Northern Ireland Assembly Research and Information Service: 'Green' job estimates: Northern Ireland (full report)

Northern Ireland Assembly Research and Information Service: Green Job Estimates – supplementary (full report)

Report on the Committee's Inquiry into Barriers to the Development of Renewable Energy Production and its Associated Contribution to the Northern Ireland Economy (Session 2010/2011): Executive Summary (full report)

Report on the Committee's Inquiry into Barriers to the Development of Renewable Energy Production and its Associated Contribution to the Northern Ireland Economy: Summary of Recommendations (full report)

DETI – Update on progress towards implementation of recommendations in the Committee for Enterprise, Trade & Investment's Inquiry into Renewable Energy – November 2012

DETI – Update on progress towards implementation of recommendations in the Committee for Enterprise, Trade & Investment's Inquiry into Renewable Energy – November 2011

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (9 December 2010) – Department of Enterprise Trade and Investment (full report)

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (17 June 2010) – Biogas Alliance (full report)

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (18 November 2010) – Northern Ireland Manufacturing (full report)

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (11 November 2010) – Invest Northern Ireland) (full report)

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (04 November 2010) – IBEC-CBI and CBI Northern Ireland (full report)

Northern Ireland Assembly Questions

Northern Ireland Assembly

Research and Information Service
Research Paper

07 December 2012

Aidan Stennett

‘Green’ job estimates: Northern Ireland

NIAR 744-12

The following paper provides a current estimate of jobs in Northern Ireland’s low carbon and environmental sector and examines a number of studies which assess the potential for job creation in the renewable sector.

Key Points

The Northern Ireland low-carbon and environmental sector employed 31,714 in 2010/11, equivalent to 3% of total UK employment in the sector. Between 2009/10 and 2010/11 the sector saw a 2.8% increase in employment. The 31,714 figure breakdown as follows:

- The low carbon subsectors accounted 39% of total employment;
- The renewable energy subsectors accounted for 38% of total employment; and,
- The environmental sector accounting for 25% of total employment.

Department of Energy and Climate Change data shows that 887 renewable jobs were created in Northern Ireland between 1 April 2011 and 31 July 2012.

A number of studies which estimate potential jobs growth have been examined in this paper. Each is based on a narrow definition of green jobs. The studies primarily focus on the renewable energy sector, or sub-sectors within it. Due to the use of different methodologies, it has not been possible to aggregate the estimates of each study.

The Carbon Trust estimate the creation of between 8,470 and 33,124 jobs from renewable energy by 2020. These estimates greatly rely on Northern Ireland exploiting opportunities presented by renewable development in European and UK markets.

Action Renewables' 2006 estimates concluded that there was the potential for the creation of 5,653 short-term jobs and 395 long-term jobs (full-time equivalent) between 2006 and 2015, the majority of short-term growth was expected to come from wind development.

The Northern Ireland Renewable Energy Industry Group provides estimates on job creation that are limited to wind energy: they estimate 2,000 additional jobs by 2020, of which 584 will be on-going.

The Department of Employment and Learning/ECROYs report focussed on the skills need in four specific sectors – integrated business technology, offshore energy, bioenergy, and energy storage. The report's central scenario estimates suggest the need for 3,300 additional skills need in these sectors.

Executive Summary

Department of Business, Innovation and Skills (BIS) data shows that total employment in Northern Ireland's low-carbon and environmental sector 31,714 in 2010/11, is equivalent to 3% of total UK employment in the sector.

Overall employment in this sector remained steady for 2007/08, 2008/09 and 2009/10 with any fluctuations measuring at less than one per cent.

Between 2009/10 and 2010/11 the sector saw a 2.8% increase in employment.

Within the broader sector, the low carbon subsectors were the largest employers in 2010/11 accounting 39% of total employment. The renewable energy subsectors accounted for 38% of total employment and with the environmental sector accounting for 25% of total employment.

Department of Energy and Climate Change data shows that 887 renewable jobs were created in Northern Ireland between 1 April 2011 and 31 July 2012.

A number of studies which estimate potential jobs growth have been examined in this paper. It has not been possible to locate a study which provides job creation estimates using the same broad definition of 'green' that is used in the BIS data. Each study examined uses a narrower view of green jobs, often focusing on renewable energy only or, as is the case with one study, a specific technology type.

Due to the use of different methodologies, it has not been possible to aggregate the estimates of each study.

The Carbon Trust's 2008 study concluded in a low case scenario renewable energy development and exploitation of various supply chain opportunities could provide 8,470 in Northern Ireland by 2020. Comparing this to the BIS data suggests that this figure has already been reached.

The Carbon Trust's high-case scenario predicts the creation of 33,124 jobs by 2020.

In both the high and the low case a significant proportion of the job creation predicted is dependent on Northern Ireland companies exploiting opportunities arising from renewable expansion in UK and Europe.

Action Renewables' 2006 estimates concluded that there was the potential for the creation of 5,653 short-term jobs and 395 long-term jobs (full-time equivalent) between 2006 and 2015. The majority of the short-term job creation potential was thought to come from growth in wind energy. The report noted that the tendency towards short-term job creation was typical of capital intensive industries such as renewable energy development.

The Northern Ireland Renewable Energy Industry Group (NIREIG) provides estimates on job creation that are limited to wind energy. Like Action Renewables, NIREIG concludes that there will be a greater proportion of short-term jobs than on-going jobs: they estimate 2,000 additional jobs by 2020, of which 584 will be on-going. They note, however, that continued renewable expansion beyond 2020 is likely to lead to the creation of further short-term employment.

The Department of Employment and Learning/ECROYs report focussed on the skills need in four specific sectors – integrated building technology, offshore energy, bioenergy, and energy storage. The report's central scenario estimates suggest the need for 3,300 additional skills need in these sectors, which almost doubles current employment (estimated at c.3,900 in 2010).The report assumes, however, that 13.9% of the 3,300 figure (459) will be to replacement demand for those that leave the sectors over the five year period.

Contents

1 Introduction

The following paper provides estimates of the potential number of jobs that could be created through the green economy in Northern Ireland. A number of sources have been used to provide these estimates:

- The Carbon Trust;
- Action Renewables;
- The Northern Ireland Renewables Industry Group; and
- The Department of Employment and Learning (skills estimates, rather than job creation).

The conclusions reached by these reports have been affected by the methodology they use, including, for example, the definition of green jobs used, or, the renewable energy penetration scenario envisaged. As such it has not been possible to aggregate the results of each study.

Before looking at the potential for green jobs in Northern Ireland, the paper will provide a brief overview of the Low Carbon and Environmental market based on the most recent data. This analysis looks at jobs, company numbers and sales. It should be noted that the data used here employs a much broader definition of ‘green’ – to include environmental, low-carbon and renewable energy industry – than any of the other studies featured in this paper.

2 Current position

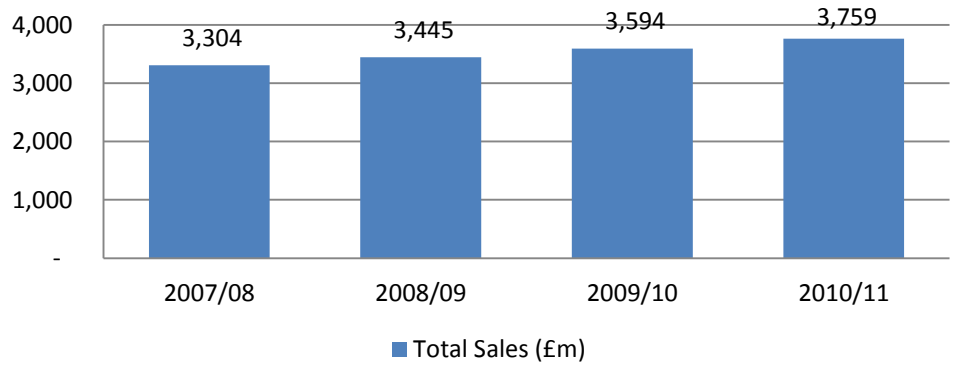
The Department of Business, Innovation and Skills produces the Low Carbon Environmental Goods and Services Report (LGES). The report includes data for employment, sales and company numbers at regional level. Data for twenty-four low-carbon and environmental industry subsectors is included. These sub-sectors fall into three broad categories, as outlined in Figure 1.

Figure 1: LGES Sub-sectors[1]

Environmental	Renewable Energy	Low Carbon
• Air Pollution	• Biomass	• Additional Energy Sources
• Contaminated Land	• Geothermal	• Alternative Fuel/ Vehicle
• Environmental Consultancy	• Hydro	• Alternative Fuels
• Environmental Monitoring	• Photovoltaic	• Building Technologies
• Marine Pollution Control	• Wave & Tidal	• Carbon Capture & Storage
• Noise & Vibration Control	• Wind	• Carbon Finance
• Recovery and Recycling	• Renewable Consulting	• Nuclear Power
• Waste Management		• Energy Management
• Water Supply and Waste Water Treatment		

Yearly totals for Northern Ireland are presented in Figures 2 to 4 for four years from 2007/08 to 2010/11 (the full data set is available at Annex 1). Figure 2 shows that total sales from the sector have increased year-on-year since 2007/08. The latest available data shows that sale in 2010/11 were valued at £3,759m. This was equivalent to 3% of total UK sales. Northern Ireland sales have increased by £455m since 2007/08, a 14% increase. Year-on-year growth averaged at 4.4% over the four year period.[2]

Figure 2: Total sales (£m) NI low carbon industry 2007/08 to 2010/11[3]



Source: BIS

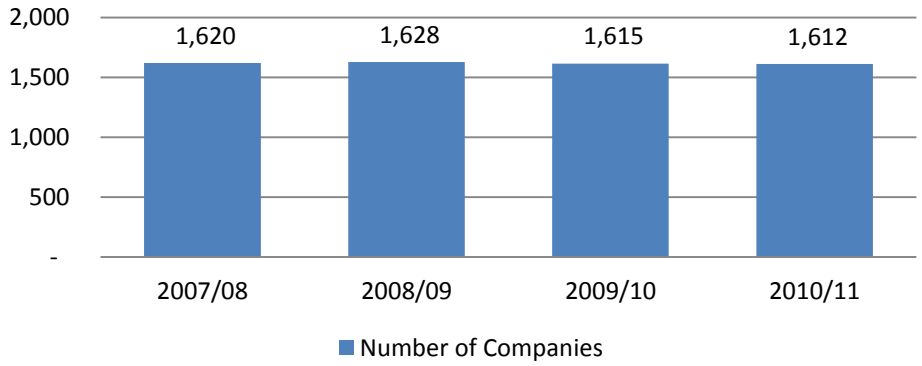
[1] The Department of Business, Innovation and Skills *Low Carbon Environmental Goods and Services Report* (May 2012) http://www.bis.gov.uk/assets/BISCore/business-sectors/docs/l/12-p143-low-carbon-environmental-goods-and-services-2010-11.pdf

[2] 2007/08 to 2008/09: 4.2%, 2008/09 to 2009/10: 4.3% and 2009/10 to 201011: 4.6%

[3] *Ibid*

Figure 3 shows the number of low carbon and environmental companies in Northern Ireland. The number of companies peaked at 1,628 in 2008/09, falling slightly in each subsequent year. In 2010/11 there were 1,612 companies operating in Northern Ireland (equivalent to 3% of the UK total). Between the 2008/09 peak and the latest data, the number of companies in the low carbon sector experience a marginal fall of 0.98%.

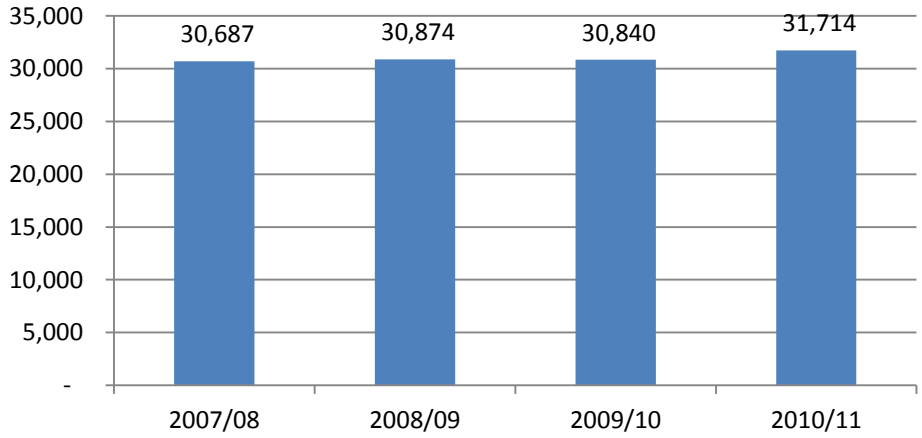
Figure 3: No. of companies NI low carbon industry 2007/08 to 2010/11[4]



Source: BIS

Figure 4 provides details of employment within the Northern Ireland low carbon sector. Despite a fall in employment between 2008/09 and 2009/10 the overall trend is upwards. In 2010/11 total employment in the sector was estimated to 31,714 (3% of the UK total); this represents a 3% increase since 2007/08. Year-on-year percentage changes to employment where as follows: 2007/08 to 2008/09 employment increased by 0.6%; 2008/09 to 2009/10 saw a decrease of 0.1%; and 2009/10 to 2010/11 saw an increase of 2.8%.

Figure 4: Employment in the NI low carbon industry 2007/08 to 2010/11[5]

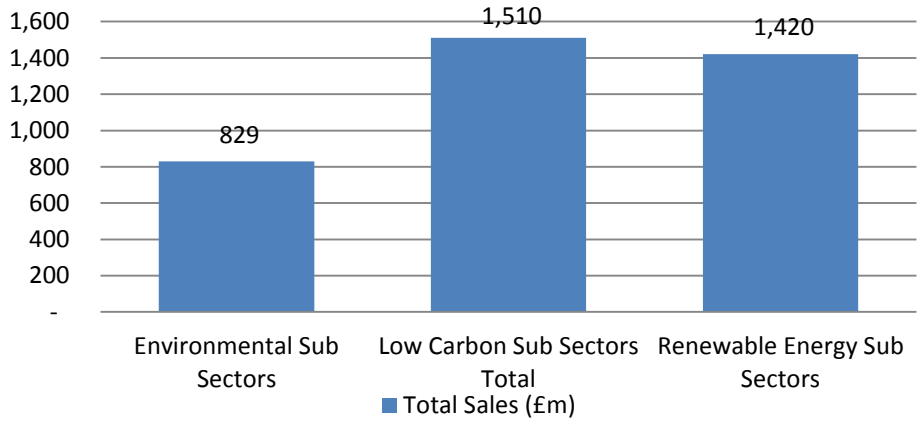


Source: BIS

[4] *Ibid*
[5] *Ibid*

Figures 5 to 7 examine the data for 2010/11 in more detail, providing a sectoral breakdown. Figure 5 looks at total sales. In 2010/11 the largest contributors to total sales within the low carbon and environmental sector were the low carbon subsectors, representing 40% (£1,510m) of total sales (£3,729m). These were closely followed by the renewable energy subsectors (£1420m) which represented 38% of total sales. Within this sector the largest component was alternative fuels, which was valued at £510m (34% of total sales for the subsector). Within the renewable energy subsectors, the largest component was wind energy, which was valued at £574m (40% of total sales in the renewable energy subsector). Wind energy was the largest contributing sector within the renewable energy market in each of the four years (see Annex 1). In 2010/11 this was closely followed by geothermal, which represented 37% of the total sales for the sector and has been the second largest sector in each year. Within the environmental subsector (which contributed 22% to total sales) the largest sector was water supply and waste water treatment which was valued at £212m, or 26% of the subsector sales (£829m).

Figure 5: Total sales by sector 2010/11[6]

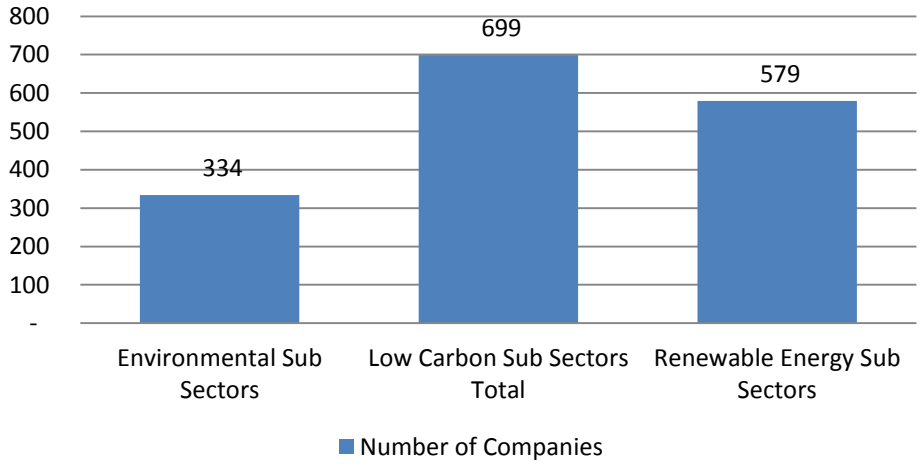


Source: BIS

Figure 6 provides a breakdown of low carbon and environmental companies by sector in 2010/11. Of the three sectors, the low carbon sector was the largest according to this measure. There were a total of 699 low carbon companies in 2010/11, equivalent to 43% of total companies (1,612). The largest subsector within the low carbon sector was alternative fuels. There were 232 of these companies 2010/11, representing 33% of the total sector. There were 579 renewable energy companies in the same year. Of these 224 were in the wind subsector (39%) and 221 were in the geothermal subsector (38%). There were 334 companies in environmental sector, of which 135 were in the waste supply and water treatment sector (40%).

[6] *Ibid*

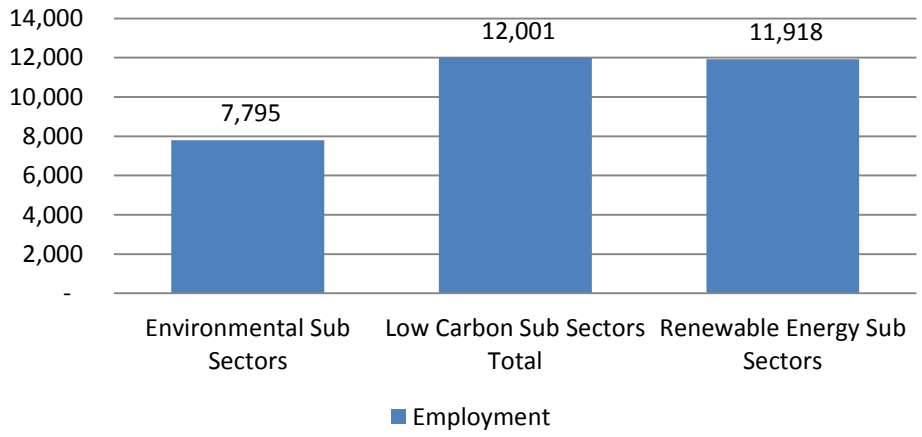
Figure 6: Number of companies by sector 2010/11[7]



Source: BIS

Figure 7 provides a breakdown of employment by sector. The largest sector according to this measure was the low carbon sector, with 12,001 employees, or 39% of total employment. The largest subsector within the low carbon sector was building technologies, which employed 2,998 people in 2010/11 (25% of the sector total). The renewable energy sector employed 11,918 people, or 38% of total employment. The largest subsector was geothermal which employed 4,785 (the largest subsector overall in each of the four years), which represented 40% of the sector total. The wind sub-sector employed 4,061 people, 34% of the sector total. There were 7,795 people employed in the environmental sector, 25% of total employment. The largest subsector here was water supply and waste management which employed 2,580 people (33% of the sector total).

Figure 7: Employment by sector 2010/11[8]



Source: BIS

[7] *Ibid*
[8] *Ibid*

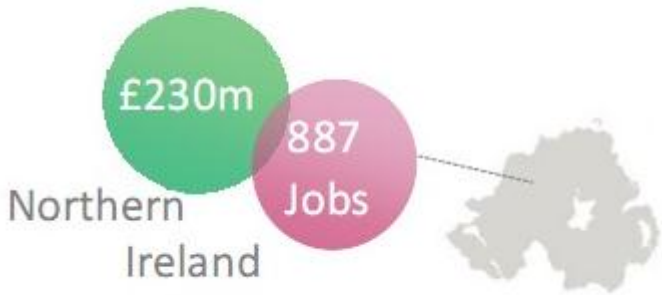
Since April 2011 the Department of Energy and Climate Change has produced a regional map of renewable energy investments and jobs. The data includes manufacturing, construction, engineering and operation, and is sourced from publically available information, including renewable trade publications.

Figure 8 summarises the investment and jobs announcement in Northern Ireland from 1 April 2011 to 31 July 2012 (latest data available). The region saw £230m investment in this period and the creation of 887 jobs.[9] This included:

- Belfast Harbour: DONG Energy £40m tailor-made installation harbour for West of Duddon Sands offshore wind farm. Up to 450 jobs;
- Harland and Wolff: contract for Gwynt y Mor wind farm; provided assembly for Ormonde and Robin Rigg wind farms; won work for tidal turbines. The shipyard is 75% offshore renewables-based;
- Gaelectric: opened new Belfast office, secured approval for £110m wind farm projects, creating 130 construction jobs;
- Powerteam: £3.7m contract from SSE Renewables;
- Creagh Concrete: £1.1m contract from Renewable Energy Generation; and
- Tyrone Energy: £10m CHP plant supporting 30 construction & 7 permanent jobs.[10]

In the period, the UK as a whole saw £6.9bn investment and 20,848 jobs. Yorkshire saw the largest proportion of investment and jobs in this period, £1.9bn and 5,416 respectively. Scotland saw the second highest proportion, £1.7bn and 4,111respectively (further details are available in Annex 2).

Figure 8: Renewable energy investment and jobs in Northern Ireland: 1 April 2011 – 31 July 2012



Source: DECC

[9] Department of Energy and Climate Change *Renewables Investment and Jobs announced 1 April 2011 to 31 July 2012* http://www.decc.gov.uk/en/content/cms/meeting_energy/renewable_ener/ored/oredjobs/oredjobs.aspx#

[10] DECC *Renewable energy investment and jobs* (August 2012) http://www.decc.gov.uk/assets/decc/11/meeting-energy-demand/renewable-energy/5937-renewables-investment-and-jobs-map-1-april-2011-.pdf

3 Carbon Trust Estimates – 2008

In 2008 the Carbon Trust published a study which sought to:

> *…evaluate the potential and through it the supply chain, for Northern Ireland to become a significant player in the fast growing renewable energy sector both as a creator of products and services and as an exploiter of the available technologies.*[11]

The study included an assessment of the economic benefits and opportunities of renewable energy for the region. It should be noted at this point the focus was very much on the renewable sector, rather than the broader Low Carbon and Environmental sector that the Department of Business, Innovation and Skills produce data examines. Within the study, the renewable sector is defined to include: [12]

- Onshore Wind;
- Offshore Wind;
- Marine;
- Biomass;
- Hydro;
- Solar;
- Geothermal/GSHP;
- Infrastructure; and
- Others.

