates to end-user prices; however the NIE network cost model obviously only relates to network cost comparison. Therefore there will be other factors driving the differentials between end prices (other than network costs) which will probably impact on the NI and UK end-price spreads.

9) Although RoI costs are considerably lower than NI, they vary, depending on the size of business, in relation to the EU Median spread. Does this suggest that, if RoI costs were demonstrated not to be allocated on a cost basis, the same could be said of many EU Member States?

Network cost reflectivity is also being reviewed at the EU level as mentioned in our paper. The important context point here is that there is no strictly "correct" way to determine network cost reflectivity between user groups. Economists, engineers, accountants may all have different views on cost-allocation principles; and different member states will make equally valid assumptions around the meaning of "cost reflectivity" of network charges. This will mean that network costs will be spread differently across customer groups in different jurisdictions and those member states may well ague they have done so in what they determine to be a cost reflective manner. (Clearly therefore we are not referring to a situation where a member state makes a deliberate policy decision to move away from cost-reflectivity, for example for industrial development or social policy reasons, and deliberately skew network costs between customer groups).

In relation to the NI and RoI position, our planned work on network cost allocations will investigate the reasons for the differences between NI and RoI network costs for a theoretical set of customers (identified to get a broad spread). This work is now commencing (see question 10). The RoI rebalancing of costs was clearly a Government decision and we cannot comment on cost-reflectivity or legality of that decision. We are also unable to comment on cost-reflectivity in other EU member states but will follow the determinations made at the EU level closely.

10) The Utility Regulator states (page 20) that further work is needed to identify and model the impact of the jurisdictional network cost charges and their impact across different customer groups. Who would have responsibility for doing this work?

As part of the follow up work, the UR will look at the allocation of network costs in NI relative to those in other jurisdictions. Primarily this will be done comparing NI to RoI and we are currently considering increasing the scope to include comparisons to GB with the project steering group.

The project steering group will be meeting for the first time this week (w/c 18th Nov) and the group will include internal colleagues (cross-directorate), consultancy resource and DETI. The project will firstly define a theoretical set of customers, identified to get a broad spread (representative types with varying connections, load profiles and demand) over which model of charges will be established. This model will build up network (and related costs) based on actual network charge schemes for comparison of relativities. The project will also include understanding of the basis for calculating network charges and related schemes, and allocations to system users. It will also consider the impact on consumer groups of re-shaping cost allocations. The output will be a results-based commentary on the impact of network charges (and their sub-components) on final prices, between jurisdictions and customer groups.

11) The Utility Regulator states (page 20) that the office intends to undertake further work on monies collected under the PSO regime and will be consulting on the allocation of "market opening" costs. What does this mean? It would be helpful to receive more detail on the work that will be done.

The Public Service Obligation (PSO) in Northern Ireland allows costs to be recovered on a cost per unit of electricity basis. This means that if you use more electricity you pay more of the PSO costs. Historically market opening IT costs were recovered in this manner. This limited the ability of costs to be allocated in a cost reflective manner. The UR is proposing to consult on where these costs should sit in the future. They can either remain in the PSO or be recovered by NIE through its Distribution Use Of System (DUOS) charges. If these costs sit within NIE DUOS charges NIE can then assess and allocate the costs in a fully cost reflective manner. This assessment by NIE may not change the manner that the costs are allocated.

12) What is the role of the SEMC in setting network charges, DETI informed the Committee that the Utility Regulator has a role to look at network charges?

The SEM committee approves market operator charges and the allocation of Transmission Use of System charges between generators across the island. The majority of network charges are approved by the Utility Regulator. The amounts to be recovered each year are determined by the relevant licences, with the main values determined by the price controls. The Utility Regulator board approves price control determinations.

13) The CBI stated that it is critical that downward pressure is maintained on imperfection charges. They say that the annual cost is around £32 million to NI consumers (about 5% of LEUs' electricity costs). CBI calls on the regulator to review how costs are sculpted. Can the Utility Regulator provide clarity on what imperfection charges relate to and on the CBI statement?

Imperfections charges are made up of a number of different elements but the costs are mainly driven by costs associated with constraints. Constraints costs arise for a number of reasons including:

1) Transmission network constraints (e.g. due to limitations of the current North-South interconnector).

2) System security and stability constraints (e.g. the system operators need to operate the system with enough reserve capacity that can quickly respond to unexpected events).

We believe it is important that these charges are minimised to the greatest extent possible and the delivery of the second North – South interconnector will be a key element to achieving this. In addition, the SEM Committee has recently introduced a mechanism to incentivise the system operators to minimise these costs.

14) The CBI states that in the GB BETTA market, Transmission Use of System charges are collected from demand during the 3 peak half hour periods whereas in the SEM they are profiled across the whole year. They contend that this can lead to a dramatic redistribution of charges between different load shape customers, and needs close investigation. Can the Utility Regulator comment on this?