It also identified a number of phases within the renewable energy supply chain which may lead to the creation of jobs if exploited. These phases were as follows:

- Field Development;
  - Desktop Feasibility;
  - Site Investigation;
  - Options Appraisal;
- Product Design and Development;
  - Research & Development;
  - Specification and Design;
  - Power Operating Environment;
- Product Manufacturing and Assembly;
- Component/ Device/ Material Manufacture;

[11] Carbon Trust/Roger Tym & Partners *NI Renewable energy supply chain* (June 2008) http://www.foe.co.uk/resource/reports/ct_supply_chain.pdf

[12] *Ibid*

    - Device and Systems Assembly;
- Operating Environment and Infrastructure;
- Site Installation;
- Testing, Certification and Acceptance;
- Operation and Maintenance; and
- Decommissioning.[13]

The report provides estimates potential job creation in Northern Ireland. Jobs creation, the report argues, is not only predicated on the growth of renewable energy, but also upon business' ability to exploit opportunities in the supply chain and in the export market. Specifically, it recommends businesses:

- Be creative in their approach to the low carbon economy and aim at developing new products and service. Manufacturers should also seek to exploit the service opportunities that the low carbon economy presents;
- Act quickly to link into the emerging supply chain and establish a foothold in emerging global markets;
- Identify collaborative partners to help manage risks and expense involved in developing new low carbon products;
- Invest in R&D and skills; and,
- Look beyond current relationships and approaches to markets. For example, manufacturers may wish to consider the role that entering low carbon markets might have on their image and profile.

The Carbon Trust's estimates that, the delivery of 2020 targets leads to the creation of:

- 2.023m jobs due to growth in EU renewable capacity up to 395,240MW;
- 564,000 jobs due to growth in UK renewable capacity up to 51,150MW; and
- 16,000 jobs due to growth in Northern Ireland up to 2,000MW.[14]

The report assumes, however, that only a proportion of these jobs will be captured by the Northern Ireland economy. The report provides higher and lower estimates for the number of jobs captured by the Northern Ireland economy:

- For jobs created through EU renewables growth the report assumes the Northern Ireland economy may capture 1% of jobs in the higher scenario and 0.1% in the lower scenario;
- For jobs created through UK renewables growth the report assumes the Northern Ireland economy may capture 2% of jobs in the higher scenario and 1% in the lower scenario; and,

[13] *Ibid*
[14] *Ibid*

- For jobs created through Northern Ireland renewables the report assumes the Northern Ireland economy may capture 10% of jobs in the higher scenario and 5% in the lower scenario.[15]

These two scenarios are explored in Table 1. On the jobs question, the Carbon Trust concludes that Northern Ireland could potentially benefit from between 8,470 and 33,124 jobs by 2020 should targets for renewable energy be met. These figures will depend, however, on the aggressiveness of Northern Ireland companies in exploiting the supply chain opportunities that are likely to emerge from the renewables growth. When presenting these figures to the Northern Ireland Assembly Environment Committee in 2009, the Carbon Trust also added that *'these estimates are best considered as a discussion point and in actuality would vary depending on the NI's success in capturing potential opportunities'.*[16]

It should be noted that the higher scenario assumes that 61% of total jobs created will be generated through growth in EU renewables, 34% through growth in the UK, and only 5% from growth in NI renewables. In the lower scenario the break down is different: 24% from EU growth; 67% from UK growth; and 10% from NI growth. In both cases therefore, the results are heavily dependent on the Northern Ireland companies exploiting outside markets.

If the Carbon Trust's figures are compared with the Department for Business, Innovation and Skills outlined in Section 2 it is evident that the 11,918 jobs estimated to have been created in Northern Ireland's renewable sector as of 2010/11 is 40% higher that the Trust's lower estimate for 2020 but only 36% of their higher estimate.

Table 1: Carbon Trust NI job estimates 2020 – high and low scenarios[17]

High Case		Low Case	
Share of jobs in renewables	**Potential employment**	**Share of jobs in renewables**	**Potential employment**
1% of total jobs generated in the EU	20,230	0.1% of total jobs generated in the EU	2,023
2% of total jobs generated in the UK	11,280	1% of total jobs generated in the UK	5,640
10% of total jobs generated in the NI	1,614	5% of total jobs generated in the NI	807
Potential Jobs in NI	33,124	Potential Jobs in NI	8,470

[15] *Ibid*
[16] *Ibid*
[17] *Ibid*

4 Action Renewables - 2006

In 2006 Action Renewables published a study which examined Job Creation Opportunities from Renewables in Northern Ireland. The study focussed on three markets which Northern Ireland could potential benefit from:

- Renewable technology products (manufacture, etc.);
- Renewable services (installation, etc.); and
- Fuel production and supply.[18]

A range of technologies were considered:

- Offshore wind;
- Onshore wind;
- Small-scale wind;
- Biomass;
- Waste to energy;
- Solar thermal;
- Photovoltaics;
- Hydro;
- Geothermal; and
- Marine energy.[19]

The job creation estimates are based upon the renewable energy installed capacity figures outlined in Table 2. These figures are adjusted for a range of constraints, including constraints on wind deployment due to grid limitations and public objections. The report states these estimates are *'a more realistic base from which to project job creation potential'.*

[18] Action Renewables/Lagan Consulting *Job Creation Opportunities from Renewables in Northern Ireland* (April 2006)
[19] *Ibid*

Table 2: Action Renewables – Renewable energy installed capacity assumptions 2006-2015[20]

Technology		MW
Wind	Onshore	350
	Offshore	250
Biomass	Willow SRC	7
	Sawmill/forest residue	5
	Agriculture Waste/Poultry Litter	9
	Biofuels (transport)	-
Waste to energy	Landfill gas	15
	Municipal solid waste	13
Solar	Solar thermal	4
	PV	0.5
Hydro	Hydro	2
Geothermal	Geothermal	6
Emerging technologies	Wave/tidal;	10
	Hydrogen	-
	Fuel cells	-
Total		**671.5**

Based on these projections, jobs per MW estimates[21], and assuming an import factor is applied to both MW and jobs per MW[22], the study reached the conclusions outlined in Table 3. The analysis concluded that the renewable deployment between 2006 and 2015 at the levels outlined in Table 2 could potentially lead to the creation of 5,653 short-term and 392 long-term jobs. Of these jobs the majority are expected to come from the wind sector which was estimated to have the potential to create 80% of short-term jobs and 30% of long-term jobs.

On these results the report stated:

> *As in many capital intensive industries, renewable energy development tends to be characterised by substantial short-term employment creation during the construction phase and relatively modest long term employment thereafter. This tendency is more accentuated in the case of large-scale installations (e.g. offshore wind) and less so where there is an agrarian element such as in short-rotation willow coppice biomass or pure plant oil biofuel production…*
>
> *…Nonetheless on top of some 6,000 short-term jobs, it can be expected that renewables sector will contribute some 400 permanent jobs to the Northern Ireland economy. This is a substantial contribution, particularly*

[20] *Ibid*
[21] Based upon DTI's Renewable Supply Chain Gap and the European Commission MITRE project.
[22] That renewable generation growth will lead to job creation in other regions as opposed to NI.

given the decline in traditional industries in the province, including agriculture and across a number of areas of manufacturing. In addition, the jobs created in the renewables industry would be private sector, thereby contributing to the much sought-after rebalancing between Northern Ireland's relatively small enterprise sector and relatively large public sector.[23]

Table 3: Action Renewables – Renewable energy job creation potential[24]

	Estimated job creation	
Technology	**Short-term**	**Long-term**
Onshore wind	2,170	70
Offshore wind	2,400	50
Short-rotation willow	134	49
Sawmill residue	99	36
Poultry litter/agri waste	91	25
Landfill gas	148	74
Municipal Solid waste	218	57
Solar thermal	86	17
PV	17	1
Hydro	158	2
Geothermal	37	5
Wave/Tidal	96	6
Total	**5,653**	**392**

5 Northern Ireland Renewables Industry Group (NIREG) – Wind deployment and job creation

A study carried out by consultants Redpoint for NIREG in January 2012 assessed the Northern Ireland energy market. It included estimates of job creation from wind deployment. Again, as is the case with the other estimates outlined above, NIREG/Redpoint's study was narrow in its focus, in this case wind energy. The conclusions drawn from this analysis were as follows:

- At its peak in 2017, it is estimated that close to 2,000 additional jobs will be created in NI – mostly in planning and construction;
- Once all capacity is installed in 2020, an estimated 584 on-going jobs will have been created in the sector;
- Should renewables deployment continue past 2020, as expected, there would also be on-going planning and construction jobs maintained in the sector;

[23] *Ibid*
[24] *Ibid*

- potential benefit to the NI economy over the 2011-20 period will be around £100m in 2011 terms; and
- With 584 on-going jobs created by 2020, enduring benefits of up to £2.3m per annum (NPV, in 2011 terms) are estimated.

It is evident from the above that Redpoint/NIREG concludes that the largest contributor to job creation in the wind sector will be planning and the construction industry. They, like Action Renewables above, suggest that of the jobs created, only a fraction will be on-going jobs (they estimate 29%). The report does suggest, however, that continued expansion of the renewables sector beyond 2020 will lead to the creation of additional jobs above the 584 on-going jobs created up to that point.

6 Department for Employment and Learning: estimate of skills need August 2011

In August 2011 the Department of Employment and Learning published a study which sought to determine the skills required to support potential economic growth in the Northern Ireland sustainable energy sector.

The report, which was completed by ECORYS on behalf of the Department, had two primary objectives:

- To assess the skills required over the next ten years to support the growth of the Sustainable Energy (SE) sector in Northern Ireland; and
- To identify the short, medium and long-term actions needed to ensure that the supply of these skills in NI is sufficient to meet the predicted growth of this sector.[25]

The study did not attempt to provide estimates for the whole *'green economy'* rather it was limited to specific, pre-selected sectors. These were as follows:

- The Integrated Building Technology (IBT) sector, which includes energy efficiency and the integration of renewables into existing buildings. The reasons for inclusion were threefold: the sector is a large energy consumer; a large amount of housing stock requires refurbishment; and the construction sector is a large employer;
- Offshore energy, which includes offshore wind, wave and tidal. The sector is included due to the *'rapid'* development of wind and the *'major future potential'* of wave and tidal.
- Bioenergy, which includes the production and utilisation of solid and liquid biomass for energy purposes. It was included due to the large potential resource and the potential for diversified employment the sector presents; and,
- Energy storage, which includes the development of the smart grid and the potential storage of electricity and other energy forms. [26]

[25] Department of Employment and Learning/ECORYS *Research study to determine the skills required to support potential economic growth in the Northern Ireland sustainable energy sector* (August 2011) http://www.delni.gov.uk/ni_se_final_report_-_pdf_version_-_final.pdf

[26] *Ibid*

- Table 4 provides an estimate of the turnover and size of these four sectors in 2010, as presented in the DEL report. The table shows that, measured by employment, the IBT sector was the largest, followed by the bio energy sector.
- Table 4: 2010 estimate of turnover and size of selected sustainable energy sectors in NI[27]

Sector	Sector GVA (£m)	No. of Companies	Employment
IBT	92.1	634	1,798
Offshore	31.7	94	476
Bio energy	26	239	1,106
Energy Storage	25.6	73	526
Total	175.4	1,040	39,006
Share of NI total (%)	0.92	1.52	0.56

- To calculate the estimated skills need, the report outlines three possible growth scenarios up to 2020 – low, central, and high. Each scenario assumes different rates of growth for each of the selected sectors and sub-sectors found within them. These are outlined in Table 5.
- Table 5: Annual growth rates in selected sectors and subsector up to 2020[28]

	Annual growth in market size to 2020 (%)		
	Low	Central	High
IBT	5.5	10	15
Offshore - wind	17	27	32
Offshore - wave, tidal	7	26.5	40
Bioenergy - electricity	5.7	6.4	29
Bioenergy - heat	3.9	9.4	22
Bioenergy - transport	6.2	9.5	13.8
Energy storage	3	4	6

- Based on ECROYS' modelling, the results of which are outlined in Table 6, the central scenario will require an additional skills requirement of 3,327 between 2011 and 2015. In the high scenario this increases 5,880 and in the low scenario this reduces to 1,809.[29]
- Table 6 also shows that in the low and central growth sector the skill demand is expected to second greatest in the IBT sector (followed by offshore), whilst in the high growth scenario it is expected to be greatest in the bio energy sector (followed by IBT and offshore respectively).[30]

The main conclusion drawn by the report on this data is that the central estimate of approximately 3,300 implies nearly doubling of 2010 employment in the chosen sectors (3,900 as per Table 4).

[27] *Ibid*
[28] *Ibid*
[29] *Ibid*
[30] *Ibid*

It should also be borne in mind that conclusion drawn by the DEL/ECORYS report represents only a proportion of the low carbon and environmental sector considered in Section 2, limited as the analysis is to four sub-sectors. The figure of 3,300 jobs is, for example, equivalent to just 10.4% of the 2010/11 employment in the low carbon and environmental sector as outlined above.

It should be noted that despite focussing on a limited number of subsectors the report identifies a number of concerns in meeting the demand:

- A decline in the number of those pursuing high level mechanical and electrical engineering courses;
- A need for multidisciplinary, skilled workers to meet the crossover of disciplines at all levels. For example, there is a need for ICT and engineering skills cross over in the development of the Smart Grid;
- The possibility that *'current public sector funding constraints will make additional public intervention in funding courses difficult'*; and,
- Any large incoming company will likely need to source many of its initial skill needs from outside NI. To address this it appears 'that the most promising route is to provide a healthy supply of entrants to the labour market with sound Science, Technology, Engineering and Maths (STEM) skills'.[31]

[31] *Ibid*

Table 6: Total skills requirement in selected sustainable energy sectors to 2015[32]

		2011	2012	2013	2014	2015	Total to 2015
IBT	Low	126	133	140	148	156	702
	Central	207	227	250	275	303	1,262
	High	297	341	392	451	519	2,000
Offshore	Low	81	94	109	126	145	554
	Central	133	169	215	272	346	1,134
	High	161	214	284	378	503	1,540
Bio energy	Low	70	73	77	80	84	385
	Central	123	133	145	158	172	731
	High	266	325	398	488	598	2,074
Energy Storage	Low	32	32	33	34	36	167
	Central	37	38	40	41	43	199
	High	47	50	53	56	60	267
Total	Low	309	333	359	388	420	1,809
	Central	499	568	650	747	863	3,327
	High	771	930	1,127	1,373	1,680	5,880

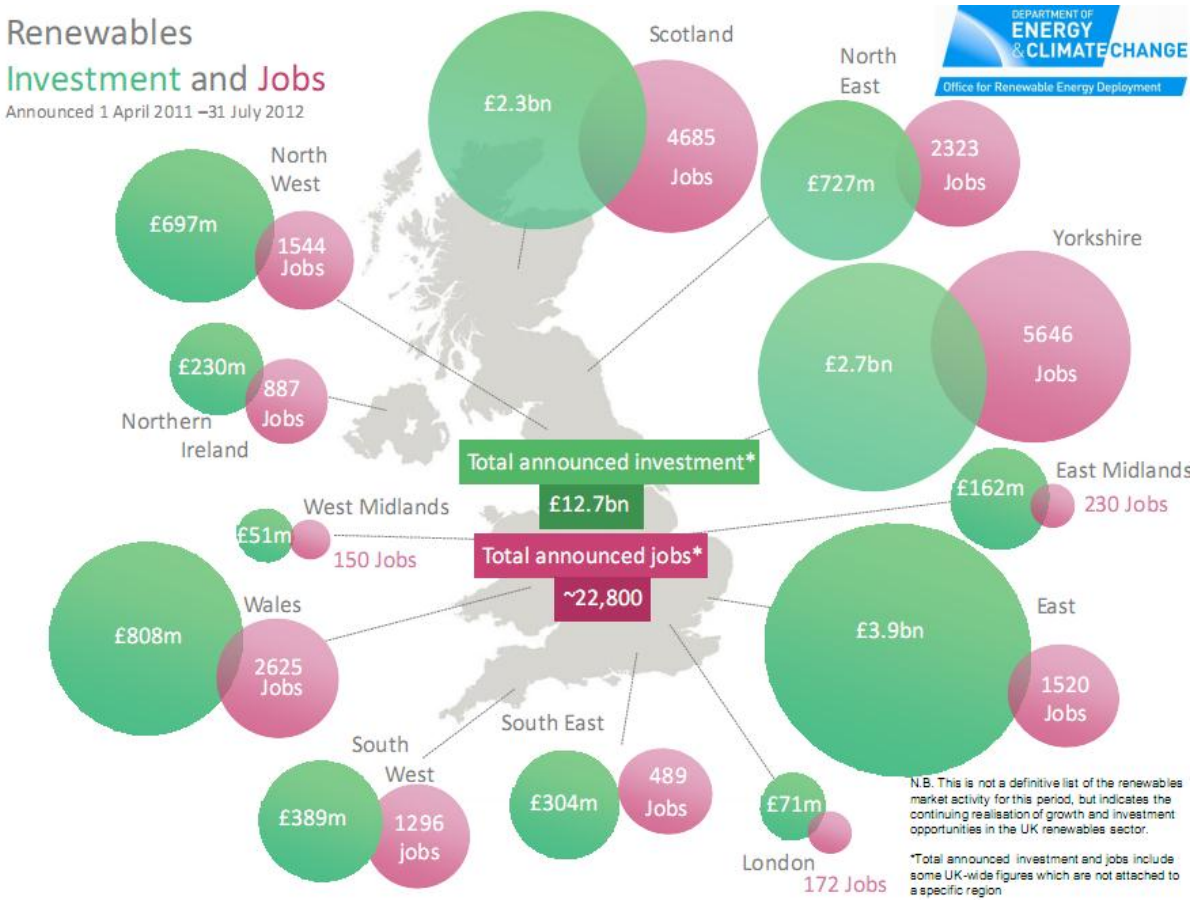
[32] *Ibid*

Annex 1: BIS Low carbon and environmental goods and services: Northern Ireland (2012)

		Total Sales (£m)				Number of Companies				Employment			
Level 1	**Level 2**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Environmental Sub Sectors	Air Pollution	42	42	43	44	5	5	5	5	503	510	517	533
	Contaminated Land Reclamation & Remediation	18	18	19	19	10	10	10	10	263	265	271	280
	Environmental Consultancy and Related Services	32	33	34	35	3	3	3	3	371	362	373	385
	Environmental Monitoring, Instrumentation and Analysis	6	6	7	7	0	0	0	0	82	85	83	85
	Marine Pollution Control	5	5	5	5	0	0	0	0	51	51	51	53
	Noise & Vibration Control	10	10	10	11	0	0	0	0	124	121	119	123
	Recovery and Recycling	187	193	199	206	78	77	80	80	1,788	1,853	1,823	1877
	Waste Management	196	201	206	212	101	102	102	101	1,821	1,810	1,829	1879
	Water Supply and Waste Water Treatment	276	280	285	290	134	133	134	135	2,452	2,466	2,511	2580
Low Carbon Sub Sectors	Additional Energy Sources	35	36	38	39	25	25	25	25	345	337	348.14	349
	Alternative Fuel Vehicle	417	432	425	442	217	208	199	194	3,603	3,631	3,298	3397
	Alternative Fuels	417	438	483	510	207	225	232	234	3,646	3,540	3,590	3678
	Nuclear Power	50	51	53	54	31	31	32	32	473	462	489	491
	Building Technologies	314	328	343	359	163	167	162	161	2,964	2,926	2,918	2998
	Carbon Capture & Storage	11	12	12	12	7	7	7	7	164	170	169	169
	Carbon Finance	5	5	6	6	1	1	1	1	25	27	26	26
	Energy Management	80	83	85	88	45	45	45	45	890	881	865	893

		Total Sales (£m)				Number of Companies				Employment			
Level 1	**Level 2**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2007/08**	**2008/09**	**2009/10**	**2010/11**	**2007/08**	**2008/09**	**2009/10**	**2010/11**
Renewable Energy Sub Sectors	Biomass	111	115	120	126	46	46	46	46	1,161	1,144	1,201	1250
	Geothermal	460	481	503	528	239	239	221	221	4,456	4,715	4,643	4785
	Hydro	20	20	21	21	9	9	9	9	254	255	273	280
	Photovoltaic	132	140	148	157	70	71	70	70	1,301	1,289	1,340	1388
	Renewable consulting	11	11	11	12	9	9	9	9	129	136	136	135
	Wave & Tidal	2	2	2	2	0	0	0	0	12	13	18	19
	Wind	469	501	535	574	220	215	223	224	3,809	3,825	3,949	4061
Environmental Sub Sectors		770	789	808	829	331	330	334	334	7,455	7,523	7,577	7,795
Low Carbon Sub Sectors Total		1,329	1,385	1,445	1,510	696	709	703	699	12,110	11,974	11,703	12,001
Renewable Energy Sub Sectors		1,205	1,271	1,341	1,420	593	589	578	579	11,122	11,377	11,560	11,918
Total		3,304	3,445	3,594	3,759	1,620	1,628	1,615	1,612	30,687	30,874	30,840	31,714

Annex 2: DECC Renewables Investment and Jobs (UK)



Northern Ireland Assembly

Research and Information Service Briefing Note

25 January 2013 NIAR 51-13

Aidan Stennett

Green Job Estimates – supplementary

1 Introduction

The following paper provides supplementary information to Northern Ireland Assembly Research and Information Service paper 09/13 available here. The purpose of this paper is to address a query raised during the Committee's discussion on the previous research. In this respect this paper:

- Revisits the Department of Employment and Learning (DEL)/ECORYS estimates of skills needed outlined in the previous research and provide further details on the potential skills gap identified in the DEL report.

2 The DEL Report

To provide some context to the data that follows, it is useful to briefly restate the methodology and overall findings of the DEL report. The report, which was published in 2011 and completed by ECORYS on behalf of the Department, had two primary objectives:

- To assess the skills required over the next ten years to support the growth of the Sustainable Energy (SE) sector in Northern Ireland; and
- To identify the short, medium and long-term actions needed to ensure that the supply of these skills in NI is sufficient to meet the predicted growth of this sector.[33]

The report took a narrow[34] view of the 'green economy' focusing on four specific sectors. These were:

- The Integrated Building Technology (IBT) sector, which includes energy efficiency and the integration of renewables into existing buildings. The reasons for inclusion were threefold: the sector is a large energy consumer; a large amount of housing stock requires refurbishment; and the construction sector is a large employer;
- Offshore energy, which includes offshore wind, wave and tidal. The sector is included due to the *'rapid'* development of wind and the *'major future potential'* of wave and tidal.
- Bioenergy, which includes the production and utilisation of solid and liquid biomass for energy purposes. It was included due to the large potential resource and the potential for diversified employment the sector presents; and,
- Energy storage, which includes the development of the smart grid and the potential storage of electricity and other energy forms. [35]

The estimates provided by the DEL report only facilitate a snapshot of the green economy. They do not include certain large subsectors. Subsectors such as onshore wind, geothermal energy, and water supply and waste management which are currently large employers (see section 2 NIAR 09/13) according to data provided by the Department of Business, Innovation and Skills.

Three growth scenarios were explored – low, central, and high. This paper will focus on the central scenario (anticipated skills gaps in the other scenarios are included in the annexes to this paper). The main conclusion of the report was that in the central scenario an additional 3,327 skilled persons would be required between 2011 and 2015 across all four sectors. This implies nearly doubling of 2010 employment in the chosen sectors (2010 employment was estimated to be c.3,900 in the report). It should be noted, however, that the report assumes 13.9% of the 3,327 figure will be to replacement demand for those that leave the sectors over the five year period.[36]

[33] Department of Employment and Learning/ECORYS *Research study to determine the skills required to support potential economic growth in the Northern Ireland sustainable energy sector* (August 2011) http://www.delni.gov.uk/ni_se_final_report_-_pdf_version_-_final.pdf

[34] Narrow in comparison to the data provided by the Department of Business, Innovation and Skills – see previous research paper Section 2 of NIAR 09/13 for further details (link in introduction).

[35] *Ibid*

[36] *Ibid*

3 Estimated skills gap

In addition to predicting the skills requirement necessary to meet growth in the identified sectors, the DEL report also compared the anticipated demand in these sectors against the predicted supply. The report quantifies and classifies the skills gap.

To calculate the level of gap in each sector, the report compares the average skills annual requirement (for each growth scenario, although the focus here will be the central scenario) according to occupation category to the current number places provided annually in qualifications servicing these occupational categories. The anticipated skills gap is calculated on an annual and total (2011-2015) basis.

A number of skills providers are considered, including:

- The six regional further education colleges (the report refers to these as the *'key element in meeting vocational skills needs'*) who offer a range of courses tailored (at all NVQ levels) to the needs of the sustainable energy sector (included in their Carbon Zero prospectus), as well as mainstream training provision which can also meet the needs of the sector;
- Private training organisations who deliver vocational skills training at NVQ levels 1 and 2 within in areas matching the sustainable sector's needs; and,
- The University sector, which offers course specifically tailored towards the energy sector and which conducts research in sustainable energy.

The following sections will summarise skills gap estimates contained in the DEL report for each of the four sectors.

Two things should be noted before looking at the data in more detail. Firstly, the skills gap estimates quoted have, as is mentioned above, been calculated using 2010 "current place" figures. These figures are subject to change, that is, they could increase or decrease due to a range of factors (for example, a change in policy direction, or changes to funding). This leads to the second consideration, which is that skills providers were, at the time of the report's publication:

> *…confident that they could meet the skills needs of the sector albeit with 2 caveats. The first caveat was that they felt that the continuation of some form of Innovation Fund to allow them to develop courses to specifically meet the needs of employers would be helpful. The second caveat was that they felt continued support for Carbon Zero to assist with the co-ordination of the colleges' response to the needs of the sector would also be helpful.*[37]

[37] *Ibid*

3.1 Integrated building technologies

Within the integrated building technologies sector, Table 1, skills gaps have been identified in four out of the five occupational categories. The report concludes that an additional 70 skilled persons will be needed per year to meet the sector's needs, this equates to an additional 350 persons over the period 2011 to 2015.

The largest gap is identified in the process, plant and machine operations occupational category, where an estimated 44 persons are required per year, equating to 221 over the period. This represents 63% of the estimated annual gap. Occupations within this category include operators, electrical fitters, manufacturer, and maintenance. There are a broad range of qualifications associated with the category from no qualifications to mechanical engineering degrees. Other associated qualifications include NVQ up to level 3 and NVQ level 2 in assembly.

Commenting on the sector the report notes:

> *…the main training need will be for re-skilling from traditional trades and the colleges have already developed a range of courses to meet these needs. Going forward it will therefore be a case of making sure that the volume of provision meets the need and that training is kept up to date with technological advances. Some of our consultees also felt that there was a need for courses to develop the awareness and knowledge of architects and M&E* [mechanical and electrical] *engineers to improve the energy efficiency of building designs and move away from more traditional building methods.*[38]

Commenting specifically on the skills gap, the report states that:

> *It is likely that this gap can be bridged through increasing existing course intakes.*[39]

[38] *Ibid*
[39] *Ibid*

Table 1: IBT– Summary Skills Demand-Supply Gap Analysis (central scenario)[40]

Occupational Category	Specific Occupations	Typical Qualification Requirements	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Commercial Manager, general manager, director, mechanical engineers, design and overseeing of contracts, Sales Manager, Managing Director, technical electrical engineers, senior engineer, Design and Management, Professional and Technical issues, Sales, Academics/Consultants, installer, Product research, Technical Manager	Degree level - engineering or marketing, training accredited safety, environment engineering, Electrical Engineering, Electronic Engineering, Chartered engineer, Civil Engineering, languages, plumbing qualifications, Qualified Industrial Chemist, Mechanical Technician, HNC	38	21	17	83
Professional Occupations	Commissioning engineers, admin, mechanical engineers, consultancy advice, electrical engineers, Structural and Civil Engineers, Engineering R&D, Project Design, academics and consultants, Acoustical consultants, business development, engineering	Engineering degree, Electrical Engineering, Master's degree, project design experience, PhD, Mechanical engineering, Acoustics, Electronic Engineering, Fully NICEIC qualified	40	25	15	77
Associate Professional and Technical Occupations	Installation Engineers, technical sales, design engineers, Electricians, engineering technicians, Manufacturing Technicians, project design and installation, Professional and Technical issues, research, electrical technician, Mechanical Engineer	Engineering or marketing degree/HND/BTEC, electrical qualifications, HNC & relevant time served, design and installation, Electrical Engineers, NVQ level 4 qualified electrician, Mechanical Engineering, NICEIC qualified	18	29	-11	-57
Skilled Trades Occupations	Design and Installation, overall production, plumbing & heating	Technical Installation experience, GCSEs, city and guilds	25	20	5	25
Process, Plant and Machine Operations	Operators, electrical fitters, manufacturer, Maintenance	Mechanical engineering degree, none, NVQ up to level 3, NVQ level 2 in assembly, Engineering experience, Trade Qualifications - mechanical - electromechanical	76	32	44	221
Total			197	127	70	350

Source: DEL/ECORYS (totals may not sum due to rounding)

[40] *Ibid*

2 Offshore energy

Table 2 summarises the report's findings on the potential skills gap within the offshore energy sector. Again, gaps are identified in four out of the five occupational categories.

The total identified gap is 110 additional skilled persons per year, or 548 additional persons between 2011 and 2015. This is the largest of identified gap of all four sectors, despite the sector having the second largest annual skills requirement over the period.

Within the sector, the largest identified gap was in the skilled trades occupations, where it was estimated an additional 81 persons (74% of the total annual gap) would be required per year, equal to 406 persons over the period (74% of the total need). The report identifies a specific need for mechanical fitters with NVQ level 3 in mechanical engineering.

On the sector the report raises a number of points with regard to the sector:

- Initial demand in the sector is predicted to be for higher-skills in the design and deployment phase, although most of these could be met from external sources e.g. the home countries of the main contractors;
- The biggest opportunity and largest demand was identified within operation and maintenance. Here, it was thought that technicians could be drawn from existing trades although re-skilling would be required;
- Bottlenecks could be created due to the high-demand for these skills in other sectors; and,
- Industry placements will be necessary to ensure young fitters and electricians can be taught the required skills adequately.[41]

Commenting more generally on the skills gap the report notes*:*

> *These gaps, particularly around skilled trades occupations, may require expansion of existing, and introduction of new, courses.*[42]

[41] *Ibid*
[42] *Ibid*

Table 2: Offshore Energy – Summary Skills Demand-Supply Gap Analysis (central scenario)[43]

Occupational Category	Specific Occupations	Typical Qualification Requirements	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Technical, development manager, Hardware design, tender and project management, engineering manager, Operations Manager Sales, Academics or Consultants, installer, Product research, Technical Manager	Degree – engineering, civil engineering, mechanical engineering, PhD in Physics, engineering experience and 3rd level qualification	34	19	15	76
Professional Occupations	Engineer, Accountant	Degree in Engineering, CIMA	18	23	-4	-22
Associate Professional and Technical Occupations	Design Draftsman, Project engineer, Rig Drivers and Operators	Civil engineering degree, Plant Card, HNC	23	19	4	21
Skilled Trades Occupations	Mechanical fitter	NVQ level 3 in mechanical Engineering	91	10	81	406
Process, Plant and Machine Operations	Maintenance Engineer	NVQ level 3 in maintenance engineering	23	10	13	66
Total			188	79	110	548

Source: DEL/ECORYS (totals may not sum due to rounding)

3.3 Bioenergy

Table 3 details the estimated skills gap anticipated in the bioenergy sector. Of the four sectors bioenergy is the only one in which a skills overall surplus is expected both on an annual basis and over the period 2011 to 2015.

Despite this, however, gaps are expected within the managers and senior officials, and professional occupations categories. Within the former an additional three skilled persons are required per year, or 19 over the period. This category incorporates occupations such as commercials managers, mechanical engineers, research, and energy consultants (a full list is included in the table). Qualification requirements in this category range from HNC in electrical engineering to PhDs and MBAs.

A bigger gap is anticipated within the professional occupations categories, with an estimated 10 persons required each year and 46 over the 2011 to 2015 period. This category incorporates occupations including commissioning engineers, consultancy,

[43] *Ibid*

plumbing engineers and installers. The range of required qualifications includes degree levels engineering and various professional qualifications/registrations.

The report notes the following about this sector:

- Government policy will be a major determinant of growth within the sector;
- There may be a need to *'provide refresher courses for architectural and mechanical and electrical professionals in the construction sector to ensure that they are up to date with the current technology in relation to IBT and renewable energy'*; and,
- The take up of the renewable heat incentive may lead to spikes in demand. Monitoring of this will be required to ensure there are enough trained installers to meet this demand.[44]

Commenting on the specific skills gaps the report notes:

> *…under a central scenario few skills gaps are expected overall, with only small gaps at managerial and professional levels. It is understood that these could be accommodated within existing course provision, with relatively comprehensive provision of higher level courses with land-based components.*[45]

[44] *Ibid*
[45] *Ibid*

Table 3: Bioenergy – Summary Skills Demand-Supply Gap Analysis (central scenario)[46]

Occupational Category	Specific Occupations	Typical Qualification Requirements	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Commercial Manager, Sales, Mechanical Engineers, project manage, energy consultants, Product research, Technical Manager, Manager	Degree -Engineering PhD, MBA, MSc, energy related qualifications, Experience of Industry, Mechanical Technician qualifications, HNC -Electronic Engineering, professional engineer	29	26	3	19
Professional Occupations	Commissioning engineers, Mechanical Engineers, consultancy advice, Accountancy, business development manager, plumbing engineers and installers	Degree - Engineering, Electronic Engineering, ACA or ACCA, Registered plumber/installer - BPEC Qualified, Fully NICEIC qualified	37	27	10	46
Associate Professional and Technical Occupations	Installation Engineers, design engineers, Trainer, biomass installer, Electrical Installer	Engineering degree, NVQ level 4 qualified electricians and plumbers, NVQ LEVEL 3, NICEIC qualified	15	20	-5	-27
Skilled Trades Occupations	None included	None included	19	36	-17	-85
Process, Plant and Machine Operations	Technical operative, handling, storage, distributing and processing of biomass	General understanding of plant machinery, Trade Qualifications- mechanical - electro mechanical	15	16	-1	-7
Total			114	125	-11	-55

Source: DEL/ECORYS (totals may not sum due to rounding)

3.4 Energy Storage

The energy storage sector record the lowest level of skills gaps of all the four sectors reflecting lower levels of expected growth over the period measured and the lower levels of skills requirement as a result.

Table 4 shows an overall gap of seven persons per year is expected, equating to 35 persons over the entire period. The largest gap is predicted in the process, plant and machine operations category (6 per annum, 30 in total). This sector includes occupations associated with the handling, storage, distributing and processing of biomass, with skills requirements at NVQ Levels 2 and 3.

[46] *Ibid*

Growth in the sector is expected to pick up after 2015. This is reliant, however, on the development of a smart grid (categorised as an energy subsector within the paper). On this, the reports notes:

> *Energy Storage and more specifically the development of a Smart Grid are seen as one area where more graduate level skills are needed. NIE find it difficult to recruit power engineers and will also face greater recruitment problems over the next few years due to an ageing workforce. However, the main response here is likely to come through the STEM initiative and moves to attract more young people to choose degree subjects in these areas which would include electrical engineering. Despite the many confident predictions of the future importance of Smart Grid and the significant efforts around the work to research the approaches and technology involved we were not able to identify any data on specific future skill needs or the scale of these needs. The reason for this is thought to be that the technologies are still under development so the exact nature and timing of the skills needs cannot yet be identified.*[47]

Table 4: Energy Storage – Summary Skills Demand-Supply Gap Analysis (central scenario)[48]

Occupational Category	Specific Occupations	Typical Qualification Requirements	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Project manager, mechanical and electrical engineering	MBA, Engineering degree, energy related qualifications	8	3	5	23
Professional Occupations	Engineering, Engineering supervisor	Engineering degree – refrigeration, electronics	10	9	1	6
Associate Professional and Technical Occupations	None included	Degree	3	6	-3	-12
Skilled Trades Occupations	None included	City and guilds	4	7	-3	-13
Process, Plant and Machine Operations	Handling, storage, distributing and processing of biomass	NVQ 2/ 3, general understanding of plant machinery	6	0	6	30
Total			31	24	7	35

Source: DEL/ECORYS (totals may not sum due to rounding)

[47] *Ibid*
[48] *Ibid*

Annexes: Estimated Skills Gap All Growth Scenarios

1 IBT

Occupational Category	Specfic Occupations	Typical Qualification Requirements	Scenario	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Commercial Manager, general manager, director, mechanical engineers, design and overseeing of	Degree level - engineering or marketing, training accredited safety, environment	Low	21	21	0	-1
			Central	38		17	83
			High	60		39	194
Professional Occupations	Commissioning engineers, admin, mechanical engineers, consultancy advice, electrical engineers,	Engineering degree, Electrical Engineering, Masters degree, project design experience, PHd,	Low	22	25	-3	-13
			Central	40		15	77
			High	64		39	195
Associate Professional and Technical Occupations	Installation Engineers, technical sales, design engineers, Electricians, engineering	Engineering or marketing degree/HND/BTEC, electrical qualifications, HNC	Low	10	29	-19	-96
			Central	18		-11	-57
			High	28		-1	-5
Skilled Trades Occupations	Design and Installation, overall production, plumbing and heating	Technical Installation experience, GCSEs, city and guilds	Low	14	20	-6	-31
			Central	25		5	25
			High	40		20	99
Process, Plant and Machine Operations	Operators, electrical fitters, manufacturer, Maintenance	Mechanical engineering degree, none, NVQ up to leve 3, NVQ level 2 in assembly,	Low	42	32	10	53
			Central	76		44	221
			High	120		88	443
Total			Low	110	127	-13	-87
			Central	197		70	350
			High	312		185	925

2 Offshore

Occupational Category	Specfic Occupations	Typical Qualification Requirements	Scenario	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Technical, development manager, Hardware design, tender and project management, engineering manager, Operations Manager Sales, Academics or Consultants, installer, Product research, Technical Manager	Degree – engineering, civil engineering, mechanical engineering, PhD in Physics, engineering experience and 3rd level qualification	Low	17	19	-2	-11
			Central	34		15	76
			High	46		27	137
Professional Occupations	Engineer, Accountant	Degree in Engineering, CIMA	Low	9	23	-14	-68
			Central	18		-4	-22
			High	25		2	11
Associate Professional and Technical Occupations	Design Draftsman, Project engineer, Rig Drivers and Operators	civil engineering degree, Plant Card, HNC	Low	11	19	-8	-37
			Central	23		4	21
			High	31		12	61
Skilled Trades Occupations	Mechanical Fitter	NVQ level 3 in mechanical engineering	Low	44	10	34	174
			Central	91		81	406
			High	123		113	568
Process, Plant and Machine Operations	Maintenance Engineer	NVQ level 3 in maintenance engineering	Low	11	10	1	8
			Central	23		13	66
			High	31		21	106
Total			Low	93	79	13	66
			Central	188		110	548
			High	256		117	884

3 Bioenergy

Occupational Category	Specfic Occupations	Typical Qualification Requirements	Scenario	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Commercial Manager, Sales,Mechanical Engineers, project manage,energy consultants, Product research, Technical Manager, Manager	Degree - Engineering PhD, MBA, MSc, energy related qualifications, Experience of Industry, Mechanical Technician qualifications, HNC -Electronic Engineering, professional engineer	Low	15	26	-11	-50
			Central	29		3	19
			High	83		57	287
Professional Occupations	Commissioning engineers, Mechanical Engineers, consultancy advice, Accountancy, business development manager, plumbing engineers and installers	Degree - Engineering, Electronic Engineering, ACA or ACCA, Registered plumber/installer - BPEC Qualified, Fully NICEIC qualified	Low	19	27	-8	-41
			Central	37		10	46
			High	104		77	382
Associate Professional and Technical Occupations	Installation Engineers, design engineers, Trainer, biomass installer, Electrical Installer	Engineering degree, NVQ level 4 qualified electricians and plumbers, NVQ LEVEL 3, NICEIC qualified	Low	8	20	-12	-61
			Central	15		-5	-27
			High	41		21	107
Skilled Trades Occupations	None provided	None provided	Low	10	36	-26	-130
			Central	19		-17	-85
			High	54		18	90
Process, Plant and Machine Operations	Technical operative, Handling, storage, distributing and processing of biomass	General understanding of plant machinery, Trade Qualifications- mechanical - electro mechanical	Low	8	16	-8	-41
			Central	15		-1	-7
			High	41		25	127
Total			Low	60	125	-65	-324
			Central	114		-11	-55
			High	324		199	993

4 Energy storage

Occupational Category	Specfic Occupations	Typical Qualification Requirements	Scenario	Average Annual Skills Requirements 2011-2015	Current places Annually	Estimated Annual Gap	Total Gap 2011-2015
Managers and Senior Officials	Project manager, mechanical and electrical engineering	MBA, Engineering degree, energy related qualifications	Low	7	3	4	17
			Central	8		5	23
			High	11		8	37
Professional Occupations	Engineering, Engineering supervisor	Engineering degree – refrigeration, electronics	Low	8	9	-1	-2
			Central	10		1	6
			High	13		4	23
Associate Professional and Technical Occupations		Degree	Low	3	6	-3	-15
			Central	3		-3	-12
			High	4		-2	-7
Skilled Trades Occupations		City and guilds	Low	3	7	-3	-16
			Central	4		-3	-13
			High	5		-2	-6
Process, Plant and Machine Operations	Handling, storage, distributing and processing of biomass	NVQ 2/ 3, general understanding of plant machinery	Low	5	0	5	25
			Central	6		6	30
			High	8		8	40
Total			Low	26	24	2	10
			Central	31		7	35
			High	42		17	87

Report on the Committee's Inquiry into Barriers to the Development of Renewable Energy Production and its Associated Contribution to the Northern Ireland Economy (Session 2010/2011)

Executive Summary

Background and Purpose of the Inquiry

1. We are living in an era of ever increasing energy prices and of great uncertainty in relation to our energy future. We are largely dependent on imported fossil fuels to power our energy needs, and the markets for these are becoming increasingly volatile. We are required to meet specific EU targets for reducing the amount of energy we consume from fossil fuels. A recent report from carbon management consulting company, Carbon Masters, concludes that under the Coalition Government's Carbon Reduction Commitment Energy Efficiency Scheme (CRCEE), energy costs for Northern Ireland businesses and public bodies could double over the next five years due to 'carbon tax' payments.[1] The Report states that the cost and carbon implications for organisations in Northern Ireland will be far worse than for similar organisations in the rest of the UK. The reasons provided are the high dependency of the Northern Ireland energy mix on oil compared to other parts of the UK and the already high price of both gas and electricity here. For these reasons it is essential that we have the right vision, policies and strategies in place to secure our energy future. This will mean a much larger dependency on renewable sources to meet our energy needs. We must therefore ensure that we take the appropriate steps now to remove the barriers that exist to renewable energy production in Northern Ireland. It is also essential that policy on the economy takes account of the strategic importance of renewable energy to our economic future.

2. The Inquiry was undertaken in order identify the main barriers that are inhibiting the development of renewable energy production. The Committee also wanted to bring forward recommendations on how these barriers can be overcome in order to optimise the development of renewable energy technologies, the contribution of renewable energy to the local economy and the production of energy from renewable sources.

Government Vision

3. During the course of the Inquiry, the Committee took a considerable amount of both written and oral evidence from a wide range of stakeholders. It became apparent that the issues arising were wide ranging and covered the remits of a number of Government departments and public sector bodies. The wide range of issues is reflected in the nature of the recommendations in this Report. The Committee believes that the depth and breadth of the barriers to the development of renewable energy is symptomatic of the Government's approach to the matter to date.

4. This Report makes recommendations to assist in removing barriers to the development of renewable energy however the Committee wishes to stress that it values the achievements that have been made so far by a number of departments. The Department of Enterprise, Trade & Investment (DETI) has brought forward the Strategic Energy Framework (SEF) which outlines Northern Ireland's energy future up to 2020. The Department of Agriculture & Rural Development (DARD) has developed its Renewable Energy Action Plan 2010 which is designed to develop renewable energy opportunities in the land based sector. The Department of Employment & Learning (DEL) provides funding to Further Education Colleges to deliver courses and programmes on energy efficiency and renewable energy. The Office of the First Minister and the deputy First Minister (OFMDFM) has developed its Sustainable Development Strategy which includes objectives relating to the increase in energy derived from renewable sources. The Department of the

Environment (DoE) has developed Planning Policy Statement 18(PPS18) and associated guidance for development that generates energy from renewable sources. Government departments are also working together with a common agenda through the Sustainable Energy Inter-Departmental Working Group (SEIDWG).

5. In addition to the work being undertaken within Government there are a number of agencies, many established by Government with responsibility for advising and informing the public and business on energy issues. The Energy Saving Trust provides advice and support on energy saving in the home, low carbon transport, on renewable technologies and on saving water and waste. Action Renewables' objectives include promoting renewable energy, providing information and support, removing barriers and leading and completing relevant research in renewable energy. The Carbon Trust provides specialist support to help business and the public sector cut carbon emissions, save energy and commercialise low carbon technologies. The Northern Ireland Energy Agency activities include promoting action by householders and not-for-profit organisations on energy efficiency, renewable energy, low carbon transport, water and waste.

6. There is no doubt that there is a significant amount of activity ongoing in relation to renewable energy. It may therefore seem surprising that so many businesses and support organisations in the local renewable energy sector believe more needs to be done. In the course of the Inquiry, the Committee has come to the conclusion that much work is indeed being undertaken. However, despite the work of SEIDWG, the Government approach to the renewable energy agenda requires more focus and an overall vision for our long-term energy future. There are many examples in this Report which demonstrate the need for a clearer vision and for a fully integrated approach to resolving our energy problems and securing our energy future. The need for a clearer focus was highlighted in the Independent Review of Economic Policy (Barnett Report) which called for a clear focus and leadership to the range of energy policy issues. This recommendation is supported by the Committee. The Committee believes that this should be achieved by bringing all responsibility for energy policy and strategy under a single Government department (Recommendation 1).

7. The Committee believes that the vision for renewable energy should extend well beyond the SEF timescale of 2020 and that Government should now be looking much further forward in order to secure our long-term energy future. Any vision for our energy future must not only ensure an integrated approach within Northern Ireland, it must also be integrated with the visions of other devolved administrations, with the Republic of Ireland and possibly even further afield. This is especially the case in relation the Single Electricity Market (SEM) and in relation to the SEF target of 40% of electricity consumed coming from renewable sources by 2020. Both are highly dependent on our ability to export and import electricity through interconnection.