The SEM is not responsible for the structure of how the Transmission Use of System charges are collected. These are not collected on the same basis, north and south. We understanding that in ROI they are profiled across the whole year however the mechanism here is not the same.

The Utility Regulator worked with SONI in 2010 to review the Transmission Use of System charges to ensure they were cost reflective. This means that the fixed costs of the network are shared across the entire year, while the costs associated with network expansion are charged at peak times. The charging mechanism reflects the fact that the network is required

to serve all customers and they should contribute towards it. However if customers reduce their demand at peak times, and thereby reduce the need for investment in new capacity, then they benefit through a lower average charge.

The UR is of course not responsible for the cost reflectivity of the charging mechanism in GB; and haven't to date attempted to do a "compare and contrast" type exercise.

15) Can the Utility Regulator provide detail on the relative costs to consumers of grid strengthening for a small number of large renewable generators versus a large number of small renewable generators? CBI stated that much of the consequences of supporting small renewables have a significant cost on the network, which everybody pays for. Is this an accurate assessment?

Costs for grid strengthening assess the cost impact on, and the value for, consumers. No assessment is made of benefits to any type of generator, irrespective of whether it is nonrenewable, renewable – small or large.

There is no support for small scale renewables within the network costs element. All network costs are assessed to ensure they add economic value for consumers, not generators.

The UR has recently given approval for NIE to recover costs of up to £2.3m in completing 'smaller projects' associated with connection of small scale generation. We are in the process of a Completion Commission (CC) referral which includes NIEs capital expenditure spend in this period. NIE has provided a paper to the CC on the 28th of Oct with regard to the 33kv Network Limitations for Small scale renewable generation. The CC has asked for further submissions from the parties as to how this issue is best dealt with within the price control design structure that they have provisionally proposed. Responses to the CC have to be submitted by Friday the 29th of November.

16) Commenting on EU integration of electricity markets, the Utility Regulator states (page 15) that the rationale behind the pan-European market is to drive competition across the wholesale energy market. It is stated that the first step for the SEM will be to redesign the market structure. How is it envisaged that this will differ from what is currently in place within the SEM?

Work by the project team on identifying, assessing and then selecting a redesign of the SEM is at a relatively early stage. It is therefore not possible to say definitively what differences the new design will have from the existing SEM.

However it is possible to state that the requirements of the European Target Model will require high level changes to the SEM. These include rules on the calculation of generation capacity and the delimitation of zones between which trading rules will apply. The facility for cross border forward hedging and harmonisation of allocation rules will also need to be introduced. The introduction of the ability to connect trading in the local market with the rest of Europe in the Day Ahead (of actual electricity power flows) and Intra Day time frames will also need to be assessed. Rules will also be introduced to allow cross border balancing of power flows that allow the demand and supply of electricity to be kept in balance.

The market structure that will support these new rules may take a number of different shapes and the project is designed to identify the optimal design that is also compliant with the requirements of the European Target Model.

17) The Utility Regulator states that there is a lower supply margin than in GB within the regulated domestic market in Northern Ireland. What information is available on the unregulated domestic market here?

For domestic and small non-domestic consumers, regulatory scrutiny has been retained through price controls and the availability of tariffs approved by us for customers of the currently dominant suppliers. Other supply companies tend to use these regulated end prices as benchmarks for their own tariffs. Thus comparative information is relatively easy to obtain.

We know that regulated margins in NI are lower than the estimates given for equivalent supply-related margins in the GB market.

The situation for larger non-domestic electricity customers is very different. The extent of regulatory control of the larger I&C market (> 150 MWh pa) has been progressively reduced since 1999 to meet national and EU policies around competitive markets. In this non-price-controlled sector there are a small number of active suppliers, and supply prices are linked to supplier selling/marketing activities and the individual contracts they have with each customer. These prices are therefore all commercially confidential. The UR has no direct visibility on supplier prices and margins in these individual supplier contracts.

Stakeholders' feedback to our March 13 Information Paper suggest that it is unlikely that retail cost elements are significantly impacting on the price patterns evidenced in March. Suppliers stated in their response to our information paper that supply margins are low for all size bands. (This view is supported by the current regulatory regime for dominant suppliers where we have control over margins earned (domestic and smaller non-domestic customers)).

It is important to note that the UR is commencing a number of projects that will influence the operation of supply companies and the regulatory framework around them. These are all in our forward workplan for 2014/15 and include:

- Delivery of the supply price controls and regulated electricity charges, which will maintain downward pressure on costs and prices.
- A project to deliver enhanced retail market monitoring across all suppliers in the NI market, which will include further transparency on pricing and margins across all consumers.
- A review into the effectiveness of retail competition in the NI electricity retail market.