8. In addition to an energy perspective, the energy vision also requires an economic perspective. There are many opportunities, now and in the future, both for our indigenous businesses and for Foreign Direct Investment in the renewable energy sector. Therefore any vision for renewable energy must plan to take advantage of these opportunities. The long-term vision for renewable energy must include both an energy perspective and an economic perspective and must establish long-term partnerships with other devolved administrations in the UK and with the Republic of Ireland, and should, where appropriate, include an all-island dimension for renewable energy (Recommendation 2). The Committee believes that many of the recommendations made in this Report result from problems that have arisen because there is no overarching vision for renewable energy. The development of a long-term vision should provide focus and assist in developing solutions to many of the problems faced.

9. Although much work is being done within Government on renewable energy, this work has been done in the absence of an overall vision for renewable energy in Northern Ireland. This has resulted in significant aspects of this work being done largely in isolation, without a full understanding or appreciation of what is happening in other sectors and other regions and without a full appreciation of what can be achieved here. Examples have been provided to demonstrate that more could have been achieved if the appropriate resources and technical expertise had been available. The result has been that Northern Ireland has fallen behind in the development and deployment of some renewable energy technologies which are now well established in other European Union (EU) Member States. Examples include anaerobic digestion, energy from waste, geothermal energy and renewable heat. In the future, more resources and technical expertise must be provided to those responsible for developing energy policy to proactively drive the renewable energy agenda and enable the development of policies and strategies to help Northern Ireland progress in those renewable energy areas which are underdeveloped in relation to other regions (Recommendation 3).

Government Policy and Strategy

10. Many Government departments' remits include policies and strategies relating to renewable energy. OFMDFM's Sustainable Development Strategy attempts, to some extent, to bring these together. There is however no overarching policy or strategy for renewable energy. The first step to achieving an overarching policy and strategy must be to secure a long-term vision for renewable energy.

11. The main document outlining Government policy for Energy is the new Strategic Energy Framework. The SEF extends to 2020 but does not contain interim targets or milestones apart from a target for the level of electricity consumed to come from renewable sources by 2012, which is only one year away. No interim targets exist between then and 2020 for any aspect of the SEF. The Committee believes that this will make it difficult to determine what is achievable year-on-year and to monitor progress to determine if we are on course to achieve the long-term target. It is therefore important that interim targets are put in place in relation to Strategic Energy Framework objectives (Recommendation 4).

12. Many respondents to the Committee's call for evidence commented on high dependence of Government policy on the target of 40% of electricity coming from renewable sources by 2020 and the associated high dependence on wind-generated electricity. Some felt that this focus had resulted in other technologies being neglected. The Committee understands the reasons why the Department has concentrated on wind-generated electricity. DETI is working with very limited resources within Energy Division and Northern Ireland is required to make a suitable contribution to the overall UK target to meet EU requirements. This has however, resulted in missed opportunities in other sectors; opportunities which we must now try to grasp. In order to make the most of these opportunities, in conjunction with a new long-term vision for renewable energy, targets must be set well beyond 2020. The Committee therefore believes that the 40% target for electricity consumption from renewable sources by 2020 should include specific stretching targets for electricity from sources other than wind and/or stretching targets for non-wind sources by 2025 and beyond (Recommendation 5).

13. In order to ensure that its vision for renewable energy is appropriately aligned and takes into account the expertise, needs and views of key stakeholders and to ensure that future opportunities are appropriately exploited, Government must make use of the available expertise when developing its vision, policies and strategies. Therefore, the Sustainable Energy Interdepartmental working group should be supplemented by a group which includes representatives from the renewable energy sector, business, academia and the Northern Ireland Local Government Association to advise on the development of Government policy on renewable energy (Recommendation 6).

14. In the course of the Inquiry, the Committee became aware of a potential opportunity where an integrated approach to renewable energy could potentially result in significant benefits to a wide range of stakeholders within Government. Members were informed that there is huge potential to generate electricity through anaerobic digestion at water treatment plants throughout Northern Ireland. This would involve the co-digestion of wastewater sludge and agricultural material. Further research will be required in order to determine the viability and potential of such a proposal (Recommendation 7).

Government Communications

15. As stated earlier, there are many organisations providing information, advice and support in relation to renewable energy. However, communications from Government was seen as a major concern for many respondents to the call for evidence. Issues were raised in relation to communications between Government and the public, between Government and the business sector as well as communication within Government.

16. The raising of public awareness about the need to develop renewable energy resources was considered important. Some respondents also considered the absence of reliable, independent advice to the public to be a barrier to the deployment of renewable energy. Communication between Government and business was also an issue for a number of respondents.

17. The Committee believes that the current mechanisms for communicating with the public and with business should be better integrated. There is a need for a single organisation providing consistent, efficient, easily accessible advice and support to business and the public on all energy issues. This organisation should have a section dedicated to developing policy on the dissemination of support, advice and information to the public and business on renewable energy and its importance to the future of Northern Ireland (Recommendation 8).

Incentives for Renewable Energy Production

18. During the course of the Inquiry, the Committee was not convinced that the incentives being provided are always the most appropriate to stimulate the production of renewable energy. There was also evidence of inconsistency in the approach taken, leading to a bias in favour of technologies such as large-scale wind electricity generation. It is understandable, from an energy perspective that DETI would concentrate on providing incentives to assist in achieving its 40% target through wind-generated electricity. However, this approach did not consider the business opportunities that could become available through incentivising other technologies. There was a sense from the evidence gathered that in some cases the incentives provided were inadequate to stimulate development and that many potential investors/developers were waiting to see what would become available in the next consultation on the Northern Ireland Renewables Obligation (NIRO) and whether incentives would improve.

19. The Committee welcomes the move by the Department to increase incentives for some renewable energy technologies however, in some cases there is a sense that potential developers in some technologies believe that incentives may improve further in the future. Some developers are not therefore convinced that now is the time to invest. More certainty must be provided to developers to encourage and incentivise them to invest now. Therefore assurances should be provided to developers that they will not be worse off by investing now than they would be had they waited. This will require assurances that the incentives provided to future developers will be mirrored for existing developers (Recommendation 9).

20. A key debate throughout the course of the Inquiry was whether a Renewable Obligation Certificate (ROC) or a Feed-in Tariff (FIT) is the better mechanism for incentivising renewable energy production. Both

mechanisms are explained in detail in the body of the Report. The Committee can see advantages and disadvantages in both mechanisms. One key advantage of the ROC from a Northern Ireland perspective is that it is a UK wide mechanism. A FIT mechanism would, on the other hand, have to be paid for by Northern Ireland consumers. Much of the evidence relating to FITs centred on the long-term security they provide for investors who can obtain finance for renewable energy installations on the basis that they will have a fixed income which is inflation-proofed for up to 20 years. The value of ROCs is determined by market forces and can potentially rise and fall. The Committee was informed that only 25-30% of the value of a ROC is bankable and that financial institutions were unwilling to lend on that basis. The Department informed the Committee that it has controls in place to ensure that the ROC maintains an appropriate value and that investor confidence is protected. The Committee therefore considers it important that that DETI educate the financial sector and provide some level of assurances on the long-term security of ROCs so as reassure lenders and stimulate lending to renewable energy investors (Recommendation 10).

21. While the Committee accepts that the ROC is probably the better mechanism for incentivising large-scale renewable energy production, it is mindful of the fact that a FIT mechanism was introduced for small-scale generation in GB and is therefore considered the preferred mechanism for small-scale generation there. It is unclear however, whether the benefits that a FIT would provide for small-scale developers and for indigenous renewable energy businesses would outweigh the costs to the Northern Ireland economy. Therefore, DETI should undertake an analysis to determine the costs and benefits to the Northern Ireland economy, business and renewable energy developers of introducing a FIT for small-scale generation along the lines of what has been introduced in GB (Recommendation 11).

22. The SEF contains a target for 10% of heat consumed to come from renewable sources by 2020. The Treasury offer of £25million for Northern Ireland to develop a Renewable Heat Incentive (RHI), if accepted, should greatly assist in ensuring that this target is achieved. A RHI would have a heavy reliance on biomass. Some respondents to the call for evidence raised concerns about the sustainability and practicality of biomass. It was suggested that if a policy is created relating to biomass, it must be sustainable here rather having to rely on imported biomass which, it was stated, would almost certainly be the case if biomass is used to generate electricity. The Committee is concerned that, if biomass for domestic heating has to compete with biomass for electricity generation, this may result in the need to import biomass which could create market volatility. Therefore the Committee believes that, in the short-term, Government policy on biomass should concentrate on renewable heat to assist in meeting the Strategic Energy Framework target of 10% of heat from renewable sources by 2020. DETI should also give favourable consideration to the Treasury offer of £25 million for a Renewable Heat Incentive for Northern Ireland (Recommendation 12).

Support for the Development of Renewable Energy Technologies

23. Concern was expressed in the call for evidence about the level and nature of support available in Northern Ireland for the development of renewable energy technologies. In those EU regions at the forefront of renewable energy generation and production, drivers for research and development included issues around security of energy supply and the need to ensure energy self sufficiency. These are the very issues currently faced here. The Committee believes that opportunities were missed in Northern Ireland to take advantage of the funding available for research and development under EU Framework Programme 7. It is essential that, under the next programme, Framework Programme 8, Northern Ireland is in a position to take full advantage of opportunities for funding for research and development. Therefore, DETI must explore the opportunities for enhancing the research funding system in Northern Ireland by benchmarking against leading European regions (Recommendation 13).

Support for Business

24. Most indigenous renewable energy sector businesses are not exporting. However, they need to grow and develop to meet the needs of local users of renewable energy products and services. If they fail to develop, the result will be a reliance on imports to meet our renewable energy needs. More targeted advice and support is required for Small and Medium Enterprises (SMEs). Therefore, the nature of Invest NI support should be reviewed to realise the net benefits that indigenous SMEs can bring to the overall Northern Ireland economy (Recommendation 14).

25. The need for more specialist technical advice for businesses to enable them to take advantage of opportunities in the renewable energy sector was raised as an issue by a number of respondents. As Invest NI continues to identify companies with potential to develop to take advantage of opportunities in the renewable energy sector, more emphasis will have to be put on building internal renewable energy markets and associated skills bases. Invest NI must ensure that incentives do not result in imports of renewable energy products and services due to a lack of indigenous expertise. Invest NI should review the technical knowledge and skills available within the organisation so as to ensure that it has the appropriate resources available to support the indigenous renewable energy sector (Recommendation 15).

26. A number of respondents raised the issue of the need to make renewable technologies mandatory for new buildings. Experience in other EU regions has demonstrated that there are benefits to both the public and the economy of making certain renewable technologies mandatory for new buildings. The costs and benefits of this should be reviewed with a view to bringing forward proposals if feasible (Recommendation 16).

27. The Northern Ireland Green New Deal Group believes that a significant contribution from public funds is warranted to leverage additional investment for a green recovery package for Northern Ireland. It states that the total cost of such a package could be in the region of £900 million. The Group has published a paper on the "Green New Deal Housing Fund" which is designed to enable the energy retrofit of 500,000 homes over a ten year period. As the Fund would offer significant incentives for householders to deploy renewable energy technologies it provides a clear and immediate opportunity to give support to both the renewable energy sector and the construction sector here. The Committee therefore believes that the Executive should, as a priority, consider the proposals for a Green New Deal Housing Fund with a view to agreeing how this can be taken forward (Recommendation 17).

Grid Infrastructure

28. There was general consensus from written and oral evidence that the current electricity grid infrastructure requires major investment for upgrading and reinforcing. A number of respondents agreed that, in its present form, the grid cannot cope with the amount of renewable energy being generated. Several respondents stated that the absence of a Government grid infrastructure development plan is an obstacle with limited evidence of a structured approach to grid development. The Department informed the Committee that it is working with Northern Ireland Electricity (NIE) as it develops its options for grid development. The Committee considers it important that a plan for infrastructure development is prepared and implemented to assist in meeting the 40% target for electricity consumption from renewable sources by 2020 (Recommendation 18).

29. The need for further interconnection on the electricity grid was raised by several respondents. The Department considers the proposed North-South Interconnector to be an essential requirement to meet its 40% target for renewable electricity as well as being important for the Single Electricity Market (SEM). The Utility Regulator informed the Committee that not having the North-South Interconnector is costing the Northern Ireland economy approximately £20million per year. Northern Ireland Electricity submitted a

planning application for the Interconnector in December 2009. This was subsequently referred to a Public Inquiry. NIE informed the Committee that the initial indication was that the Public Inquiry may not be heard until late 2012. Evidence to the Committee has demonstrated that the North-South Interconnector is a vitally important element of infrastructure both from an energy perspective and from an economic perspective. It is essential that a decision on the Interconnector is made with the utmost urgency. Therefore, the Department of the Environment and the Planning Appeals Commission should prioritise the Public Inquiry process so as to ensure that high priority, key infrastructure projects such as the North-South Interconnector are dealt with as a top priority (Recommendation 19).

Grid Connection

30. The main issues arising in relation to grid connection included high costs, long delays in gaining access to the grid and NIE's new Distribution Code.

31. Concerns were raised by a number of respondents in relation to the cost of connection for small-scale developers. In Northern Ireland, the cost of connection depends on the location of the installation. The Department informed the Committee that the Utility Regulator plans to consult on the issue and that this will provide an opportunity to consider how to improve pricing structure for small-scale generators. Some EU regions offer subsidised connections but currently in Northern Ireland work is paid for by the developer.

32. NIE's Distribution Code sets out the day-to-day planning and operational procedures required by NIE for system users including electricity generators. NIE estimates that the infrastructure needed to meet the requirements of the Distribution Code will cost generators approximately £20,000 plus VAT. The Committee was informed that, for many small-scale generators, this is a significant up-front cost.

33. The Committee is concerned that the costs of grid connection and the Distribution Code requirements, coupled with potential uncertainty around the timescales for connection, may be a key barrier to small-scale renewable electricity generation. The process for grid connection should be reviewed to ensure that it is fully transparent and costs are fully explained. Connections for installations should be made in a timely fashion, with both parties aware of how long the process is going to take (Recommendation 20).

Planning and Consents

34. A large number of respondents to the call for evidence cited the planning process as a significant issue. This concern was reinforced by a number of those giving oral evidence to the Committee. There was considerable concern expressed in relation to the impact that the planning process could have on renewable energy projects and the related impact on the economy. The main issues arising were in relation to planning policy for renewable energy and in particular Planning Policy Statement 18 (PPS18), delays in reaching planning decisions, planning for micro generation, building regulations and permitted development.

35. In written evidence, several respondents welcomed PPS18 however others expressed uncertainty around the policy and its supplementary guidance. Some expressed concern that potential still exists for inconsistent application through the different interpretation of planning guidance by individual planners. Given the significant impact that the planning process can have on renewable energy and the related impact on the economy the Department of the Environment and the Planning Service should ensure that planning policy for renewable energy (PPS 18) is implemented and applied in a consistent manner (Recommendation 21).

36. The field of renewable energy is quite diverse and many of the concepts are quite new to Northern Ireland. With improved incentives and a strategic focus on renewable energy the number and quality of planning applications should improve. The Committee believes that, given the complexity of some renewable energy technologies, the associated complexity in applications and the, sometimes ill-informed conceptions that third parties may have, Planning Service staff must be fully informed and have an up-to-date awareness of the impact of renewable energy technologies. There is therefore, an onus on other departments to work with the Planning Service to fully inform Planners and to provide clear guidance and advice on the impact of these technologies (Recommendation 22).

37. Currently in Northern Ireland, all proposals for renewable energy installations must go through the planning process. In other regions permitted development rights have been granted for some installations. DoE has undertaken a consultation exercise on permitted development for domestic renewable energy installations. DoE officials informed the Committee during oral evidence that a report would be published in early 2011 and that legislation on permitted development for the installation of domestic micro generation equipment would be proposed thereafter. The Committee believes that such proposals should be brought forward at the earliest opportunity (Recommendation 23).

38. DoE has not undertaken a consultation on permitted development for business or agricultural renewable energy installations. There are clear advantages in allowing permitted development rights for some small-scale, non-domestic renewable energy installations. The Committee believes that DoE should commence a consultation exercise on permitted development for business and agricultural installations with a view to bringing forward proposals for permitted development in these sectors (Recommendation 24).

Public Buildings and Renewable Energy

39. Government must take a more active role in the promotion of renewable energy and in reducing public sector dependence on carbon intensive energy sources. It is important that Government is seen to lead by example. This is especially the case given reports that energy costs for both business and the public sector could double within the next five years due to UK Carbon Reduction Commitment legislation. Therefore the Executive must bring forward a programme to develop the renewable energy potential of public buildings. This should include targets and time-scales for substantially increasing the deployment of renewable energy right across the public sector (Recommendation 25).

Report on the Committee's Inquiry into Barriers to the Development of Renewable Energy Production and its Associated Contribution to the Northern Ireland Economy (Session 2010/2011)

Summary of Recommendations

Government Vision (Recommendations 1-3)

1. The Barnett review stated that the Executive must provide clear focus and leadership to the range of energy policy issues as a separate and distinct Government priority. The Committee supports this recommendation and calls on the Executive to provide appropriate leadership in delivering the overall energy agenda by bringing all responsibility for energy policy and strategy under a single Government department.

2. The Executive must develop a long-term vision for renewable energy which includes both an energy perspective and an economic perspective and establishes long-term partnerships to the benefit of Northern Ireland with other devolved administrations in the UK and with the Republic of Ireland, and should, where appropriate, include an all-island dimension for renewable energy.

3. The Executive must provide more resources and technical expertise to those responsible for developing energy policy to proactively drive the renewable energy agenda and enable the development of policies and strategies to help Northern Ireland progress in those renewable energy areas such as anaerobic digestion, energy from waste, geothermal energy and renewable heat which are underdeveloped in relation to other regions.

Government Policy and Strategy (Recommendations 4-7)

4. In relation to the Strategic Energy Framework, interim targets should be put in place in order to provide a clear indication of what is achievable and what has been achieved at interim stages and to assist in monitoring progress with the implementation of the Framework.

5. The 40% target for electricity consumption from renewable sources by 2020 should include specific stretching targets for electricity from sources other than wind and/or stretching targets for non-wind sources by 2025 and beyond.

6. The Sustainable Energy Interdepartmental working group should be supplemented by a group which includes representatives from the renewable energy sector, business, academia and NILGA to advise on the development of Government policy on renewable energy.

7. DETI, DRD, DARD and DoE should work with NIAUR as the Regulator for both water and energy, to conduct research to determine:

i) how much energy potential exists for anaerobic digestion through co-digestion of wastewater treatment sludge and agricultural material;
ii) the viability of moving quickly to establish anaerobic digestion facilities throughout Northern Ireland which can be used for wastewater treatment sludge and agricultural waste; and
iii) the most appropriate means of delivering such anaerobic digestion facilities whether through Northern Ireland Water, private sector contracts or other means.

Government Communications (Recommendation 8)

8. DETI should, as a priority, review the structures and mechanisms which have been established to provide advice and support on energy with a view to establishing a single organisation providing consistent, efficient, easily accessible advice and support to business and the public on all energy issues. This organisation should have a section dedicated to developing policy on the dissemination of support, advice and information to the public and business on renewable energy and its importance to the future of Northern Ireland.

Incentives for Renewable Energy Production (Recommendations 9-12)

9. To provide certainty for developers and to encourage and incentivise them to invest now, assurances should be provided that no investor will be worse off by investing now than they would be had they waited. This will require assurances that the incentives provided to future developers will be mirrored for existing developers.

10. It is important that DETI educate the financial sector and provide some level of assurances on the long term security of Renewable Energy Certificates so as reassure lenders and stimulate lending to renewable energy investors.

11. DETI should undertake an analysis to determine the costs and benefits to the Northern Ireland economy, business and renewable energy developers of introducing a FIT for small-scale generation along the lines of what has been introduced in GB.

12. In the short-term, Government policy on biomass should concentrate on renewable heat to assist in meeting the Strategic Energy Framework target of 10% of heat from renewable sources by 2020. DETI should also give favourable consideration to the Treasury offer of £25 million for a Renewable Heat Incentive for Northern Ireland.

Support for the Development of Renewable Energy Technologies (Recommendation 13)

13. DETI must explore the opportunities for enhancing the research funding system in Northern Ireland by benchmarking against leading European regions so as to ensure that Northern Ireland is in a position to take full advantage of opportunities for funding for research and development under EU Framework Programme 8.

Support for Business (Recommendations 14-17)

14. The nature of Invest NI support should be reviewed to realise the net benefits that indigenous SMEs can bring to the overall Northern Ireland economy.

15. Invest NI should review the technical knowledge and skills available within the organisation so as to ensure that it has the appropriate resources available to support the indigenous renewable energy sector.

16. The Department of Finance & Personnel should review the costs and benefits of making certain renewable energy technologies mandatory for new builds with a view to bringing forward proposals if feasible.

17. The Executive should, as a priority, consider the proposals for a Green New Deal Housing Fund with a view to agreeing how this can be taken forward including the nature and level of Government support required.

Grid Infrastructure (Recommendations 18-19)

18. A plan for infrastructure development must be prepared and implemented, with all key stakeholders having input into the plan. The timescales for infrastructure development must be included and must plan for the appropriate infrastructure to be in place in time to meet the 40% target for renewable electricity.

19. The Department of the Environment and the Planning Appeals Commission should prioritise the Public Inquiry process so as to ensure that high priority, key infrastructure projects such as the North-South Interconnector are dealt with as a top priority.

Grid Connection (Recommendation 20)

20. The Utility Regulator should review the process for grid connection to ensure that it is fully transparent and costs are fully explained. Connections for installations should be made in a timely fashion, with both parties aware of how long the process is going to take.

Planning and Consents (Recommendation 21-24)

21. The Department of the Environment and the Planning Service should ensure that planning policy for renewable energy (PPS 18) is implemented and applied in a consistent manner.

22. In order to inform planning decisions relating to emerging technologies, DETI, DoE and DARD should work with the Planning Service to fully inform Planners and to provide clear guidance and advice on the impact of these technologies.

23. The Department of the Environment should publish the results of its consultation on permitted development for domestic installations at the earliest opportunity and bring forward proposals as soon as possible.

24. The Department of the Environment should commence a consultation exercise on permitted development for business and agricultural installations with a view to bringing forward proposals for permitted development in these sectors.

Public Buildings and Renewable Energy (Recommendation 25)

25. The Executive must bring forward a programme to develop the renewable energy potential of public buildings. This should include targets and time-scales for substantially increasing the deployment of renewable energy right across the public sector

Department of
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Jim McManus

Committee Clerk,

Enterprise Trade and Investment Committee

Northern Ireland Assembly

Room 424, Parliament Buildings

BELFAST

BT4 3XX

17 December 2012

Dear Jim

UPDATES ON THE REPORT ON THE INQUIRY INTO RENEWABLE ENERGY & THE STRATEGIC ENERGY FRAMEWORK (SEF) IMPLEMENTATION PLAN

The Department responded to the Committee on the "Report on the Committee's Inquiry into Barriers to the Development of Renewable Energy Production and its Associated Contribution to the Northern Ireland Economy" on 27 June 2011, and supplied additional information following Committee consideration on 11 August 2011. Updates on progress towards implementation of the recommendations were provided on 21 November 2011 and 23 May 2012, and we agreed that future updates should be provided biannually. I am now writing to advise you of progress since May.

The current position is attached and includes input from other departments with responsibility for a number of the recommendations. The information provided should be considered in conjunction with the update provided in May. Departmental officials will be happy to provide further clarification on the recommendations for which this Department is responsible.

It was also agreed that updates on the SEF Implementation Plan would be provided every six months and the attached version reflects progress up to the end of September 2012. The Committee should be made aware that further milestones for 2012/13 and for the period 2013 and beyond are included in the update.

Yours sincerely

FIONA HEPPER (Head of DETI Energy Division)

Annex A

Detail on updates to the recommendations

- Recommendation 1 – OFMDFM put a paper detailing the Sustainable Development Champions' Group recommendations to the Executive on 31 May 2012. The Executive agreed that there are no operational or policy gaps of sufficient size in energy vires to merit substantive change and that the consolidation of energy functions should be revisited at some time in the future. In practice, this will be part of the wider Executive review of NI Departments.

- Recommendation 2 – the Sustainable Energy Action Plan was approved by the Executive on 5 April 2012 and was published on 4 May. It is envisaged that external consultants will be appointed late November/early December to carry out an initial study which will feed into work on a long term vision, to 2050, for energy in Northern Ireland.

- Recommendation 10 – A further EMR seminar was held in June 2012 to provide additional (updated) information on the move from Renewable Obligation Certificates to a Fit CFD. Representatives from the financial sector were invited to this seminar along with other stakeholders.

- Recommendation 11 – DETI is in the process of commissioning analysis to evaluate the structure of a small scale FIT, tariff levels and associated small scale ROC banding levels for the period prior to the FIT being introduced. It is anticipated that this work will commence in December 2012 and complete by March 2013.

- Recommendation 12 - the consultation on the Development of the Northern Ireland Renewable Heat Incentive closed in October 2011 and a summary of responses was provided to the Committee in November 2011. The final policy position has been

approved by the EU Commission. The first phase of the NI RHI launched on 1 November 2012.

- Recommendation 16 – new building regulations to improve the thermal performance of buildings were brought into operation by DFP on 31 October 2012. The new standards will provide an aggregate improvement of 25% over previous standards.

- Recommendation 17 – DFP has considered an economic appraisal of the options for increasing domestic energy and thermal efficiency, including the Green New Deal. The preferred option, approved by DFP on 18 May 2012, is the boiler replacement scheme proposed by the Housing Executive. The Social Development Minister launched the Department's Boiler Replacement Scheme in September 2012.

- Recommendation 18 – NIAUR briefed the ETI Committee on RP5 in early May 2012. NIAUR published the final determination for RP5 on 23 October 2012 (NIE have until 20 November to respond).

Update on progress towards implementation of recommendations in the Committee for Enterprise, Trade & Investment's Inquiry into Renewable Energy – November 2012

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
1. The Barnett review stated that the Executive must provide clear focus and leadership to the range of energy policy issues as a separate and distinct Government priority. The Committee supports this recommendation and calls on the Executive to provide appropriate leadership in delivering the overall energy agenda by bringing all responsibility for energy policy and strategy under a single Government department	Response provided by: OFMDFM The Sustainable Development Champions' Group has considered the DETI paper and provided recommendations that have been circulated to Ministers. It is intended that the Executive consider the recommendations during May.	Response provided by: OFMDFM The Sustainable Development Champions' Group has considered the DETI paper and provided recommendations that have been circulated to Ministers. OFMDFM put a paper detailing the Sustainable Development Champions' Group recommendations to the Executive on 31 May 2012. The Executive agreed that: - there are no operational or policy gaps of sufficient size in energy vires to merit substantive change; - the consolidation of energy functions should be revisited at some time in the future, taking into account the operational and policy status of the SEIDWG and the Cross-Departmental Working Group on Climate Change; and, - the small scale tactical reorganisation of energy efficiency functions to improve efficiency of operation should be kept under continuous review.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
2. The Executive must develop a long-term vision for renewable energy which includes both an energy perspective and an economic perspective and establishes long-term partnerships to the benefit of Northern Ireland with other devolved administrations in the UK and with the Republic of Ireland, and should, where appropriate, include an all-island dimension for renewable energy.	Response provided by: DETI The Sustainable Energy Action Plan (SEAP) was approved by the Executive on 5 April 2012 and was published on 4 May. The SEAP includes a commitment to undertake work to establish a long term vision, to 2050, for energy in Northern Ireland. It is envisaged that this work should be referred to the Executive for approval by the end of 2012.	Response provided by: DETI The Sustainable Energy Action Plan (SEAP) was approved by the Executive on 5 April 2012 and was published on 4 May. The SEAP includes a commitment to undertake work to establish a long term vision, to 2050, for energy in Northern Ireland. It is envisaged that external consultants will be appointed late November/early December to carry out a study to establish a long term vision, to 2050, for energy in Northern Ireland. The work should be well advanced by March 2013.
3. The Executive must provide more resources and technical expertise to those responsible for developing energy policy and proactively drive the renewable energy agenda and enable the development of policies and strategies to help Northern Ireland progress in those renewable energy areas such an anaerobic digestion, energy from waste, geothermal energy and renewable heat which are underdeveloped in relation to other regions.	Response provided by: DETI The department has continued to monitor the staffing of Energy Division in the light of its budget settlement and competing departmental priorities. In the last few months decisions have been taken in relation to the resourcing of the Division, across both the renewables and markets branches. Additional staff have been allocated to renewables and are already engaged on work associated with renewable heat; and, by end June a new resource will be available to the renewable electricity branch.	Action completed. No further update required.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
4. In relation to the Strategic Energy Framework, interim targets should be put in place in order to provide a clear indication of what is achievable and what has been achieved at interim stages and to assist in monitoring progress with the implementation of the Framework.	Response provided by: DETI Interim targets for the percentage of renewable electricity consumption and percentage of renewable heat for each of the years 2012/13, 2013/14 and 2014/15 have been included in the Executive's new Programme for Government and have been incorporated into the SEF Implementation Plan. The interim targets are as follows: Electricity consumption: 2012/13: 12% 2013/14: 15% 2014/15: 20% Renewable heat: 2012/13: 2% 2013/14: 3% 2014/15: 4% The caveats detailed at June 2011 remain valid. A further update on progress	Response provided by: DETI Action completed. No further update required. Response provided by: DETI A further update on progress against the SEF Implementation Plan to end September 2012 is attached as an Annex to this report.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
	against the SEF Implementation Plan to end March 2012 - is attached at Annex A to this report.	
6. The Sustainable Energy Interdepartmental working group should be supplemented by a group which includes representatives from the renewable energy sector, business, academia and NILGA to advise on the development of Government policy on renewable energy.	Response provided by: DETI Nothing to add to update provided in November 2011.	Response provided by: DETI Nothing to add to update provided in November 2011.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
10. It is important that DETI educate the financial sector and provide some level of assurances on the long term security of Renewable Energy Certificates so as reassure lenders and stimulate lending to renewable energy investors.	Update provided by: DETI The department remains committed to organising a seminar in 2012/13 financial year, which will also cover the move away from the NIRO as part of EMR implementation. This cannot be organised however until the NIRO response and position on EMR are published. The need for liquidity in the market is a key element of EMR and DETI will extend invitations to the financial sector to such a seminar at the time.	Update provided by: DETI An additional EMR seminar was held in June 2012 to provide information on the move from Renewable Obligation Certificates to a FIT CfD. Representatives from the financial sector were invited to the seminar, along with other stakeholders. In addition, the NIRO consultation response was published in August 2012, with a further supplementary consultation on banding levels for solar PV and biomass sustainability requirements being launched in the Autumn. The NIRO amendment order is scheduled for laying in the Assembly before the end of March 2013. Following the introduction of the DECC Energy Bill in late November 2012, DETI will again invite

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
		stakeholders, including representatives from the finance sector, to a briefing event which will provide further detail on the current and future changes to renewable electricity incentivisation.
11. DETI should undertake an analysis to determine the costs and benefits to the Northern Ireland economy, business and renewable energy developers of introducing a FIT for small-scale generation along the lines of what has been introduced in GB.	Response provided by: DETI The recent consultation on changes to the NIRO contained proposals for implementing EMR, including the introduction of a small scale FIT. It is intended that the forthcoming DETI Energy Bill will take the enabling powers for a small scale FIT. DETI will commission analysis during 2012/13 to evaluate the tariff levels for a small scale FIT and small scale banding levels for the period prior to the FIT being introduced.	Response provided by: DETI The recent consultation on changes to the NIRO contained proposals for introduction of a small scale FIT. Responses to the consultation where overwhelmingly in favour of a small scale FIT and the forthcoming DETI Energy Bill which was subject to consultation during this period will take the enabling powers for a small scale FIT. DETI is in the process of commissioning analysis to evaluate the structure of a small scale FIT, tariff levels and associated small scale ROC banding levels for the period prior to the FIT being introduced. It is anticipated that this work will commence in December 2012 and complete by March 2013.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
12. In the short-term, Government policy on biomass should concentrate on renewable heat to assist in meeting the Strategic Energy Framework target of 10% of heat from renewable sources by 2020. DETI should also give favourable consideration to the Treasury offer of £25 million for a Renewable Heat Incentive for Northern Ireland.	Response provided by: DETI The consultation on the Development of the Northern Ireland Renewable Heat Incentive closed in October 2011 and a summary of responses was provided to the ETI Committee. Following the consultation, further economic analysis was carried out to consider issues raised by stakeholders. This analysis has informed the final policy position and DETI is awaiting final approval from the EU Commission before implementation of the scheme.	Response provided by: DETI The consultation on the Development of the Northern Ireland Renewable Heat Incentive closed in October 2011 and a summary of responses was provided to the ETI Committee. Following the consultation, further economic analysis was carried out to consider issues raised by stakeholders. This analysis informed the final policy position which has been approved by the EU Commission. The first Phase of the NI RHI will launch on 1 November 2012. Development of Phase 2 of the scheme is underway – this phase will extend the eligible technologies and incentivise domestic installations.
13. DETI must explore the opportunities for enhancing the research funding system in	Response provided by: Invest NI Nothing to add to	Response provided by: Invest NI Nothing to add to update provided in November 2011

<table>
<tr><th>Recommendation</th><th>DETI Update (May 2012)</th><th>DETI Update (November 2012)</th></tr>
<tr><td>Northern Ireland by benchmarking against leading European regions so as to ensure that Northern Ireland is in a position to take full advantage of opportunities for funding for research and development under EU Framework Programme 8.</td><td>update provided in November 2011.</td><td></td></tr>
<tr><td>14. The nature of Invest NI support should be reviewed to realise the net benefits that indigenous SMEs can bring to the overall Northern Ireland economy.</td><td>Response provided by: Invest NI

Nothing to add to update provided in November 2011.</td><td>Invest NI continually reviews the support it provides through both formal evaluations and best practice reviews. As with any other sector, and in line with its economic development remit, Invest NI's focus is primarily geared towards growing the indigenous renewable energy sector. Through its mainstream support, Invest NI will continue to assist local renewables companies to explore and take up the significant development opportunities that exist. Applications for financial support from SME's, in any sector, are rigorously appraised to ensure value for money is achieved for the public purse and that the benefits to the local economy are maximised.
Invest NI Support to the Sector is outlined below:

<table>
<tr><th>Financial Year</th><th>Offers Made</th><th>Total Assistance (£m)</th><th>Planned Investment (£m)</th></tr>
<tr><td>2008-09</td><td>103</td><td>7.93</td><td>54.03</td></tr>
<tr><td>2009-10</td><td>137</td><td>1.90</td><td>7.53</td></tr>
<tr><td>2010-11</td><td>112</td><td>0.71</td><td>2.37</td></tr>
<tr><td>2011-12</td><td>123</td><td>1.11</td><td>4.57</td></tr>
<tr><td>2012-13 (Apr – Sep)</td><td>74</td><td>0.74</td><td>2.37</td></tr>
<tr><td>Grand Total</td><td>549</td><td>12.39</td><td>70.88</td></tr>
</table>
</td></tr>
</table>

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
		The Renewable Energy sector is a wide and diverse sector. For the purposes of the above table Invest NI has defined Renewable Energy businesses as those client businesses engaged in the Renewable Energy Products sector, or Waste Products and Environmental Services sub sectors. In addition a range of activities are being delivered within Invest NI's Sustainable Productivity Programme including an interest free energy efficiency loan scheme, a capital grant scheme for water and/or materials saving projects, industrial symbiosis services, free audits/surveys to identify resource efficiency projects, free technical consultancy to help businesses take resource efficiency projects forward and a range of one-to-many events and activities. Where appropriate the deployment of sustainable energy (renewable and energy efficiency) technologies are promoted within these activities. Invest NI also continues to support renewable energy R&D activity in Northern Ireland through Carbon Trust's Innovation programmes and has offered £746k to Carbon Trust for this activity in the period 2011/12 to 2012/13.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
15. Invest NI should review the technical knowledge and skills available within the organisation so as to ensure that it has the appropriate resources available to support the indigenous renewable energy sector.	Response provided by: Invest NI Nothing to add to update provided in November 2011.	Response provided by: Invest NI Nothing to add to update provided in November 2011.
16. The Department of Finance & Personnel should review the costs and benefits of making certain renewable energy technologies mandatory for new builds with a view to bringing forward proposals if feasible.	Response provided by: DFP Nothing to add to update provided in June 2011.	Response provided by: DFP New building Regulations to improve the thermal performance of buildings came into operation on 31 October 2012. The new standards will provide an aggregate improvement of 25% over previous standards.
17. The Executive should, as a priority, consider the proposals for a Green New Deal Housing Fund with a view to agreeing how this can be taken forward including the nature and level on Government support required.	Response provided by: DSD A cross Departmental Group, Chaired by DSD developed a full economic appraisal to determine the most effective use of the £12 million available to deliver maximum domestic energy efficiency improvements. The preferred option, approved by DFP on 18 May 2012, is one put forward by the Housing Executive. The Social Development Minister will announce details shortly.	Response provided by: DSD A cross Departmental Group, Chaired by DSD developed a full economic appraisal to determine the most effective use of the £12 million available to deliver maximum domestic energy efficiency improvements. The preferred option, approved by DFP on 18 May 2012, is one put forward by the Housing Executive and in September 2012 the Social Development Minister launched the Departments Boiler Replacement Scheme.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
18. A plan for infrastructure development must be prepared and implemented, with all key stakeholders having input into the plan. The timescales for infrastructure development must be included and must plan for the appropriate infrastructure to be in place in time to meet the 40% target for renewable electricity.	Response provided by: NIAUR NIAUR has published the draft determination for RP5. These are available on the NIAUR website. Within the proposals, NIAUR has detailed the approach to the approval of costs for investment in supporting renewable generation. As many of the projects and costs are not known in detail at this time, NIAUR plan to assess and approve the appropriate costs on a project per project basis. NIAUR considers this to be in the consumer interests and a lower risk approach for NIE. NIAUR briefed the committee on RP5 in early May 2012.	Response provided by: NIAUR NIAUR published the final determination for RP5 on 23 October 2012. Within the determination, NIAUR defined the approach to the approval of costs for investment in supporting renewable generation. An additional consultation on the details of the assessments that will be undertaken closed on 27 September. The responses to this will be reflected in the final determination. As many of the projects and costs are not known in detail at this time, NIAUR plan to assess and approve the appropriate costs on a project per project basis. NIAUR considers this to be in the consumer interests and a lower risk approach for NIE. NIAUR briefed the committee on RP5 in early May 2012. NIE has until 20 November to respond to the NIAUR final determination.
19. The Department of the Environment and the Planning Appeals Commission should prioritise the Public Inquiry process so as to ensure that high priority, key infrastructure projects such as the North-South Interconnector are dealt with as a top priority.	Response provided by: DoE Nothing to add to update provided in November 2011.	Response provided by: DoE Nothing to add to update provided in November 2011.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
20. The Utility Regulator should review the process for grid connection to ensure that it is fully transparent and costs are fully explained. Connections for installations should be made in a timely fashion, with both parties aware of how long the process is going to take.	Response provided by: NIAUR NIAUR has published the draft determination for RP5. These are available on the NIAUR website. NIAUR expects extensive stakeholder engagement on connections during the 3 month consultation period. NIAUR has also written to NIE requesting them to submit a new format of connection charging documentation. The new format is to include additional information required by connectees and will increase the transparency of costs included.	Response provided by: NIAUR Following extensive stakeholder engagement on connections during the three month consultation period, NIAUR published the final determination for RP5 on 23 October 2012. Following a request by NIAUR, NIE has submitted a new format of connection charging documentation. The new format includes additional information required by connectees and will increase the transparency of costs included. This was approved by NIAUR prior to it taking effect on 1 October 2012. Action 20 is now complete.
21. The Department of the Environment and the Planning Service should ensure that planning policy for renewable energy (PPS 18) is implemented and applied in a consistent manner.	Response provided by: DoE For wind turbine developments, the Department of the Environment has rolled out a training programme which included issues such as siting, visual impact and other policy considerations. Whilst this was to ensure consistency in application of the policy across Northern Ireland, each application remains to be considered on its merits.	Response provided by: DoE For wind turbine developments, the Department of the Environment has rolled out a training programme which included issues such as siting, visual impact and other policy considerations. Whilst this was to ensure consistency in application of the policy across Northern Ireland, each application remains to be considered on its merits. Renewable energy applications are a standing item on the monthly Principals' working group where discussions take place to ensure consistency of approach across the area office

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
		network. A Performance Action Plan is now in place and includes the monitoring of wind turbine applications. Furthermore, to improve processing times for AD applications, the majority of the small scale AD applications have recently been transferred to the local planning offices for assessment.

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
22. In order to inform planning decisions relating to emerging technologies, DETI, DoE and DARD should work with the Planning Service to fully inform Planners and to provide clear guidance and advice on the impact of these technologies.	Response provided by: DoE To assist those involved with the development of anaerobic digestors, the Minister of the Environment has announced his intention to bring forward supplementary planning guidance to PPS18. It is intended that this guidance will be published for public consultation in Summer 2012, and will inform developers and investors as to the appropriate level of information to be provided in forwarding planning applications for anaerobic digestion facilities.	Response provided by: DoE To assist those involved with the development of anaerobic digesters, the DOE is currently devising bespoke guidance to complement the policy provisions of PPS 18 and its Best Practice Guidance. This new guidance is being drawn up in conjunction with the renewable energy industry representatives and trade organisations, and it is anticipated that this will be published for public consultation in early 2013.
23. The Department of the Environment should publish the results of its consultation on permitted development for domestic installations at the earliest opportunity and bring forward proposals as soon as possible.	Response provided by: DoE Nothing to add to update provided in November 2011.	Response provided by: DoE Nothing to add to update provided in November 2011.
24. The Department of the Environment should commence a consultation exercise on permitted development for business and agricultural installations with a view to bringing	Response provided by: DoE Nothing to add to update provided in November 2011.	Response provided by: DoE Further to its consultation on small scale renewable technology permitted development which ended in January 2010, the Department intends to bring

Recommendation	DETI Update (May 2012)	DETI Update (November 2012)
forward proposals for permitted development in these sectors.		forward legislative proposals for a range of non-domestic renewable permitted development rights later this year. These will include solar panels, ground and water source heat pumps, biomass stores and boiler housing. In addition the Department intends to consult on the provision of permitted development rights for anaerobic digesters on agricultural units as part of its consultation on agricultural buildings permitted development. It is anticipated that the consultation will run between October 2012 and January 2013.
25. The Executive must bring forward a programme to develop the renewable energy potential of public buildings. This should include targets and time-scales for substantially increasing the deployment of renewable energy right across the public sector.	Response provided by: OFMDFM Nothing to add to update provided in November 2011.	Response provided by: OFMDFM Nothing to add to update provided in November 2011.

Update on progress towards implementation of recommendations in the Committee for Enterprise, Trade & Investment's Inquiry into Renewable Energy – November 2011

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
1. The Barnett review stated that the Executive must provide clear focus and leadership to the range of energy policy issues as a separate and distinct Government priority. The Committee supports this recommendation and calls on the Executive to provide appropriate leadership in delivering the overall energy agenda by bringing all responsibility for energy policy and strategy under a single Government department.	Response provided by: DETI & OFMDFM **Partially Accept.** The Executive agreed in February 2011 that the Sustainable Energy Inter-departmental Working Group (SEIDWG) should undertake work on energy vires and a leadership statement on sustainable energy. SEIDWG will accelerate this work to explore the scope for consolidating and streamlining sustainable energy activities, as and where appropriate, within the current departmental structure. If this work confirms the need for a single energy department, SEIDWG will make any necessary recommendation to the Executive. It will be for the Executive to decide on any structural change in Departments.	The Committee welcomes the acceptance by DETI and OFMDFM of aspects of this recommendation. **DETI** to forward SEIDWG report on energy vires and leadership on sustainable energy to the Committee when it is available. **DETI** to forward a copy of the ToR for SEIDWG work on energy vires, leadership and sustainable energy to the Committee.	Response provided by: DETI & OFMDFM OFMDFM has agreed to progress the energy vires work through the cross-Government Sustainable Development Champions Group and their conclusions will be provided on completion. A copy of the energy vires paper recently presented to SE IDWG members is attached for information (Annex 1).	Update provided by: DETI Energy vires was discussed at the Sustainable Development Champions' Group on 3 August, when it was agreed that DETI would present a Cost Benefit Analysis paper to the next SEIDWG meeting on 30 November. This work is on target.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
1.(Cont'd)	OFMDFM believe that there is merit in examining the feasibility of marshalling the various responsibilities and the different research and operational activities currently being undertaken, within the broad Energy theme by Departments, in a singular way. It will assist DETI as necessary should this occur. OFMDFM also recognise that there are advantages in creating conditions where particular expertise resides in specific strategic area; for example, within a single Directorate.	Following publication of SEIDWG findings, the Committee requests a written briefing from **OFMDFM** on its proposals for examining the feasibility of marshalling the various responsibilities and the different research and operational activities within the broad energy theme.		
2. The Executive must develop a long-term vision for renewable energy which includes both an energy perspective and an economic perspective and establishes long-term partnerships to the benefit of Northern Ireland with other devolved	Response provided by: DETI **Accept.** Building on the work of the SEIDWG sub-group for Economic Opportunities and Skills Development, which was included in the paper from the main group to the Executive in February 2011, SEIDWG will compile an Executive – wide Sustainable Energy Action Plan by the end of 2012, which will contain a long term vision for renewable energy.	The Committee welcomes the compilation of a Sustainable Energy Action Plan. **DETI** to provide the Committee with the reasons for the long time period until the publication of a Sustainable Energy Action Plan (end of 2012). Also, is the delay related to Recommendation 3 that	Response provided by: DETI The planned timeline for the Sustainable Energy Action Plan indicates that it will progress through the Executive process in December 2011 and, if adopted by the Executive, it will be published as soon	Update provided by: DETI