Additional information requests

18) Further information on the Smart metering Trial

The University of Ulster led a small smart metering trial running November 2011 to October 2012. This trial took a different approach to trials carried out in RoI and GB to date – focusing attention solely on lower income customers. The trial provided a smart meter and In House Display (IHD) to each volunteer participant and was centred around the idea that smart meters can be made particularly useful when customers use the technology in intelligent ways. There was no pressure on customers to save money or reduce consumption, no incentives or penalties were used. Rather each customer was given detailed instruction on how to use their IHD and how to interpret the information it was giving them. The result was that higher users did reduce their consumption, while lower users generally remained the same. For those that did reduce their consumption (and hence reduce their electricity costs), this was brought about by being made aware of what electricity their appliances used and it's cost in pounds and pence, even on standby modes. Some customers use this to reduce the amount of electricity used in a wasteful way (standby units, charging fully charges equipment such as phones) and then increase their useage in other areas (loading the tumble drying). Overall there was great support of the visibility and choice it provided. The IHD was key to providing the visual aid in this aspect. Overall by the end of the trial, participants viewed smart meters and their IHDs as essential budgeting tools, and a means of taking control of their electricity usage and costs. The next step is to produce a smart metering strategy consultation, looking at options for NI's smart meter roll out. This is in progress and will be published early next year.

Phil Flannigan also mentioned time of use tariffs. These are not currently available for domestic consumers but can be introduced with smart meters. They do exist for large commercial consumers.

Request as at 7th November

Further to the oral evidence session on Tuesday, the Utility Regulator undertook to forward further information on the following matters:

19) To give additional information on the connection facilities in Enniskillen and Letterkenny (see response 23 below)

20) To clarify the powers of the NIAUR with relation to connection charges

We are also under statute a formal dispute-resolution body and will make a determination within the process identified on our web site if someone raises a dispute. This determination is binding upon NIE. We also approve the methodology of NIE's charging statement for connections

21) To give further information on the allocation of resources within the SEM model -

Could we have further information on this question - it is currently unclear as to the meaning of the question?

22) In addition, the Committee agreed to forward the Mutual Energy submission for comment.

The Mutual Energy submission highlights the work being carried out to restore the Moyle Interconnector to full capacity. The Utility Regulator will continue to engage with Mutual Energy on this matter, which is important as it plays a key role in ensuring security of electricity supply and will also help contribute to the competitiveness of electricity prices in Northern Ireland.

In relation to regulatory issues concerning the Islandmagee project, the Utility Regulator is continuing to work with the Commission for Energy Regulation in the Republic of Ireland to develop a regulatory framework for transportation tariffs for gas storage facilities.

Request as at 15th November

23) Connection facilities at Enniskillen and Letterkenny - what are the two 110kv lines converted into MW?

The 110KV lines can go up to 125MW, but will be affected by constraints on other elements of the system, further information can be found on the SONI website - http://www.soni.ltd.uk/Operations/Tie-Lines/

The following text from the SONI website provides overview information:

"The Northern Ireland and Ireland transmission systems are connected via a double circuit 275kV line between Tandragee and Louth. In addition there are two 110kV connections between Strabane and Letterkenny and Enniskillen and Corraclassy. Both of these circuits consist of single lines. Until 2001, both 110kV circuits operated in a standby mode, but were then converted into permanent connections by the deployment of power flow controllers, rated at 125MW. The power flow controllers are normally adjusted to maintain a 0MW transfer, but can be set to any desired value to support either system during abnormal operating conditions.

Since the introduction of SEM all the North South circuits have also been treated as Tie Lines. The two 110kV circuits are automatically taken out of service during the outage of both 275kV circuits on the North-South Tie Line. This is to ensure that the all-Island network operates in a stable manner. The Strabane – Letterkenny Tie Line is now also used to import excess wind from Donegal on a regular basis."

There is a chart on this site giving update flows – e.g. 14/11/2013 the Strabane – Letterkenny Tie Line has a flow of between 10-20 MW.