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
administrations in the UK and with the Republic of Ireland, and should, where appropriate, include an all-island dimension for renewable energy.		more resources are provided to those responsible for developing energy policy? **DETI** to provide the Committee with details of the broad proposals for inclusion in the Action Plan prior to the development of the Plan.	as possible thereafter in spring 2012. A copy of the paper recently presented to the SE IDWG, setting out the proposed structure and timelines, is attached (Annex 2).	Input has been received from all departments and a draft Sustainable Energy roadmap is being prepared for discussion at the next SEIDWG meeting on 30 November.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
3. The Executive must provide more resources and technical expertise to those responsible for developing energy policy and proactively drive the renewable energy agenda and enable the development of policies and strategies to help Northern Ireland progress in those renewable energy areas such an anaerobic digestion, energy from waste, geothermal energy and renewable heat which are underdeveloped in relation to other regions.	Response provided by: DETI **Under consideration.** DETI is aware of the work load within Energy Division and is considering this in the context of a wider Departmental organisational review. This review is being undertaken to ensure existing resources are appropriately distributed across priority areas to meet Ministerial objectives. The outcome may be that some additional resource is allocated to energy policy. However, this needs to be balanced against pressures in other areas and the top management team has not yet completed all of the necessary work. The outcome of this will also have to be discussed with the Minister ahead of final decisions being taken.	The Committee will wait outcomes of **DETI** Organisational Review.	Response provided by: DETI Implementation of the Organisational Review is ongoing. The Department aims to enhance Energy Division resources – although this remains challenging given other pressures in the Department.	Update provided by: DETI The Department continues to monitor the staffing of Energy Division in the light of its budget settlement and competing departmental pressures. In relation to Geothermal and Renewable Heat, the Committee will be aware that the recent consultation on the Renewable Heat Incentive included a call for evidence in relation to Geothermal energy. The consultation is now closed and responses are being analysed.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
4. In relation to the Strategic Energy Framework, interim targets should be put in place in order to provide a clear indication of what is achievable and what has been achieved at interim stages and to assist in monitoring progress with the implementation of the Framework.	Response provided by: DETI **Accept.** DETI will consider an appropriate high level interim target for renewable electricity and renewable heat for inclusion in the SEF implementation plan. However, it must be borne in mind that the delivery of such targets relies on a significant number of external factors such as:- how investors respond to the market and overall investment and economic conditions; and delivery of grid infrastructure, including, and in particular, the North – South Interconnector.	The Committee is aware that any organisation, when setting targets, must bear in mind that the delivery those targets relies on a number of external factors which are outside its control. The Committee suggests that, in developing its interim targets, **DETI** include 'critical assumptions' to take account of external factors. As the SEF details the energy strategy for Northern Ireland from 2010 to 2020, **DETI** should explain to the Committee why there has been a delay in developing an implementation plan. Also, is the delay related to Recommendation 3 that more resources are	Response provided by: DETI SEF Implementation Plan is attached (Annex 3). There has been no delay in developing an implementation plan. The plan, primarily for internal monitoring purposes, has been prepared and is updated quarterly.	Update provided by: DETI Draft interim targets for the percentage of renewable electricity consumption and percentage of renewable heat for each of the years 2012/13, 2013/14 and 2014/15 have been put forward for inclusion in the draft Programme for Government and when approved

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
		provided to those responsible for developing energy policy? **DETI** to inform the Committee of the expected date the Committee can expect to see a draft SEF Implementation Plan.		will be incorporated into the SEF Implementation Plan. The draft targets are as follows: **Electricity consumption** 2012/13: 12% 2013/14: 15% 2014/15: 20%

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
				Renewable heat: 2012/13: 2 % 2013/14: 3 % 2014/15: 4 % The caveats detailed at June 2011 remain valid.
5. The 40% target for electricity consumption from renewable sources by 2020 should include specific stretching targets for electricity from sources other than wind and/or stretching targets for non-wind sources by 2025 and	Response provided by: DETI **Reject.** DETI recognises the importance of contributions from all onshore technologies towards our 40% target and beyond. While the Department is in the process of setting offshore renewable energy targets as a statement of its ambition in this particular field, of up to 900 MW from wind and 300 MW	**DETI** to provide the Committee with details of the potential technology mix scenarios that could make up the 40% target. **DETI** incentivises renewable energy through the Northern Ireland Renewables Obligation (NIRO).	Response provided by: DETI The Committee received these scenarios as part of a written briefing on the on shore renewable energy action plan in June 2011.	Update provided by: DETI

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
beyond.	from tidal resources by 2020 (subject to the approval of the Executive), in order to provide a clear statement about its offshore ambitions, DETI does not wish to be prescriptive about the exact mix of technologies to meet the 40% target. Instead, it wants the level of renewable energy penetration to be market led, technology neutral and non geographic specific. The mix to be deployed to meet the 40% target will depend on specific decisions made by developers operating within an effective regulatory framework and Government incentivisation policies.	This has been revised annually for the past number of years to ensure that renewable energy production is appropriately incentivised. **DETI** to explain to the Committee how, in the absence of targets: i. It plans to ensure a cost-effective, reliable and diverse mix of generation; and		
5. (Cont'd)	The Department, through the Strategic Environmental Assessment (SEA) of its Onshore Renewable Electricity Action Plan, has examined low, medium and high levels of onshore wind, biomass and other technologies. This, coupled with the environmental results of the offshore SEA, will give us an indication of potential technology mix scenarios, which include all forms of onshore technologies, that could make up the 40% target.		The 40% target is a market led, technology and geographically neutral target. The market will bring forward the most cost effective technologies and this is already being seen with on shore wind. The cost of some of the other renewable technologies remains high but is likely to reduce	

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			over time as the technologies mature but in the meantime DETI continues to ensure that the NIRO incentivises	
	DETI will continue to support a range of renewable technologies, through the NIRO, to ensure a cost-effective, reliable and diverse mix of generation.		renewable technologies at a level expected to increase deployment. It is important that the market brings forward reliable generating capacity and this is generally found in proven technologies in the short term. In a time of financial constraint it is vital for us to focus on those technologies and projects which are capable of providing the most cost-effective and significant contribution to achievement of	

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			the 2020 target.	
5. (Cont'd)			The UK Renewables Roadmap identifies the eight technologies which have either the greatest potential (more than 90%) to help meet the 2020 target in a cost effective and sustainable way, or offer the greatest potential for the decades that follow. These eight technologies are on shore wind, off shore wind, marine, biomass electricity, biomass heat, ground and air source heat pumps and renewable transport. The Utility Regulator is responsible for evaluating the cost effectiveness of infrastructure development required to integrate	

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			renewables onto the transmission and distribution network.	
		ii. It measures success of the NIRO in terms of effectiveness and value for money	The success of the NIRO is judged by the amount of renewable electricity generated. This has increased from 3% in 2005 to a current figure of 10% and is on course to meet the 12% target by 2012.	The latest data shows that the amount of renewable electricity generated in the period April to September 2011 was 11.2%; with May at 18.7% and September 16.8%.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
5. (Cont'd)			The amount of renewable energy generated is monitored on a monthly basis by Northern Ireland Electricity and this year to date (April 2011-March 2012) one month has already achieved a level of 18% and one month 11% of electricity generated from renewable sources. In terms of value for money, the lower obligation level imposed on NI suppliers under the NIRO (currently 5.5% compared to 12.5% for GB) and the fact that the associated costs of the ROs are spread across all UK consumers means that NI gets a good deal from the NIRO scheme. The 2009/10 Renewables Obligation Annual Report produced by Ofgem shows that there was a	

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			29% increase in ROCs issued to NI generators compared to 2008/09 – the largest increase across the UK.	

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
6. The Sustainable Energy Interdepartmental working group should be supplemented by a group which includes representatives from the renewable energy sector, business, academia and NILGA to advise on the development of Government policy on renewable energy.	Response provided by: DETI **Partially Accept.** The Department has always been, and remains, open to sectoral and other business, academia and local government interests in the formulation of all sustainable energy policy. For example the Sustainable Development Commission (until its closure) was represented on the SEIDWG. Sectoral representatives have been included in the Renewable Heat group, the Offshore Renewable Energy Forum and will also be included in a sub-group of the SEIDWG which is being set up to consider grid related issues. The situation will be kept under review and as the opportunity arises to include sectoral representation in any other groups, full consideration will be given to this.	The Committee welcome the inclusion of sectoral representatives in a sub-group of SEIDWG. **DETI** to provide the Committee with a list of those groups represented on the Renewable Heat Group	Response provided by: DETI The Renewable Heat Group operated between January 2010 and June 2010 to oversee a study into the Northern Ireland renewable heat market. Sectoral representation was from: • Action Renewables • Carbon Trust • Queen's University • University of Ulster • MATRIX Panel • Ulster Farmer's Union • Biomass Energy NI	Update provided by: DETI The following

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
		DETI to provide the Committee with details of membership of future SEIDWG sub-groups as they are formed.	SE IDWG sub-groups focussing on Renewable Heat, Planning and Grid Development issues will soon be established. Further details will be provided when membership is confirmed.	sub-groups have been established: • Renewable Heat Strategy - representatives from DETI, OFMDFM, DFP, DRD, DSD, DARD, DOE, DHSSPS, DEL and Invest NI. The group met for the first time on 18 October and will meet again in January 2012.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
6. (Cont'd)				• Planning & Renewable Energy - representatives from DETI, DOE (including Planning Service and NIEA) and Invest NI. The group met on 15 September and again on 9 November. • Grid Development & Renewable Energy – representatives from DETI, DOE (Planning Service), DRD, Invest NI, NIE, SONI and NIAUR. The group met for the first time on 25 October and will meet again in December.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
7. DETI, DRD, DARD and DoE should work with NIAUR as the Regulator for both water and energy, to conduct research to determine: (i) how much energy potential exists for anaerobic digestion through co-digestion of wastewater treatment sludge and agricultural material; (ii) the viability of moving quickly to establish anaerobic digestion facilities throughout Northern Ireland which can be used	Response provided by: DRD, NI Water, NIAUR, DARD and DETI **Reject.** The Departments have met to research the feasibility of implementing the recommendation. The full findings are at Appendix A. DRD, NIAUR, DETI, DOE, DARD and NI Water have investigated this recommendation and advise that additional research of NI Water sludge disposal options would not represent best use of public money at this time. A long term PPP contract has been in place since 2007 for the disposal of all of NI Water's wastewater sludge through thermal treatment. This contract runs until 2032 and involves the use of assets built in NI at a cost of c£65m to enable the compliant disposal of all of NI Water's wastewater sludge.	The Committee notes the response to this recommendation. The Committee will copy DETI's response on this recommendation to the Questor Centre in Queen's University Belfast for comment, as it was they who suggested the use of wastewater treatment sludge for co-digestion.		

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
for wastewater treatment sludge and agricultural waste; and				

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
7. (Cont'd) (iii) the most appropriate means of delivering such anaerobic digestion facilities whether through Northern Ireland Water, private sector contracts or other means.				

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
8. DETI should, as a priority, review the structures and mechanisms which have been established to provide advice and support on energy with a view to establishing a single organisation providing consistent, efficient, easily accessible advice and support to business and the public on all energy issues. This organisation should have a section dedicated to developing policy on the dissemination of support, advice and information to the public and business on renewable energy and its importance to the future of Northern	Response provided by: DETI **Reject.** DETI already identified this issue in 2007 and commissioned a review of the Sustainable Energy Market. It identified significant overlap in the many organisations in existence which are not controlled or funded by Government. The recommendation of this review was that better co-ordination across Government was needed and hence the Sustainable Energy Interdepartmental Working Group (SE IDWG) was established. Since then, the Executive has endorsed a unified approach to sustainable energy communications, proposed by the SEIDWG Sustainable Communications sub-group, to all Government funded sustainable energy activities. The Committee will be aware that a number of Departments have a role to	Despite SEIDWG providing better co-ordination across Government, the provision of advice to different sectors by three departments and one NDPB suggests considerable duplication. The Committee requests the views of **DETI** on whether the SEIDWG work on energy vires and a leadership statement on sustainable energy (Recommendation 1, DETI response) will include a review of how advice is provided to different sectors.	Response provided by: DETI DETI, and other departments, will input to the energy vires work which should be lead by the cross-Government Sustainable Development Champions Group (secretariat provided by OFMdFM). If this work results in a reduction in the number of departments with responsibility for energy, the provision of advice will be one of a number of key issues to be considered.	Update provided by: DETI Vires work underway as per update on Recommendation 1.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
Ireland.	play in energy matters. DETI only has vires regarding the provision of advice in relation to energy efficiency to the community sector. Invest NI provides advice to the business sector, DSD provides advice to the domestic sector, and DFP provides advice to the public sector.			
8. (Cont'd)	The Renewable Energy Directive includes recommendations on disseminating information to the public, and DETI, through the SEIDWG, will be working with the other NI Departments to ensure that any work on disseminating advice and support to business and the public aligns with this Directive.			A new brand – 'Energy Wise', for all Government funded sustainable energy messages, was launched on 3 October 2011. This will ensure a unified approach across Departments and other stakeholders.
9. To provide certainty for developers and to encourage and incentivise them to invest now, assurances should be provided that no investor will	Response provided by: DETI **Reject.** 'Grandfathering' arrangements were put in place when banding was introduced across all three Renewables Obligations in 2009, including the Northern Ireland	The Committee notes the response to this recommendation.		

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
be worse off by investing now than they would be had they waited. This will require assurances that the incentives provided to future developers will be mirrored for existing developers.	Renewables Obligation (NIRO), to protect investment decisions against fluctuations in ROC banding levels. The policy intention is to maintain a given level of support for the full lifetime of eligibility for ROCs from the point of accreditation. For grandfathered generators, the policy intent is not to change the original level of support received at future banding reviews. The purpose of this policy is to allow generators to finance the fixed costs of their development over the lifetime of the project's eligibility for support under the RO.			
9. (Cont'd)	Future banding reviews could determine that the capital and operating costs for some technologies have decreased due to a range of factors, therefore new generators require less support. However these reduced costs would not apply to those who have already invested when costs were higher. Developers therefore need certainty that the ROC level they invest at will remain consistent.			

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	Adoption of the Committee's recommendation would result in uncertainty and may discourage investment, as developers would hesitate to invest due to the possibility that ROC levels could be banded down at a later date.			
10. It is important that DETI educate the financial sector and provide some level of assurances on the long term security of Renewable Energy Certificates so as reassure lenders and stimulate lending to renewable energy investors.	Response provided by: DETI **Accept.** DETI will organise a seminar for the financial sector on Renewable Obligation Certificates when the Department is clear on the future of the NIRO, following DECC's Electricity Market Reform (EMR) consultation and the completion of specific NI studies which are underway. This is likely to be in 2012.	The Committee welcomes DETI's approach to implementing this recommendation. **DETI** to inform the Committee when this action has been completed.	Response provided by: DETI DETI will inform the Committee accordingly as part of updates on implementation of the Committee's recommendation.	Update provided by: DETI The department remains committed to organising a seminar in 2012.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
11. DETI should undertake an analysis to determine the costs and benefits to the Northern Ireland economy, business and renewable energy developers of introducing a FIT for small-scale generation along the lines of what has been introduced in GB.	Response provided by: DETI **Accept.** This recommendation has been fulfilled by work commissioned by the Department from Cambridge Economic Policy Associates (CEPA) and a copy of the report was submitted to the Committee on 8 November 2010. Further work is, however, underway, in the context of analysing the impact of the EMR on the NIRO and the best way forward for Northern Ireland.	The Committee welcomes DETI's implementation of this recommendation. **DETI** to keep the Committee informed when further work is completed.	Response provided by: DETI The work on analysing the impact of the EMR proposals is underway and should be available to the Committee in the autumn.	Update provided by: DETI The work on analysing the impact of the EMR is progressing well and should be made available to the Committee in December. Exploratory discussions with DECC continue on how the EMR proposals might apply to NI. This includes detailed examination of how a FIT with CfD could work in NI, and socialising of costs across the UK.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
12. In the short-term, Government policy on biomass should concentrate on renewable heat to assist in meeting the Strategic Energy Framework target of 10% of heat from renewable sources by 2020. DETI should also give favourable consideration to the Treasury offer of £25 million for a Renewable Heat Incentive for Northern Ireland.	Response provided by: DETI **Accept.** The Bioenergy Action Plan which underwent consultation, was revised and endorsed by the Executive, and makes it clear (page 11) that the majority of consultees supported the proposal to focus attention on the development of bioenergy in NI for renewable heat and renewable electricity. DETI plans to introduce a support mechanism for Renewable Heat, subject to the completion by early June of an economic appraisal. A public consultation on this will issue in the early Summer. DETI will consider the need for a cross departmental renewable group to support the development of a renewable heat strategy/roadmap. There are a range of issues outside of DETI's remit that would need to be addressed in a wider renewable heat strategy, including biomass sustainability.	The Committee welcomes DETI's plans to implement this recommendation. **DETI** to provide the Committee with a written briefing on the draft proposals and summary of consultation responses to give the Committee adequate time to comment before they are finalised.	Response provided by: DETI The consultation on the Development of the Northern Ireland Renewable Heat Incentive was launched on 20 July 2011 and will be open until 3 October 2011. Once responses have been collated and analysed, DETI will provide the Committee with a summary of consultation responses in adequate time to ensure consideration and comment before proposals are finalised. Copies of the consultation document were sent to the	Update provided by: DETI The consultation on the Development of the Northern Ireland Renewable Heat Incentive closed on 3 October 2011. Eighty responses were received and these are now being collated and analysed. DETI will provide the Committee with a summary of consultation responses by end November 2011 to allow for consideration and comment before proposals are finalised.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			Committee Clerk on 25 July.	
Recommendation	**DETI Response (June 2011)**	**Committee Consideration (July 2011)**	**DETI Response (August 2011)**	**DETI Update (November 2011)**
13. DETI must explore the opportunities for enhancing the research funding system in Northern Ireland by benchmarking against leading European regions so as to ensure that Northern Ireland is in a position to take full advantage of opportunities for funding for research and development under EU Framework Programme 8.	Response provided by: Invest NI **Accept.** Invest NI will continue to explore available R&D opportunities, not only under Framework but also under other EU, national and cross-border research programmes and promote them to NI stakeholders. It will work to identify the potential opportunities for Northern Ireland's businesses as they become available under FP7's successor, including those in the renewable sector.	The Committee welcomes Invest NI's acceptance of this recommendation. **Invest NI** to provide the Committee with a list of other EU, national and cross-border research programmes and details of uptake in Northern Ireland.	Response provided by: Invest NI attached at Annex 4.	Update provided by: Invest NI attached at Annex 1. The response at Annex 1 has been updated to show the increased number of businesses supported.
14. The nature	Response provided by: Invest NI	The Committee welcomes Invest	Response	Update provided by: Invest NI

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
of Invest NI support should be reviewed to realise the net benefits that indigenous SMEs can bring to the overall Northern Ireland economy.	**Partially Accept.** Invest NI continually reviews the support it provides through both formal evaluations and best practice reviews. As with any other sector, and in line with its economic development remit, Invest NI's aim is already very much geared to growing the indigenous renewable energy sector – as well as attracting Foreign Direct Investment.	NI's support for renewable energy. **Invest NI** to provide the Committee with details of support provided to renewable energy businesses during each year of the last Programme for Government.	provided by: Invest NI attached at Annex 5.	attached at Annex 2. The response at Annex 2 has been updated to include the assistance provided by Invest NI to renewable energy businesses during the 2011/12 financial year, to date.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
14. (Cont'd)	Through its mainstream support, Invest NI will continue to assist local renewables companies to explore and take up the significant development opportunities that exist. Applications for financial support from SME's in any sector are rigorously appraised to ensure value for money is achieved for the public purse and that the benefits to the local economy are maximised.			
15. Invest NI should review the technical knowledge and skills available within the organisation so as to ensure that it has the appropriate resources available to support the indigenous renewable energy sector.	Response provided by: Invest NI **Partially Accept.** The rationale for this recommendation is not clear and Invest NI was not asked to provide details of its renewable team during the enquiry. However, Invest NI regularly reviews its staffing requirements and believes that it has the appropriate resources to support and develop the indigenous renewable energy sector. The Invest NI team which leads on renewables is primarily made up of professional technical staff and includes:	The Committee welcomes the news that Invest NI's professional technical staff have a wide range of appropriate experience. **Invest NI** to comment specifically on its future support for renewable energy when briefing the Committee on the outcomes of its TRANSFORM project.	Response provided by: Invest NI Invest NI's Chief Executive has agreed to update the Committee on the agency's support for the Renewable Energy Sector at his next scheduled update session in October 2011.	Update provided by: Invest NI The Chief Executive's next scheduled update session is in December 2011, when he will update the Committee on the agency's support for the Renewable Energy Sector.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
	• mechanical and electrical engineers; • chemical engineers; • industrial chemists; • process engineers. Several team members have PhDs in subjects related to renewables while others have completed various postgraduate qualifications, including the University of Ulster's MSc in Energy.			
15. (Cont'd)	Owing to their wide range of industrial expertise the team is regularly consulted by renewables project developers and works to maximise the economic benefits of NI's renewables sector in tandem with other Invest NI teams, including Trade, Research and Development, Business Improvement and International Sales.			
16. The Department of Finance & Personnel should review the costs and benefits of making certain renewable energy	Response provided by: DFP **Accept.** DFP has already announced a programme of changes to Part F of the Building Regulations to enhance thermal standards, working	The Committee welcomes DFP's acceptance of this recommendation.		

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
technologies mandatory for new builds with a view to bringing forward proposals if feasible.	towards low or zero carbon from 2016, in line with amendments planned elsewhere in the UK. The Department's policy in this regard is to set as a baseline increasingly challenging standards of building fabric efficiency (with appropriate testing to ensure these targets are achieved) and to then allow designers and builders to select whatever additional measures suit the particular circumstances of the project to meet the overall target. This non-prescriptive approach to the technologies available gives flexibility to builders and developers to choose whatever mix of solutions best meets their particular needs. It is likely that from 2013 onwards, some form of renewable energy will be necessary to meet the proposed requirements. The cost-effectiveness of a range of technologies is considered as each amendment to Part F is progressed.			

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
17. The Executive should, as a priority, consider the proposals for a Green New Deal Housing Fund with a view to agreeing how this can be taken forward including the nature and level on Government support required.	Response provided by: DSD **Accept.** DSD has taken the lead in examining the Green New Deal proposals. The Permanent Secretary chairs an interdepartmental group with responsibility for working with Green New Deal steering group members to progress the business case. This work is ongoing.	The Committee welcomes DSD's acceptance of this recommendation **DSD** to provide the Committee with a written briefing on progress with implementing the Green New Deal proposals.	DSD will respond separately on this issue to the ETI Committee.	Update provided by: DSD The Green New Deal business proposal was submitted to the interdepartmental group on 14 October 2011 and is currently under consideration. Membership of the group is drawn from DSD, DFP and DETI.
18. A plan for infrastructure development must be prepared and implemented, with all key stakeholders having input into the plan. The timescales for infrastructure development must be included and must plan for the appropriate infrastructure to be in place	Response provided by: NIAUR and DETI **Accept.** As part of the regulatory process, the Utility Regulator has received and approved a number of requests from NIE and SONI for capital expenditure associated with short and medium term projects to facilitate renewable development. It is currently reviewing further grid development proposals submitted by NIE. These proposals will be subject to full cost benefit analysis as the need to develop grid	The Committee welcomes NIAUR's and DETI's plans to implement this recommendation. **DETI** to provide the Committee with a written briefing, when appropriate, on proposals for the grid development plan.	Response provided by: NIAUR and DETI <u>DETI</u> The Utility Regulator is tasked with deciding on the timescale and funding for the necessary grid development. DETI has no role in this process and can therefore only advise the Committee of the Utility Regulator's decision in due	Update provided by NIAUR

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
in time to meet the 40% target for renewable electricity.	quickly must be balanced against the cost to consumers. In the first instance, the Utility Regulator intends to publish the proposals on their website and also plans full stakeholder engagement.		course.	
18.(Cont'd)	DETI plans to set up a SEIDWG sub-group on Grid & Renewable Energy, to include NIE and DOE Planning, to discuss related issues and encourage better stakeholder engagement to facilitate the development of a grid development plan by NIE.		<u>NIAUR</u> As part of the RP5 Process, NIE submitted their business plan for the period 2012 to 2017. The Utility Regulator recently published a NIE Paper detailing their view of the capital requirements in the RP5 period. Following on from this the Utility Regulator hosted a stakeholder event (jointly with CCNI) on 'Network Development and Asset Placement', where NIE and SONI both presented on the future network.	The process detailed in August in ongoing and NIAUR continue to work through the RP5 process. It is expected that a preliminary determination will be made in early 2012.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			The Utility Regulator is currently carrying out a rigorous assessment of the capex and opex requirements for RP5. Once this process is completed, the Utility Regulator intends to fully consult on the assessment and our recommendations for the RP5 period. We expect to be consulting on our findings in late 2011/early 2012. The Utility Regulator believes it is appropriate to provide a written briefing to the Committee once we have completed our analysis and are in a position to consult publicly.	
18.(Cont'd)			It should be noted that due to the uncertainty around the necessary investment for the support of	

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			renewables, the Utility Regulator is likely to approve this investment on an incremental basis (spread over RP4, RP5 and RP6, provided NIE demonstrate need and value for money (CBA).	
19. The Department of the Environment and the Planning Appeals Commission should prioritise the Public Inquiry process so as to ensure that high priority, key infrastructure projects such as the North-South Interconnector are dealt with as a top priority.	Response provided by: DoE and DETI **Accept.** In referring cases to the Planning Appeals Commission (PAC) for public inquiries DOE indicates the level of priority that it considers appropriate to each case. The PAC has to date organised the programme of public inquiries in accordance with the priority order indicated by the Department. It should be noted that the extent to which a case may be prioritised will depend on the availability of Commission resources.	The Committee welcomes DoE's and DETI's acceptance of this recommendation. **DoE** to provide the Committee with details of how it prioritises cases as it is not clear whether DoE is best placed to decide priorities. DoE to provide the Committee with a list of cases referred to the PAC and the priorities allocated to each.	DOE will respond to the Committee separately.	Update provided by: DOE DOE responded to the Clerk of the Committee with written briefing on the key points of the published guidance on 16 September 2011 advising that DOE prioritises cases to the PAC having regard to the following criteria: • the potential significance to the NI economy; • the inclusion of the project

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
				on the list of strategic investment projects by the SIB; • the date of referral to the PAC (having regard to the principle of administrative fairness.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
20. The Utility Regulator should review the process for grid connection to ensure that it is fully transparent and costs are fully explained. Connections for installations should be made in a timely fashion, with both parties aware of how long the process is going to take.	Response provided by: NIAUR **Accept.** The Utility Regulator is happy to continue to pursue this recommendation. A consultation paper on electricity connection policy to the Northern Ireland distribution system was published by the Utility Regulator on 15 November 2010. Having considered all the responses to the consultation the Utility Regulator published a next steps paper on 10 May 2011. In relation to costs, NIAUR would advise that connections for generators to the system are currently charged at a cost reflective rate. In other words the generator who requests the connection must pay the cost associated with it. However, the consultation responses showed strong support for an examination of the definition of those costs which are	The Committee welcomes NIAUR's acceptance of this recommendation. NIAUR to provide the Committee with information on any proposals the Regulator will bring forward following engagement with stakeholders. **NIAUR** to inform the Committee of the expected date the Committee can expect to see a policy on grid connection.	Response provided by: NIAUR As indicated in the 'NI Electricity Distribution System Connection Policy – Next Steps Paper', the Utility Regulator intends to assess the cost and timing associated with Connections and will consider as part of the RP5 process. Therefore the Utility Regulator will also consult on this in late 2011/early 2012. The Utility Regulator believes it is appropriate to provide a written briefing to the	Update provided by NIAUR As noted in August, the Consultation process is likely to commence in January 2012.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
	counted as connection costs. The Utility Regulator will engage fully with stakeholders on this subject and held workshops for large scale generators on 23 May 2011 and small scale generators on 6 June. In relation to timing, the Regulator advises that they will continue to work with NIE to ensure that connections are made in a timely fashion. However delays are often due to causes which are beyond NIE's control; for example planning, access to land, and the need for downstream reinforcement which requires planning permission.		Committee once we have completed our analysis and are in a position to consult publicly.	
21. The Department of the Environment and the Planning Service should ensure that planning policy for renewable energy (PPS 18) is	Response provided by: DoE **Accept.** The majority of planning applications relating to renewable energy development are dealt with by two specialist teams within the Department's	The Committee Welcomes DoE's acceptance of this recommendation.		

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
implemented and applied in a consistent manner.	Strategic Planning Division. This permits applications for wind farms and energy from waste proposals to be processed in a consistent manner. PPS18 "Renewable Energy" sets out clear policy on renewable energy and is accompanied by best practice guidance. This assists in the delivery of a consistent approach in the processing of renewable energy proposals.			
22. In order to inform planning decisions relating to emerging technologies, DETI, DoE and DARD should work with the Planning Service to fully inform Planners and to provide clear guidance and advice on the impact of these technologies.	Response provided by: DETI, DoE and DARD **Accept.** Guidance on all forms of renewable energy development, how they work, their impact and other consenting regimes required was published as complementary best practice guidance to PPS18. The guidance was heavily influenced through bilateral meetings with both DETI and DARD and was endorsed by the Northern Ireland Executive.	The Committee welcomes the acceptance of this recommendation by DETI, DoE and DARD. **DoE** to provide the Committee with a written briefing on the key points of the published guidance.	Response provided by: DoE The Best Practice Guidance accompanying PPS18 'Renewable Energy' provides background information on the various technologies that may come forward in	Update provided by: DOE DOE responded to the Clerk of the Committee with written briefing on the key points of the published guidance on 16 September 2011.

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			Northern Ireland.	
22.(Cont'd)	The SEIDWG sub-group on Planning & Renewable Energy will work together to see how planners can be further informed on renewable energy technologies.		It provides a description of each technology; the planning issues that relate to each technology; the information that is required for each technology in submitting a planning application, where a planning application is required; and lists other authorisations or consents that may be required. In addition, the best practice guidance provides advice on how best to use the principles of passive solar design in design, siting and layout of new development, taking	

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
			advantage of the natural energy in materials and air created by exposure to the sun.	
23. The Department of the Environment should publish the results of its consultation on permitted development for domestic installations at the earliest opportunity and bring forward proposals as soon as possible.	Response provided by: DoE **Accept.** Domestic micro-generation permitted development rights for solar panels, solid biomass fuel storage, and ground and water source heat pumps were introduced with effect from 6 April 2011. A number of responses to the consultation exercise, that ended in January 2010 (and included both domestic and non-domestic technologies) raised concerns about the introduction of permitted development	The Committee welcomes DoE's acceptance of this recommendation and its implementation of many aspects of the recommendation. **DoE** to keep the Committee informed on developments on its analysis of responses to the domestic element of the consultation.	Response provided by: DOE The Department is content to keep the Committee informed on developments on its analysis of responses to the domestic element of the consultation on domestic micro-generation permitted development.	Update provided by: DOE DOE has published its analysis of responses in relation to domestic microgeneration on its website which can be accessed at www.planningni.gov.uk.
23.(Cont'd)	rights for Wind Turbines and Air			As stated in June, domestic micro-

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
	Source Heat Pumps, in relation to noise and other issues (including in the case of wind turbines, air navigation safety). Consequently, these technologies are not a feature of the new domestic permitted development regime. However, the Department continues to liaise with other planning jurisdictions in an effort to address these issues. Copies of the consultation responses have now been published on the Department's website and the Department will shortly be publishing its analysis of the responses to the domestic element of the consultation on its website.			generation permitted development rights for solar panels, solid biomass fuel storage, and ground and water source heat pumps were introduced with effect from 6 April 2011.
24. The Department of the Environment should commence a consultation exercise on permitted development for business	Response provided by: DoE **Accept.** The consultation exercise on microgeneration	The Committee welcomes DoE's plans to implement this recommendation. **DoE** to keep the Committee informed on	Response provided by: DOE The Department is content to keep the Committee	Update provided by: DOE DOE advised the Committee Clerk in writing on 16

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
and agricultural installations with a view to bringing forward proposals for permitted development in these sectors.	permitted development that ended in January 2010, covered both domestic and non-domestic permitted development and included, for example, proposals for non-domestic solar panels, wind turbines, biomass, combined heat and power plants, heat pumps and anaerobic digestion plant installation on agricultural land. The Department aims to complete further policy development work for non-domestic microgeneration permitted development rights this year following engagement with other planning jurisdictions, Government Departments, the Chief Building Control Officers Group together with Environmental Health and Senior Planners	progress with the implementation of this recommendation	informed on progress with the implementation of non-domestic permitted development rights.	September that the Department is undertaking additional policy development work on a range of non-householder permitted development rights and will keep the Committee informed on progress with the implementation of non-domestic permitted development rights for microgeneration.
24 (Cont'd)	from the Department of the Environment to address issues such as glare, noise, vibration, health, aircraft safety and interference with			

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
	communications systems. It is the Department's aim to bring forward legislative proposals for non-domestic permitted development rights to the Assembly later this year.			
25. The Executive must bring forward a programme to develop the renewable energy potential of public buildings. This should include targets and time-scales for substantially increasing the deployment of renewable energy right across the public sector.	Response provided by: DETI & OFMDFM **Partially Accept.** Regulation 11 of the UK-wide Promotion of the Use of Energy from Renewable Source Regulations (SI 2011/243)[49] puts a duty on responsible authorities in Northern Ireland to take such steps as it considers appropriate to ensure that a public building constructed after 31 December 2011, or undergoing major renovation after that date, fulfils an exemplary role in the context of the Renewable Energy Directive.	The Committee welcomes DETI's and OFMDFM's acceptance of aspects of this recommendation. **OFMDFM** to provide the Committee with details of recommendations on emissions management in the public sector when available.	OFMDFM will respond to the Committee separately, on both points.	Update provided by: OFMDFM OFMDFM officials will share the findings in relation to Greenhouse Gas emissions reductions from the wider public estate with the Committee, when the matter has been considered by the Sustainable Development Champions Group. Timing will be dictated by the Group and is likely to be by the end of 2012.

[49] http://www.legislation.gov.uk/uksi/2011/243/contents/made/data.pdf

Recommendation	DETI Response (June 2011)	Committee Consideration (July 2011)	DETI Response (August 2011)	DETI Update (November 2011)
25 (Cont'd)	OFMDFM draw attention to the new Sustainable Development Implementation Plan and, in particular, the actions associated with Objective 5.1 *'Reduce Greenhouse Gas Emissions'.* In this context, the cross-Government Sustainable Development Champions Group will consider Greenhouse Gas emissions reductions on the wider public sector estate and bring forward recommendations on emissions management. Clearly there are energy implications associated with this, and there is an opportunity to frame this work along the lines of the recommendation provided by the Committee. The DETI Sustainable Champion will highlight the linkages to the Champions Group in due course.	**OFMDFM** to provide the Committee with details of the role of the Sustainable Champion and the Sustainable Development Champions Group		Official-level development work is progressing on the Terms of Reference for the Sustainable Development Champions Group and the Role Specification for a Sustainable Development Champion. When these have been finalised, they will be provided for information to the Committee.

Invest NI Response

Recommendation 13 – Follow-up Action: Invest NI to provide the Committee with a list of other EU, national and cross-border research programmes and details of uptake in Northern Ireland.

(i) EU Research Programmes

Currently EU funding support for collaborative research and innovation is divided into three main programmes:

- 7th Framework Programme for Research and Technological Development – FP7
- Competitiveness and Innovation Framework Programme (CIP)
- European Institute of Innovation and Technology (EIT)

Additional FP7-related instruments include:

Joint Technology Initiatives which are R&D programmes co-financed by the European Commission and EU member states and, in some cases, with contribution from large industry partners in a public-private partnership (PPP). There are currently five active JTIs in Europe: Fuel Cells and Hydrogen, Aeronautics and Air Transport, Innovative Medicines Initiatives, Nanoelectronics Technology 2020 and Embedded Computing Systems.

The Risk Sharing Finance Facility is a new instrument funded jointly by the Commission and the European Investment Bank (EIB) to facilitate the financing of research and innovation projects through loans and guarantees from the EIB. The first projects were in renewable energy.

Article 169 (A169s) initiatives are aimed at the coordination of national programmes that the Commission actively participates in and funds. There are currently three A169s: Ambient Assisted Living (AAL), EMRP (Metrology); EUREKA Eurostars. The EUREKA programme offers a European platform for collaboration between member states to fund jointly research projects. The EUREKA Eurostars programme is targeted at research-performing SMEs and is recognised as a useful introduction to transnational research cooperation for SMEs. The Technology Strategy Board promotes the Eurostars programme within the UK.

A new European funding programme will commence in 2014 "Horizon 2020 – the Framework Programme for Research and Innovation". Horizon 2020 is not merely a new name for a rolling

Framework Programme. Rather it will represent an integrated funding system that will cover all research and innovation funding currently provided through FP7, CIP and EIT. It is intended to bring these different types of funding together in a coherent and flexible manner.

(ii) National Research Programmes

The Technology Strategy Board (TSB) is the UK's national innovation agency and runs a number of industry-lead research programmes:

- Collaborative R&D – this programme assists the industrial and research communities to work together on R&D projects in strategically important areas of science, engineering and technology.
- SBRI – uses government procurement to drive innovation. It provides business opportunities for innovative companies whilst solving the needs of government departments.
- Grant for R&D – offers funding to SMEs to engage in R&D projects without requiring collaboration.
- Technology Innovation Centres (TICs): The recently launched TICs will focus on specific technologies where there is a potentially large global market and a significant UK capability. These centres will be an important part of the UK's innovation system, making a major long-term contribution to UK economic growth.

In some cases, programmes run by the Research Councils are also relevant to industry participants but in general are more suited to academic research.

(iii) North/South Cross-Border Research Programmes

IntertradeIreland fund the "Innova" All-island collaborative R&D programme, geared towards product, process and service development. Joint R&D proposals are accepted from companies acting in collaboration with companies in the opposite jurisdiction, either Northern Ireland or Republic of Ireland.

(iv) Uptake in Northern Ireland

Invest NI, through its Collaborative R&D Support Service, promotes and facilitates participation by NI companies in the full range of these programmes as relevant to the strategic business direction of the company. Participants do not submit proposals through Invest NI, nor is there any obligation upon them to inform Invest NI or any national authority of a submission. All applications and subsequent grant agreements (if successful) are negotiated directly with the funding body without intermediaries. Detailed information on uptake in Northern Ireland across all of the listed programmes is, therefore, not available to Invest NI.

Highly confidential data on successful FP7 participation by NI organisations is provided twice yearly from the European Commission directly to the Department of Business, Innovation and Skills (BIS) in the UK. The most recent figures released on 1 April 2011 indicate that Northern Ireland has now drawn down €29.6m from FP7.

A small high technology company, CapnaDSP has been placed first in a recent Joint Technology Initiative (JTI) competition on Nanotechnology. They are currently in the negotiation phase to finalise the level of funding. Invest NI are also working closely with the Competence Centre for Sustainable Energy (a QUB / UU / AFBI collaboration) to prepare a joint application for a Regions of Knowledge (RoK) in Resource Efficiency under the FP7 Capacities theme. The closing date for this application is January 2012.

The Technology Strategy Board is currently running an interim IT system and is not in a position to be able to list successful applications by region. Invest NI is aware of a number of local successes including; 10 successful SBRI applications, 2 successful Eurostars applications and a number of companies successful in the Collaborative R&D programme including: Wrightbus, Bombardier, Randox and Almac.

To date InterTradeIreland has released over £5m in funding through the Innova programme and supported 25 North / South partnerships.

Recommendation 14 – Follow-up Action: Invest NI to provide the Committee with details of support provided to renewable energy businesses during each year of the last Programme for Government.

Invest NI's Support for Renewable Energy Businesses

The Renewable Energy sector is a wide and diverse sector. The supply chain is made up of many components ranging from legal and environmental services through to software and, as might be expected, the many forms of engineering. The sector is further complicated by the fact that many companies that provide goods and services for the renewable energy supply chain also provide goods and services to other sectors.

Therefore, for the purposes of this inquiry, Invest NI has defined Renewable Energy businesses as those client businesses engaged in the Renewable Energy Products sector, or Waste Products and Environmental Services sub sectors. Information on the assistance provided to these businesses during the last Programme for Government period is provided below:

Financial Year	Offers Made	Total Assistance (£m)	Planned Investment (£m)
2008-09	108	11.70	68.33
2009-10	139	1.91	7.54
2010-11	122	0.75	2.54
2011-12	53	0.28	1.09
Grand Total	**422**	**14.63**	**79.50**

Carbon Trust

In addition, Invest NI also funds the activities of the Carbon Trust in Northern Ireland and contributes to the funding of Carbon Trust's UK-wide programmes. The Carbon Trust seeks to help companies on a strategic basis to reduce carbon emissions and increase the competitiveness of their business

through lower energy bills. During the period 1st April 2008 to 31st March 2011, Invest NI provided £12.1 million of funding to the organisation, which whilst not specifically allocated to renewable energy businesses, has benefited the local sustainable energy sector.

More specifically, of this total funding, some £410,408 was provided directly by Carbon Trust in the form of R&D support to renewable energy businesses to develop new energy technologies in Northern Ireland (a breakdown of this R&D support is provided below for information).

Financial Year	Assistance Offered (£)
2008-09	104,802
2009-10	61,569
2010-11	244,037
Grand Total	**410,408**

Invest NI continues to support renewable energy R&D activity in Northern Ireland through Carbon Trust's Innovation programmes and has offered £746k to Carbon Trust for this activity in 2011/12.

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (9 December 2010) – (Full Report)

Members present for all or part of the proceedings:

Mr Alban Maginness (Chairperson)

Mr Leslie Cree

Mr Paul Frew

Mr Paul Givan

Ms Jennifer McCann

Mrs Claire McGill

Mr Gerry McHugh

Witnesses:

Ms Alison Clydesdale – Department of Enterprise, Trade and Investment

Mrs Fiona Hepper – Department of Enterprise, Trade and Investment

Ms Olivia Martin – Department of Enterprise, Trade and Investment

Mr David Thomson – Department of Enterprise, Trade and Investment

The Chairperson: Mr Thomson, you did not really touch on the industrial aspect of renewable energy. How big is the potential for job creation, not just employing people to generate renewable energy, but through the manufacture of renewable energy products and equipment and research and development in universities?

Mr David Thomson (Department of Enterprise, Trade and Investment): There is a very big potential, with one caveat. If you read the European strategies or look at what is being said in Ireland, Scotland or England, everybody is saying that it is a very competitive market. That means that you have to look at what competitive advantage you have. As I said briefly earlier, I think that Northern Ireland has a competitive advantage. We have skills in manufacturing and skills in things like composites. We are close to the market, which is useful both for onshore and offshore generation. When we talk about offshore it is not just Northern Ireland offshore, but the Irish Sea and Wales, for example.

We certainly have potential. I know that Invest NI is doing quite a lot of work and is engaged with a number of potential inward investors at the moment. Of course, if we got big inward investors, that would have supply chain consequences. As you know, Harland and Wolff is keen to develop the market and has been relatively successful to date. It certainly sees a large potential in using the facilities of Belfast port. The economic strategy, on the basis of IREP, is focusing on research and development. We should encourage innovation and R&D, and renewable energy is one of the areas mentioned. I know that both universities are doing work on renewable energy.

Mrs Hepper: Invest NI hosted a very successful supply chain event, alongside the Crown Estate, in March, which was well attended. Another is scheduled for March 2011 — I think around 3 March or 4 March — which will be just ahead of the Crown Estate call for the projects for Northern Ireland waters. That is being shaped at the moment. There is also some discussion about a renewables event in the United States to coincide with the St Patricks Day event. So, we have a number of very good opportunities to promote the product offerings of Northern Ireland and start to get our differential market offerings out into the wider world. Invest NI has done some work on that. As David said, it sees particular opportunities on the surveying, design, manufacture and assembly side of things, as well as the installation, operation and management**.**

If we get projects coming forward for the waters off Northern Ireland shores, and an installation is going into the water, at some point it will have to be decommissioned, and there will have to be work done on that. There are a number of different supply chain opportunities, and we will be pursuing those through Invest NI.

The Chairperson: Nigel McClelland of Invest Northern Ireland, when giving evidence to the Committee, spoke about an estimated 31,000 jobs in Northern Ireland across the low-carbon sector, which includes building and environmental technologies. He also said that, in the renewable energy sector in particular, it was estimated that there were approximately 3,800 jobs: that is at the moment, I understand

Mrs Hepper: That's right.

The Chairperson: He said that, given the projected growth figures, there could be as many as 15,000 jobs by 2015. Do you agree?

Mrs Hepper: The figures that he quoted come from a piece of work done on a UK-basis a couple of years ago by the Department of Business, Innovation and Skills. It stated that around 3,000 to 4,000 was the baseline for jobs in Northern Ireland, building to around 15,000 or 16,000 by around 2015 or 2016. Invest NI thought that was a credible range

The Chairperson: So, none of that is far-fetched?

Mr Thomson: No; it is not far-fetched. I would not like to say that it is a DETI projection; I am not sure that I would go as far as that. However, there is certainly potential.

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (17 June 2010) (Full report)

Members present for all or part of the proceedings:

Mr Alban Maginness (Chairperson)

Mr Paul Butler (Deputy Chairperson)

Mr Gregory Campbell

Mr Leslie Cree

Dr Alasdair McDonnell

Mr Daithí McKay

Mr Stephen Moutray

Mr Sean Neeson

Witnesses:

Mr Victor Christie – Biogas Alliance

Mr Robert Brennan – Biogas Alliance

Mr Reuben McFarland – Biogas Alliance

Mr John McLenaghan – Biogas Alliance

Mr Robert Brennan (Biogas Alliance): Good morning, ladies and gentlemen. I am conscious that the Committee has received some briefings on the issue, but I just not sure how much members have been told. We want to get across two main points today. We are not here to beat up on people. Rather, we are here to highlight the opportunity that is being missed. The local chairman of the Royal Institution of Chartered Surveyors said: "NI (Northern Ireland) has an 18 million tonnes reserve (annually) of good quality biomass (otherwise described as biodegradable waste) that when digested in the absence of air (Anaerobic Digestion) in a biogas plant can yield in excess of 30% of its vehicle fuel demand, or 16% of its heat and power consumption. As yet this ubiquitous resource is virtually unexploited."

We concur that that resource is totally unexploited, and to get the biogas industry up and running here, it will need a bit of a kick-start.

Biomass has the ability to be good for NI plc. At the moment, energy flow in Northern Ireland is worth about £1 billion annually. However, because our power production and the grid system are not vested locally but in the Middle East, all that profit flows out of here. Every time local renewable company makes a megawatt of electricity, it generates about £1 million of revenue that stays here. However, ninety-something per cent of revenue is flowing out of here. For financial reasons, we want to begin to turn that around.