Appendix 4

Research Papers

Appendix 4 – Research Papers

1. Electricity Security of Supply

Northern Ireland Assembly

Research and Information Service
Briefing Note

25 October 2013 NIAR 638-13

Aidan Stennett

Electricity: Security of Supply

1 Heading

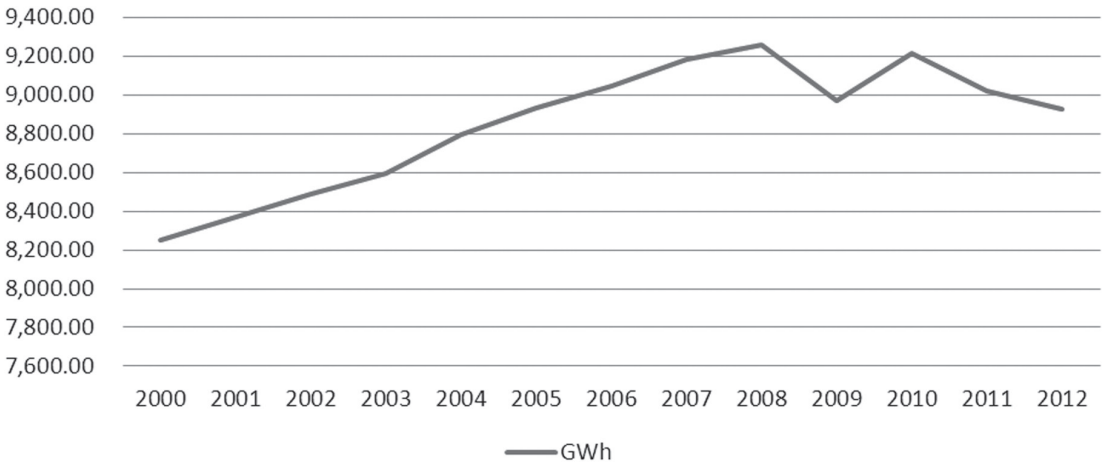
The following paper provides an overview of evidence presented to the Enterprise, Trade and Investment Committee[1] on the issue of electricity security of supply. To provide context the paper begins by examining historic electricity consumption in Northern Ireland and outlining forecasted consumption until 2022.

2 Northern Ireland - Electricity Data

Historic NI electricity consumption is plotted in Figure 1, which shows yearly consumption (in GWh) from 2000 to 2012. Over this period consumption has increased by 8.24%. Consumption saw steady growth of approximately 1.5% per annum between 2000 and 2007. Growth began to slow in 2008 (0.8% on the previous years) and contracted for three of the four years that followed (2009, 2011 and 2012). This contraction resulted from recessionary conditions which supressed energy usage.

1 Note: evidence from Gaelectric has also been provided. The company has not provided evidence directly to the Committee, but has been in contact with the Northern Ireland Assembly Research and Information Service

Figure 1: Northern Ireland electricity consumption 2000 to 2012[2]

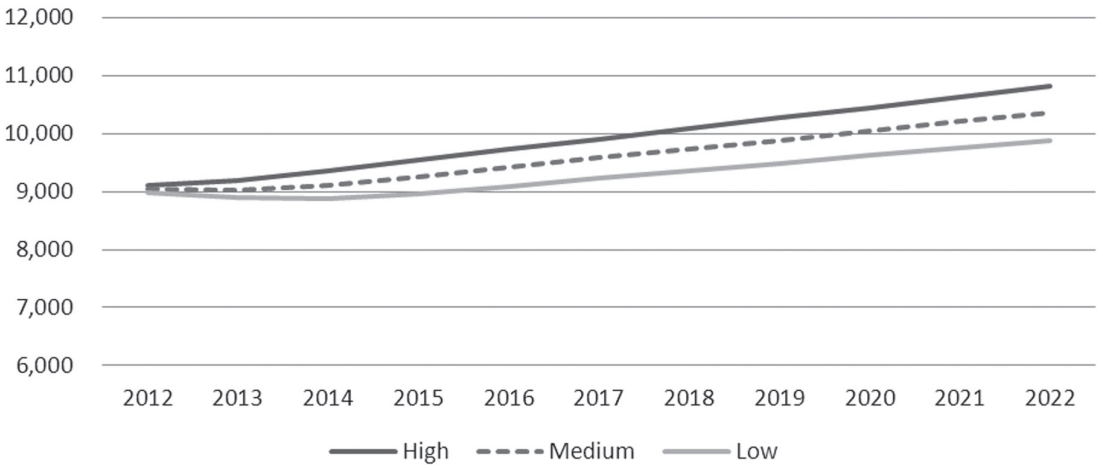


Source: SONI

Figure 2 shows estimated total electricity demand for Northern Ireland for the period 2013 to 2022. Total electricity demand measures the energy sent from generators to meet demand and self-consumption, which is energy produced and used by consumers onsite. Three scenarios are presented – low, medium and high. These scenarios consider future economic and temperature conditions. Economic conditions are the main differentiating factor between the scenarios, with the low, median and high estimates corresponding to pessimistic, realistic and optimistic views of the economic outlook. SONI, who are responsible for these estimates, believe that the medium forecast is the 'best estimate of what might happen in the future'.[3]

That forecast predicts that electricity consumption will continue to contract in 2013 (by 0.1% on the previous year) before returning to growth from 2014 onwards. SONI's medium estimate indicates that demand will not return to pre-recession levels until 2015. The medium forecast predicts total growth of 15% from 2013 to 2022.[4]

Figure 2: Northern Ireland total electricity demand forecast 2013 to 2022 – low, median and high scenarios[5]



Source: SONI

2 Data provided by SONI 25 July 2013

3 SONI & EirGrid *All-Island generation capacity statement* 2013-2022 (January 2013) http://www.eirgrid.com/media/All-Island_GCS_2013-2022.pdf

4 *Ibid*

5 *Ibid*

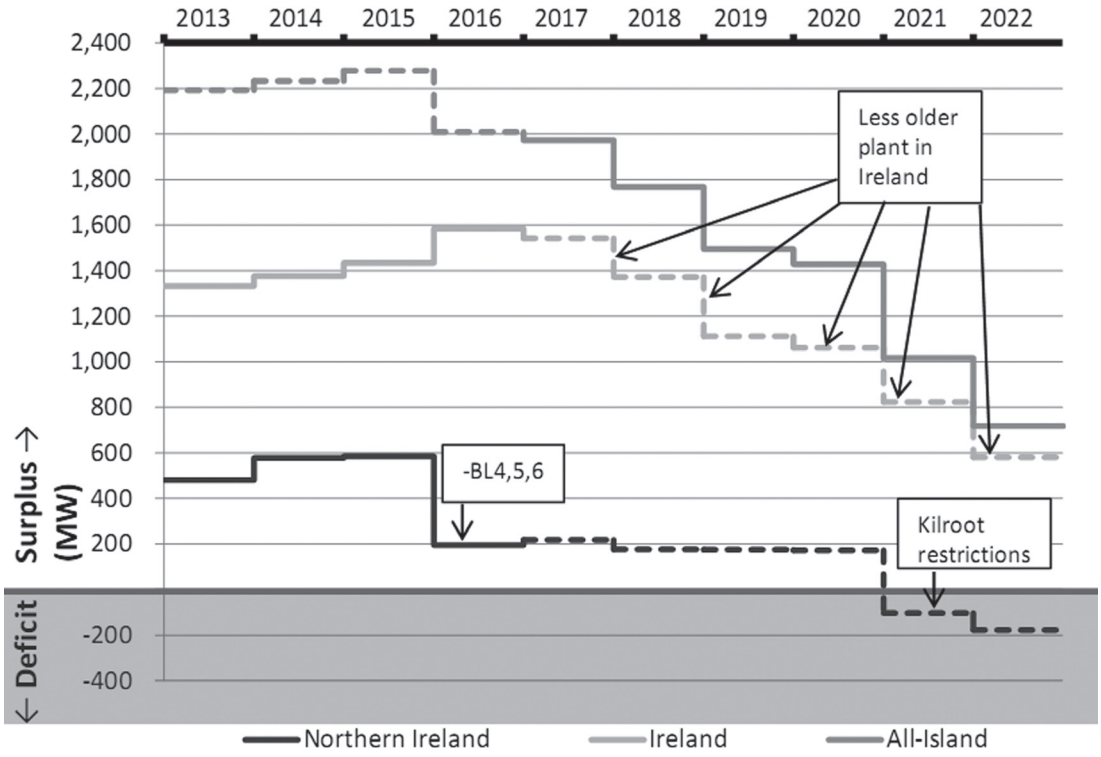
3 Northern Ireland Electricity deficit post 2016

Amongst most pressing issues facing the NI electricity market is the risk to security of supply from 2016 identified by the System Operator for Northern Ireland (SONI) in their Generation Capacity Statement 2013-2022. SONI's licence obligations require it to "track the generation capacity that is available… in Northern Ireland and on the island to ensure [there is] sufficient generation capacity to meet demand in the future".

The Operator's most recent statement, published January 2013, found that, given present conditions, Northern Ireland's security of supply would be at risk from 2016 and in deficit from 2021. This is illustrated in Figure 3. There are three reasons for this deficit:

- Despite the Republic of Ireland experiencing a surplus of generation, limitations in interconnection between the two jurisdictions restrict the amount of generation that can be transferred to Northern Ireland. The delay in the North-South Interconnector is a barrier to resolving this issue. A planning application for the Northern Ireland element of the interconnector was submitted in December 2009 and resubmitted in April 2013.
- EU Emissions Directive[6] will, from 2016, result in the reduction in generation capacity from the Ballylumford plant, and restrict generation at the Kilroot plant.
- Faults on the Moyle Interconnector, which connects Northern Ireland and Scotland, have halved its capacity. Full restoration of this capacity is not likely to be restored until 2017.[7]

Figure 3: Security of supply in Northern Ireland to 2022[8]



Source: SONI

SONI and the Northern Ireland Utility Regulator (the Regulator) have both stressed the importance of increasing interconnection between the two jurisdictions as a way to mitigate

6 The Large Combustion Plant Directive and Industrial Emissions Directive

7 Northern Ireland Utility Regulator *Security of Supply in Northern Ireland Information Paper* (12 June 2013) http://www.uregni.gov.uk/uploads/publications/20130612_Electricity_security_of_supply_paper.pdf

8 SONI & EirGrid *All-Island generation capacity statement* 2013-2022 (January 2013) http://www.eirgrid.com/media/All-Island_GCS_2013-2022.pdf

security of supply risks. The Regulator has explicitly stated that it is "imperative that the second North/South Interconnector is progressed and delivered as soon as possible".[9]

SONI provide more detail on this:

> *The Northern Ireland generating adequacy margin will be tight until the commissioning of the second North/South tie line. We bring that to the fore because, in the absence of any proposals on the table or any discussion that anyone is having with us about conventional generation, we are obviously aware of the North/South interconnector — it is the only means we have at our disposal to consider how the adequacy position will change. Once the North/South interconnector comes along, the energy that is available in Ireland can be exported to Northern Ireland and we can close this deficit. So, we are making the point quite clearly that, in the absence of any other local proposals, the North/South interconnector is the only single proposal that we are aware of that would change the situation. (Emphasis added).*[10]

Uncertainty surrounds the interconnector's future, however. As noted above, the original planning application was submitted in December 2009. This application was referred to the Planning Appeals Commission and subject to a public inquiry, which was subsequently suspended in 2012. Since then Northern Ireland Electricity (NIE) has submitted a second application (April 2013) for the NI element of the interconnector. Considerable uncertainty surrounds the granting and timing of planning permission on both sides of the border. SONI and the Regulator anticipate that 2017 is the earliest date for delivery. However, SONI note that:

> *For the North/South interconnector, we have a date of 2017, but we cannot stand over that. The planning application has been made by NIE, but we have not got a date for the Planning Appeals Commission hearing yet. That has to go through due process and you have to come out the other end. You also have to build the line, which has to be done in conjunction with a project in the South of Ireland. So there are a number of risks with the delivery of that project by 2017.*[11]

The estimated cost of the Northern Ireland element of the North-South Interconnector is £90m.[12]

A number of other possible remedies and mitigating factors exist. The most immediate is the restoration of the Moyle Interconnector to full capacity. Mutual Energy, who owns the interconnector, is investigating an interim repair solution. It is anticipated that this could lead to a short-term fix by 2016, adding a further c250MW of generation into the market, leading to a surplus of c450MW.[13]

The Utility Regulator has noted, however, that given "the more recent history of faults on the Moyle Interconnector" Mutual Energy is investigating a long-term solution to restore it to its previous capacity and reliability. It is anticipated that such a solution would take four to five years, with a commission date of 2017 viewed as realistic. The cost of such a project would be in the region of £60m, although Mutual Energy notes a degree of certainty with this figure at present.[14]

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9 Northern Ireland Utility Regulator *Security of Supply in Northern Ireland Information Paper* (12 June 2013) http://www.uregni.gov.uk/uploads/publications/20130612_Electricity_security_of_supply_paper.pdf

10 Northern Ireland Assembly Committee for Enterprise, Trade and Investment, Minutes of Evidence *Electricity Supply — SONI Generation Adequacy Report: Security of Supply Post-2015* (27 June 2013) http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2012-2013/June-2013/Electricity-Supply–SONI-Generation-Adequacy-Report–Security-of-Supply-Post-2015/

11 Northern Ireland Utility Regulator *Security of Supply in Northern Ireland Information Paper* (12 June 2013) http://www.uregni.gov.uk/uploads/publications/20130612_Electricity_security_of_supply_paper.pdf

12 *Ibid*

13 *Ibid*

14 *Ibid*

Commenting on the Moyle Interconnector during written evidence to the Enterprise, Trade and Investment Committee in June 2013 SONI stated:

> *There has been some progress with the restoration of the Moyle interconnector. Correspondence between Mutual Energy and the regulator has been published on that and there has been some indication of the costs. However, from [SONI's] perspective, there is no Gantt chart or contract that says that [they] are going to deliver x by date y, which is what we need in order to be sure that we are addressing the problem. The Moyle interconnector will only ever contribute to a solution; it will not be the solution to the security-of-supply issue.*[15]

Developing additional generation capacity is another possible remedy to Northern Ireland's security of supply issues. However, as noted in the SONI quote above, there are no proposals to develop additional capacity. The Regulator confirms that there is no additional conventional generating capacity is in the pipeline, but notes that additional renewable energy is expected to come on stream. This is not, however, viewed as an adequate solution to security of supply risks. On this the Regulator notes that the anticipated level of renewable generation required to meet the 40% target is incorporated into SONI's capacity report. Furthermore, they add:

> *Additionally, the intermittency and disparate nature of connections of wind generation do not make such generation a reliable source for addressing a security of supply issue arising from a large generation outage from 2016. Other renewable generation options are unlikely to be available until 2016.*[16]

DETI do have the power to direct the Regulator to invite tenders (or invite tenders itself) for additional generation capacity (conventional) or demand side efficiency solutions. Additional capacity could be secured by upgrading current generation plants to meet EU Emission Directive requirements, or by developing a new generation plant. Either option would ultimately be paid for by the consumer and according to the Regulator, both they and the Department are:

> *…mindful that provision of increased interconnection in due course could obviate the need for significant investment in long term generation in Northern Ireland and therefore avoid unnecessary additional consumer costs.*[17]

Northern Ireland may also be able to seek derogation from the Emission Directive which will remove a substantial amount of generation capacity (510MW) from the system from January 2016. The Regulator has stated that any 'scope to extend the deadline for compliance will be tested'. They concede, however, that 'while the Directives have provision for potential derogations, discussions to date with the Department of the Environment on the possibility of an appropriate derogation for current generating plant at Ballylumford is not considered a realisable option given the formal undertaking to close'. In their discussions with the ETI Committee, SONI had the following to say about a potential derogation:

> *…it will take a huge political effort to get a derogation. I know that Northern Ireland has a bit of a track record of looking for derogations, and this is another one. This is a short-term fix for a problem that we are aware of in advance. That is one possibility. It is possible to go out to the market to look for other generator solutions. There is a cost to what needs to be done at Ballylumford to make it compliant. So if we do not get a derogation and we were to make the Ballylumford plant compliant, a business case could be looked at and there may*

15 Northern Ireland Assembly Committee for Enterprise, Trade and Investment, Minutes of Evidence Electricity Supply — *SONI Generation Adequacy Report: Security of Supply Post-2015* (27 June 2013) http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2012-2013/June-2013/Electricity-Supply–SONI-Generation-Adequacy-Report–Security-of-Supply-Post-2015/

16 Northern Ireland Utility Regulator *Security of Supply in Northern Ireland Information Paper* (12 June 2013) http://www.uregni.gov.uk/uploads/publications/20130612_Electricity_security_of_supply_paper.pdf

17 *Ibid*

be other commercial opportunities that other generating companies could bring to the table if that was afforded to them.[18]

The AES Ballylumford (which operates the Ballyumford power station) in evidence to the ETI Committee stated that the 'most effective solution for all stakeholders would be to obtain a derogation of the IED emission limits for the B station' but that securing a derogation was 'not allowed under the current legislative structure'.

To this they added:

If you stand back and look at all the stakeholders involved, not only us but everybody who is involved — the consumer, the regulatory authority and government — you see that the simplest and most cost-effective solution is derogation, because that turns into a "business as usual" scenario. We would continue to invest annually in our normal operating costs and in maintenance repair, and the station would continue to exist, doing exactly what it is doing right now, and it would compete on that basis.

The limit of our ability to influence the push for derogation really stops at the environment authority and our discussion with the Department and the regulatory authority. That is what we can put on the table. We can provide the technical analysis to say, "This provides us with a potential solution to fill a gap from 2016". Certainly from our perspective, that is what we have been able to do. The derogation process, as we understand it, is rather complex, especially when you get into the level of EU interaction. As we found out with the carbon price floor derogation earlier this year, it is a very complex process. Other than our being able to provide baseline information, it is really in the Department's hands to be able to manage that interaction for the derogation process…

… We have been advised by the environment authorities that the internal review of the legislation that manages the IED component — the aspect of compliance of units — as well as further discussions with DETI has shown that there is no way for a plant that has opted out right now. The B station has opted out; that decision was made back in 2007. Legally, there is no opportunity for it to go through a derogated process. We would have to invest to be compliant with the new emissions standards.[19] *(emphasis added)*

The company also raised the option of investing in the B station to ensure it is IED compliant. They stated, however, that '[i]n order to fully understand the total investment likely to be required, a more extensive engineering evaluation will be completed by the end of 2013 to outline the full business case and the full extent of investment required'. They added that their decision to invest or not would be influenced by:

…anticipated changes to the electricity market in 2016, including the likely restructuring of capacity and ancillary service payments, will play a key part in determining the overall project risks. At first glance, and given those uncertainties, it is likely that a capacity contract could be required to make this a commercially attractive project. That will be confirmed by the total cost estimates as they become clear later this year.[20]

In the above quote, and at other points in their evidence to the Committee, AES note that two investment routes are likely to be considered. The first is a merchant route where the company would bear all the risks of investment themselves. If the second route was to be

18 Northern Ireland Assembly Committee for Enterprise, Trade and Investment, Minutes of Evidence Electricity Supply — *SONI Generation Adequacy Report: Security of Supply Post-2015* (27 June 2013) http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2012-2013/June-2013/Electricity-Supply–SONI-Generation-Adequacy-Report–Security-of-Supply-Post-2015/

19 Northern Ireland Assembly Committee for Enterprise, Trade and Investment, Minutes of Evidence, *Electricity Policy Review: AES Briefing* (26 September 2013) http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2013-2014/September-2013/Electricity-Policy-Review-AES-Briefing/

20 *Ibid*

explored the company would seek a capacity contract, within which the risk would be borne by the consumer.[21]

In their evidence to the Committee the Confederation of British Industry (CBI) stated:

> *For security of supply, it is pretty obvious and pretty simple: we need the interconnectors [Moyle at fully capacity and additional north-south interconnection], and we need them to be resolved very quickly. If the interconnectors are resolved in 2018, then we will have a problem, because we will have turned off a power station in 2016 and will have been struggling for two years. Therefore, there is a need to find out the issues that can be addressed in order to overcome the road blocks and get those connections in place quickly.*[22]

The CBI also postulated two 'short-term' solutions which they argued would mitigate supply risks – load shedding and aggregation.

Aggregation would see large users pool their standby generation with a view to making it available to the market at times when the system is strained. Customers doing so would be treated like generators; they would bid generation into the SEM pool and receive a capacity payment for making their generation available. Load shedding is a form of demand side management which would see large industrial customers going off-grid at peak times and by doing so lessen the demand on the system. They suggested that incentives could be explored, for example large users might receive a capacity payment for shedding load at particular times. CBI argue that 'there is no reason, in principle, why you cannot bid a reduction in demand [into the SEM pool], rather than bid additional generation'.[23]

An additional step, which could potentially mitigate security of supply risk, is energy storage. Compressed Air Energy Storage (CAES) may enhance electricity system management by allowing energy generated from renewables in off-peak hours to be stored and dispatched during peak times. The technology can help to minimise the challenges associated with balancing intermittent wind energy and has the potential to minimise Northern Ireland's reliance on fossil fuels.

Studies have been carried out by the British Geological Society and Geological Survey NI on the suitability of Northern Ireland's geology for energy storage techniques.[24]

Gaelectric Gas Storage Ltd is proposing a CAES project in Larne which could potentially see a plant with between 140MW and 300MW capacity being introduced.[25] Larne has been chosen as it is home to salt deposits that are potentially suitable. The company was granted a 'Consent to Drill' Licence by the Department of Enterprise, Trade and Innovation (DETI) in July 2013. Exploration drilling began in August 2013 and is set to take approximately 12 weeks. The work currently underway will confirm the depth and thickness of the salt deposits, to take core samples and will allow the company to map the area. Should exploration and subsequent work go to plan, the company intends to develop a fully operational plant by 2017.[26]

In a letter to DETI's energy division with regard to the post-2016 security of supply risks, Gaelectric offered their support to the development of additional North/South Interconnection as 'a means of reducing costs to the consumer, integrating renewables and alleviating security of supply concerns', yet expressed concern that the 'North-South Interconnector

21 *Ibid*

22 Northern Ireland Assembly Committee for Enterprise, Trade and Investment, Minutes of Evidence, *Energy Review: Confederation of British Industry* (19 September 2013) http://www.niassembly.gov.uk/Assembly-Business/Official-Report/Committee-Minutes-of-Evidence/Session-2013-2014/September-2013/Energy-Review-Confederation-of-British-Industry/

23 *Ibid*

24 Geological Survey NI *Energy Storage* http://www.bgs.ac.uk/gsni/energy/storage/

25 Gaelectric http://www.gaelectric.ie/index.php/energy-storage/

26 http://www.gaelectric.ie/index.php/energy-storage/larne/project-update-2/

and increased interconnector capacity are viewed as the ultimate solution'. To this end the company argued that:

> *Whilst interconnectors will provide cost reflective and adequate quality electricity, it has been shown over recent years that they cannot guarantee long term physical availability given the recent experience of outages on the Moyle Interconnector.*
>
> *As an example should the North-South interconnector become unavailable, Northern Ireland will not have physical access to adequate capacity in its jurisdiction. This by definition cannot therefore be deemed as long term security of supply, and it should be considered that Northern Ireland, despite the development of two interconnections, will remain capacity inadequate. Moreover, transmission interconnection cannot be valued as equivalent to a portfolio of indigenous generation for either the predictability of cost or reliability to deliver a secure and sustainable electricity supply.*[27]

The developer concludes that additional interconnection and the restoration of capacity at Moyle should be accompanied by development of CAES to "ensure that the long term stability of the electricity system in Northern Ireland is maintained and the integration of renewables is further encouraged".[28]

27 Letter from Gaeletric to DETI, provided by Gaeletric 04 September 2013

28 *Ibid*

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