Mr Butler: Thank you very much for your presentation. You talk about renewable energy primarily coming from wind, and your vision is for biogas plants all over the country connected with the farming industry. What set-up costs are involved?

Mr Christie: A biogas plant costs between £4,000 and £5,000 per kilowatt to install and £1,000 per kilowatt to run. However, it is labour intensive and it will create jobs. Also, biogas plants do away with diseases such as brucellosis.

Mr Christie: I have a quote here from an article on feed-in tariffs. It is to do with Germany. In the four years since their introduction in Germany, the tariffs have created 300,000 jobs and they have driven down unit costs per kilowatt. Far from being a waste of money, they have become the most powerful engine of German economic regeneration. Instead of having energy bills that pay for the import of non-renewable fossil fuels, Germany is paying its citizens to produce, install and maintain their own renewable energy systems. Therefore, it is self-financing. It will not cost anything if you do it right. It is completely self-financing. Germany has saved €5 billion from not having to import oil, and that money has been used to kick start and run all the renewable energy plants. They have 5,000 anaerobic digesters or biogas systems. In a lifetime, they will create €50 billion for the local economy.

Mr Christie: I have a statement from one of the guys behind me that contains some figures that members might be interested in. Buying gas from grass is an opportunity to create cohesion in our economy by bringing together the energy, agricultural, structural engineering, research, education and tourism sectors. If 5% of Northern Ireland's grass were used for biogas, it would create enough renewable electricity for 120,000 homes, 400 gigawatts of renewable heat, £30 million per year to farmers for providing food stock, £80 million to the construction industry, a new local market for the engineering sector worth £80 million, up to 1,000 new jobs in the operational phase alone, infrastructure development and integration with wind, wave and waste renewables to achieve energy independence and export potential. That is just 5% of our gas.

Each region must have a plan B in place by the end of this month. Countries that want to invest in a region will look for the plan B on the website. If there is no plan B, there will be no investment, but they will choose a country that is thinking way ahead. There is an Organization of the Petroleum Exporting Countries (OPEC) table that contains the countries that have underdeveloped renewables and are in the worst trouble, and they include the UK and Ireland. Countries that are in the safe zone include Finland, Sweden, Australia, Canada and Norway. There are all very advanced in renewables, and that is the way that we should be thinking.

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (18 November 2010) (Full report)

Members present for all or part of the proceedings:

Mr Alban Maginness (Chairperson)

Mr Leslie Cree

Mr Paul Frew

Mr Paul Givan

Mr William Irwin

Ms Jennifer McCann

Dr Alasdair McDonnell

Mrs Claire McGill

Mr Sean Neeson

Witnesses:

Mr Joe Donaldson – Northern Ireland Manufacturing

Mr Bryan Gray – Northern Ireland Manufacturing

Mr Richard Hogg – Northern Ireland Manufacturing

Mr Bryan Gray:… One of our main concerns is that we feel that, in some ways, we are being left behind by other UK regions. In the past three weeks, there have been announcements about a £70 million investment in Scottish ports and a £60 million investment in British ports to stimulate their respective renewables sectors. Companies such as General Electric (GE), Siemens and Gamesa have already committed to British installations. GE has stated that it intends to locate its new R&D centre there. That, we believe, is the result of a lack of focus and vision on the part of government here and having a vast array of Departments that exercise various responsibilities in the area of renewables.

We also believe that there is a need for an all-island approach in Ireland so that we complement what our near neighbours are doing rather than compete with them. In the past six months, the sustainable development strategy and the strategic energy framework have been published, but we are disappointed with both documents. We badly need a road map for renewables, because few, if any, targets were set in those documents. Both documents mention the fact that there is a huge opportunity for creating green jobs, but, unfortunately, all we have heard so far are green words. No green jobs have been created.

Mr Hogg: We should not ignore the fact that we do not have carte blanche to site renewable energy systems everywhere. However, there is a happy medium, and the rest of Europe does not go through the nonsense that we do. We compete in the worldwide market. The Province has a

fantastic opportunity, and we cannot keep knocking the passion out of people who want to do this stuff. The last thing that we need is this constant barrage of nonsense coming at us from all roads and directions, and a banking system that does not work.

The Province's renewables industry has fantastic prospects. We have all the good precision engineering and fabrication that goes on in mid-Ulster. A lot of blades are involved in renewable energy systems and they require a lot of composites, and we are about to open a new compositing centre in Glengormley. Everything is going for us, but we need to get the core of it sorted out. Forget about the big picture of there being hundreds of millions of jobs and just concentrate on the core stuff. There are things that we or the Government could do that will not cost any money, and that is get the test sites up and running, and call them test sites. That will encourage outside investment.

From my perspective, will I go back to the bank to ask for a lot of money to try to grow a company? Absolutely not. I have been kicked from pillar to post, and I am not doing that again. If somebody from outside comes, which is how I see investment coming in, we must give them something for their investment.

We have plenty of tide and plenty of wind here. We also have a great climate for growing grass, which means that biomass can be a very good product. We have a fantastic opportunity here, but, as usual, it is slipping away because we are getting stuck in bureaucracy.

Mr Joe Donaldson: I thank you, Chairman, and the Committee for taking the time to meet us. My company is a small one. Three years ago we employed 47 people, but today we have 26 and are looking at making more redundancies. We looked at this area, having done a lot of work in the water and wastewater industries. A lot of that infrastructure has been completed, and there are other companies like mine that have been involved in manufacturing in that area. We need to determine where the next opportunities lie. Again, as Richard says, there is a window of time in our part of the world to get at this and move forward, and, in doing so, to give job security to the people in our company. We want to keep the guys that we have and start to build on that.

The slower that this process rolls out, the more difficult that it will be to keep those people together. I spend a good part of my time in England and Scotland, and I have been out to Saudi Arabia and other places to see what the opportunities are for our company. If we are going to do business in England, in Scotland or especially in Saudi Arabia, we are going to have to look at employing people over there. The work that we are doing in Scotland at the moment is costing me £500 or £600 a man every week just to get them over there and to provide them with digs. The costs ramp up on a 12-week contract requiring four or five men.

Ideally, I want to bring the work to Dromore. I do not want to be employing people in England or Scotland in order to keep the bones of the business going. I want to bring it to Dromore and add some value to my community. We can achieve that if we can have a clear way through. We need to understand the supply chain and how to feed into it at the lower levels. We are not a big company; we are not a Harland and Wolff. However, if we can drip-feed off the larger companies who are able to speak to the like of Siemens, it will give bedrock companies

That is especially true in the light of Richard‟s experience. We have had losses ourselves this year, but, thankfully, there is work in the pipeline because of our efforts back and forth to England. However, is it going to be viable to fly guys over there and put them up or are we going to have to look at local labour to do installation for us? That is a big concern for us.

Mr Gray: To sum it up, the message from a recent conference on renewables held by Invest Northern Ireland was that there are millions of opportunities worldwide in renewables. However, someone at my table said that he wanted to know where the opportunities are in Ahoghill. That message is not getting through to people.

Mr Hogg: I am not suggesting that all of Northern Ireland be designated an enterprise zone, because that would be too much, and it would end up getting fluffed into some nonsense. In my area, Limavady, an enterprise zone was to be set up at Campsie, and there was to be one in Omagh and one in Belfast. That would give people the opportunity to go into those areas with biomass boilers, anaerobic digesters and wind technology and fast-track them. There could be such a zone offshore as well as on land. Surely that could be done at the stroke of a pen.

Mr Hogg: As far as the tidal systems go, Northern Ireland‟s knowledge and expertise makes us world leaders, even though we hide our light under a bushel far too much. Our universities and the guys that work in the field have made us world leaders. There is nowhere else in the world that has what we have in Strangford Lough. We are world leaders in that regard. As far as other types of manufacturing are concerned, we have fabrication businesses in mid-Ulster that are well able and are world leaders.

Make no mistake about it: Northern Ireland at this moment still has a fantastic manufacturing base and one that, with support, can go forward. However, if that is left alone for too long without support, it will disappear and be lost, for example, to Germany. In Germany, if a company cannot keep all its employees, the Government will pay 60% of their salary for three or four months until the company builds itself back up again. There, it is not just a case of shut the place down and good luck to you. That is what we are competing against.

We are leaders in some fields but not in others. However, we want to take the emerging markets and run with them. To do that, we need full support, and that is down to planning and test sites. The money for that will have to come from outside, because we do not have it in Northern Ireland. The banks do not have the money and you guys do not have the funds coming through. Invest NI is getting pushed further into a corner with smaller and smaller budgets, but it is doing the best that it can with what it has. I honestly believe that. We are in the position that we are in, but we do have industries, and the things that do not cost money are the things that we should try to do. Again, I go back to test sites, which would not cost a fortune, and to enterprise zones. We do not have to look at bringing in billions of pounds — let somebody else bring that in for us. However, let us give them the space to do that. That would make other people‟s lives easier.

Mr Donaldson: What Richard says is exactly right. Scotland is pushing forward on renewables and talking to guys over here. Our concern is that Scotland will get a fair amount of information from us and then take it, expand on it and take pole position from us. Scotland‟s focus is to be number one in Europe, and it is striving towards achieving that. Albeit we do not have the same financial resources as Scotland, but we have facilities, which, if we could get them sorted out, could be used.

We need to put that out there. That has to be the magnet that draws interest into Northern Ireland. On the back of that, local manufacturers could step up to the plate, help out, get involved in those opportunities and get into the supply chain. That is the way in which we see the situation developing.

Mr Hogg: It is not about the amount of grant money that is given out. We should stop calling it "grant money", because that messes up everybody"s mind. It is not about grant money but about something sustainable that can go forward. We do not have that grant money here, but we can achieve something that is sustainable, that can go forward and that can bring in outward investment. We do not have the investment here, but we do have sites and expertise that we cannot ignore. Let us swing in behind and help everybody. Nobody is more raw about this than I am.

Mr Frew: I have another question, Chairperson, if you will indulge me.

Is there a danger that, in trying to get investment and companies into the country, those companies will move in and take the manufacturing of this equipment to wherever it is that they originated from?

Mr Hogg: To be honest, that is always that danger. However, we could bring in products that are very complicated and difficult to make, and then the expertise would stay here. When that expertise is here, it will be very difficult to move it somewhere else. We would not be offering companies oodles of money to come here, because offering money is not necessarily the right thing to do. The aim would be to make those companies indigenous and part of the community. We would bring them in and help them. You could invite companies up here to show them that we, and Northern Ireland plc, are open for business. At the moment, from the outside looking in, it looks as though we are closed for business.

I had Canadian investors willing to invest £1·5 million in our company, but the bank managed to scuttle that. What does that say to the guys in Canada? Looking in, they see somewhere that they do not want to go because there is nothing here. That needs to be sorted out or we cannot go forward.

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard)
Renewable Energy Inquiry (11 November 2010) (Full report)

Members present for all or part of the proceedings:

Mr Alban Maginness (Chairperson)

Mr Paul Frew

Mr Paul Givan

Mr William Irwin

Ms Jennifer McCann

Dr Alasdair McDonnell

Mrs Claire McGill

Witnesses:

Ms Olive Hill – Invest Northern Ireland

Mr Nigel McClelland – Invest Northern Ireland

Ms Olive Hill: Good morning. Thank you for asking us to come along. I will spend a few minutes taking the Committee through what we are trying to do with renewables.

Invest NI is very focused on the renewables sector, primarily because of the economic benefits that we can see. We have been proactive in the sector for around 18 months. Prior to that, we tended to deal with the sector through our normal approach to sectors, but, 18 months ago, we undertook a substantial piece of work to assess what strengths Northern Ireland had, where we should position ourselves and where our capability was in developing the sector.

We welcome the strategic energy framework. It is very important that investors can see that government has set clear targets in this area. It sends out a robust message that there are opportunities. For example, if 40% of electricity is to be generated from renewables, that will lead to a requirement for products and services and it immediately makes Northern Ireland an attractive investment opportunity both for foreign direct investment and indigenous businesses that see a tangible opportunity that they can deliver.

A lot of those technologies are evolving, so we have an opportunity to work closely with the universities to evolve more R&D in the sector. The most substantial opportunity that we see from

our company perspective is around the supply chain that will come with renewables. There is an opportunity for even some of our very small indigenous companies to feed into the renewables supply chain.

Our core driver in renewables is the economic benefits. The global opportunity — not just what the Executive have agreed as targets for Northern Ireland — is huge. I know that the Committee has had a number of reports that highlight that. That opportunity is huge and long term, so those jobs

are sustainable. They will not last for three or four years and go away. The global opportunity is such that they are sustainable jobs that tend to generate higher-than-average salaries, primarily because of the technology base that surrounds the jobs, all of which sits very well with what Invest NI is trying to do.

The Committee asked for our views on renewables obligation certificate (ROC) incentive measures. The feedback from businesses still varies on that. Our engagement with investors shows that the key factors are consistency and longevity. At a conference last week in Glasgow, the marine sector stated that ROCs are working and are accepted and that the last thing they want is changes to be made in that market because that would cause a lot of uncertainty for investors. The key issue for us when we compete for investment is that incentives are equitable when compared with those of our nearest counterparts and what is happening in Europe.

Of the areas where we think that Northern Ireland can play a role, there will be some in which there really is not much incentive to do so. We would be less focused or concentrated on what happens with those. The key areas that we have worked on have evolved from where we feel our natural resources are, where we see the scale of the opportunity, where we see our research capabilities and where our manufacturing base has capability. Based on that, we have strategically focused on four key areas, which are quite large areas in their own right. Our challenge is to get access to the niche opportunities beneath them. Offshore energy, bioenergy, integrated buildings and energy storage are, for a variety of reasons, the key areas where Northern Ireland is very well placed. Our natural offshore tidal energy resource is recognised as being the best in Europe, if not further afield. That makes us attractive from an investment point of view, given the number of subsidiary products and services that flow from it. In bioenergy, we have moved a number of our traditional engineering companies into the renewables sector by concentrating on the manufacture of biomass equipment and plant. We have taken a different approach in each of those four areas, but there are clear opportunities for different reasons and different characteristics

You asked us specifically to outline the barriers and challenges. We are active in this arena from an investment point of view. There are a number of key things that I want to focus on. I included a picture of Belfast port in our submission to emphasise that infrastructure is key. From my perspective, much broader involvement is required, and not just from Invest NI. On the offshore side in particular, there are huge land requirements, such as deep water access and heavy-loading quays. Northern Ireland is very well placed in that regard, not just at Belfast but at Londonderry port, particularly given our UK competition. We have also looked at the ports at Kilroot and Warrenpoint. That is a huge selling feature for us, which we should not underestimate. A lot of big projects cannot go ahead without that infrastructure, and Northern Ireland already has a lot of that infrastructure in place.

Other consultees have flagged up the challenge of joined-up government and investors' perception of our approach. The work that Minister Foster has done with the interdepartmental working group has helped hugely in that regard. One of the first outputs of that working group was a piece of scoping work that showed the breadth of work on renewables that is happening across all Departments. A lot is happening, and that particular group has really helped to get the joined-up approach across. Interestingly, from an Invest NI point of view, when we have investors over to talk about projects, many of which are five or six years away, that is the first thing that they ask about.

They want to know whether they will get a joined-up approach from government if they come here and whether they will get a surety that the land will be available, that they will be able to do their projects and that the Environment Agency will work with them. They are not asking for clean sheets; they just want to know that everybody will work in tandem. A lot has happened there, and we are very happy with the progress, but a lot more can be done. Although we do not necessarily need to replicate everything that our nearest neighbours are doing, the most obvious example is that of Scotland, where the Scottish Executive, from Alex Salmond down, continually put renewables to the forefront of practically every speech and agenda item that they deal with.

There is no question that our research is world-leading. We have done a lot of work to try to assess that. The big challenge for us is to make sure that that research benefits Northern Ireland and does not just go offshore. Engineers from Queen's University and other parts of Northern Ireland have been involved in practically all the marine devices that are in the water around Scotland or Scandinavia. We want to make better use of that resource. We already have a small but strong base operating in the sector, and we are trying to enhance the capability of those operators by getting them to work in collaborative networks. For example, Siemens were with us a few months ago trying to build a supply chain. However, their cut-off was that they did not want to talk to anyone with a turnover of less than £10 million. The number of companies of that scale in Northern Ireland is limited, but getting them to pull together and form entities has resulted in some successes in having contracts awarded.

I have included in our papers some idea of the targets that have been set. We set challenging targets from a very low base. All those targets have been achieved, but, from my perspective, the key outputs have been that, from a base of no enquiries from a foreign direct investment point of view, we have now had over 40. That means that international companies see Northern Ireland, primarily because of its research and its natural resources, as a place that they should be looking at for renewables.

On the research and development side, from a very low base, we are getting projects through and are starting to see that being embedded in our companies. The key to research is to get the universities and colleges working together around renewables. We are working on a proposition at the moment, which is led by Queen's University, on an innovation hub and competence centre for renewables. We think that that will send a broad message out about Northern Ireland and our success in research.

We have a lot more to do, but we are very focused on and proactive in the sector. A great opportunity may come up through the round 3 Crown Estate licences and the Northern Ireland licences. We are keen to get a large infrastructure project, because we feel that that would generate a hub. As recently as yesterday, our Minister was involved with discussions in another investment project. The challenge for us in Invest NI in our public service agreement (PSA) targets and corporate plan is that we tend to work in three-year cycles. Renewables is a harder nut to crack as the projects take between five and seven years. For example, the general consensus is that there is unlikely to be any generation from marine devices until 2020. If we roll that back into a proposition coming to Invest NI, we can see that competition for funds is a challenge. However, there is great optimism around the sector. We feel that there are great opportunities there, and we are keen to keep driving forward and delivering.

The Chairperson: Thank you, Ms Hill. That was very interesting. I just want to make sure that I understand fully what you are saying. Effectively, Invest Northern Ireland is saying that renewables is a discrete sector and that it is going to work through that discrete sector. One of your criteria in assessing companies is whether they can export. Are you saying that the renewables sector is a very important and new sector that you can get stuck into and can try to build up, ultimately, to start exporting but that it also has the capacity to attract foreign direct investment, to create jobs and to create wealth in the community?

Ms Hill: Yes, that is what I am saying. The uniqueness of the sector is a challenge in that it draws in companies from every other sector, such as McLaughlin and Harvey, for example. That company is very active and successful in the deployment of renewable projects. It is a construction company, not necessarily a renewables company, but the breadth of the sector is the challenge. The opportunity makes it worthwhile for us to focus on it.

The Chairperson: In my view, the sector breaks up into three areas: research and development for the new renewable energy technologies; the manufacture or production of generation equipment, such as plant and machinery, turbines and so on; and the generation of energy from different sources.

Are you concentrating on the first two areas? If you are, I would understand that, as the third area is the actual generation of renewable energy.

Ms Hill: Our focus would be on the first two areas, although we provide a lot of technical advice and support on the generation aspects as well, because, if people can develop things in the local market that will help the strategic energy framework, they will, hopefully, develop a product or service that can then feed into export arrangements.

The Chairperson: What level is foreign direct investment at here? Do we have any such investment in the renewables sector?

Ms Hill: Are you asking about volume?

The Chairperson: Yes. It would be good if you could quantify it.

Ms Hill: In 2009-2010, we had 43 enquiries from around 30 foreign direct investors. Our figures for 2010-11 are not available yet, but that number has certainly escalated.

The Chairperson: Have they actually invested money?

Ms Hill: No.

The Chairperson: They have not invested money.

Ms Hill: No; this is purely about prospecting at this stage. The Chairperson: So, they are not coming in and saying that they want to do this or that?

Ms Hill: No. We are doing the work now on projects that will potentially bring investment in three to four years' time. It is all driven by government policy. Once the licence is out there, the

developers start looking at where they are going to go and what infrastructure and so forth is in place to help them select the site.

Ms Hill: If we are talking about the three Crown Estate licences in the Irish Sea, the last investors that we had in will probably invest in 2013-14 at the earliest, because it will be 2015-16 before generation begins.

Mr Givan: Thank you for your presentation. You mentioned the R&D opportunities in the sector. I recently saw the wave and tidal system that Queen's University has. Do you see opportunities in that area? The turbine in Strangford is gathering electricity through that source, and there is tidal potential around the North coast. Have you had interest from people around those areas, and could you get investment there?

Ms Hill: On your first point, there are great opportunities for marine energy, and that is driven by the fact that we are seen to have tidal resource. It would make sense for marine devices to be put in around the coast. Universities often say that their research is leading-edge, but Queen's University's marine research definitely is. There is not one marine proposition in Europe that some of our people are not involved in from a Northern Ireland perspective. The supply chain around that is what we are trying to work on. You are probably aware of the global maritime alliance that we have funded, which is a collaborative network that is trying to feed in to that supply chain to make sure that, if tidal devices come, we have a supply chain to back them up.

Mr Nigel McClelland: Tidal stream energy is much less mature than wind energy. The prospect of generating electricity from tidal streams is a lot further away. The industry is focused on the development of devices, both wave and tidal, to capture energy, and a lot of research is being carried out. We have supported companies through our funding of the Carbon Trust, which is one of the organisations advocating greater use of renewable energies. Through our funding, a number of local companies have been able to access R&D support.

Mr Irwin: Invest NI mainly focuses its support on companies that export. Is it not possible to encourage companies in the renewable energy market to produce goods and services for Northern Ireland? Outwith renewable energy, I was at a meeting the other night where some businesspeople from small companies were quite critical of Invest NI. I support exports and companies that export, but some small companies in Northern Ireland feel that they cannot avail themselves of support from Invest NI.

Ms Hill: Our export focus is driven by economic return. That has been the case with Invest Northern Ireland for a long time. I will give you an example from the renewables sector. We recently took a couple of our fairly small traditional engineering companies that do not export to look at some biomass boiler technology in Slovenia. They have now successfully bid to install a biomass boiler in Strabane, which will be the first such installation in Northern Ireland. Although that is not a direct export, we hope that, as a result of that experience, we can eventually get them into an export market. It is not that we are not assisting them but that we are assisting them in a slightly different way. At the end of the day, the market opportunity will be outside Northern Ireland. If people can establish credibility and experience in Northern Ireland, that would translate across.

The Chairperson: Are you telling companies that you will not assist them if they do not export?

Ms Hill: We are keen to get them all embedded and involved in renewables.

The Chairperson: You want to build that up and then, hopefully, they will begin to export.

Mr Irwin: Are those companies aware of that?

Ms Hill: Over the past year, we have had someone out on the road talking to those smaller companies. I think that renewables scares some companies, so we are telling them that the widget that they make for the engineering plant down the road is also useful in the renewables sector. We ask them to let us work with them to try to formulate those opportunities. The collaborative network is a key part of that, because the smaller companies can take the information back and feed off some of the bigger companies that have broader experience.

Mr Frew: Thank you for your presentation. You touched on engineering companies trying to grab some of the renewable energy market. I would like you to elaborate on that. I also want to ask about the potential for the construction industry to become involved in installations. The construction industry is on its knees at the minute, and it is not likely to recover anytime soon. Could it evolve to become part of the renewable energy market? It might not necessarily become involved in major installations for large companies, because those companies will do it all in-house, but it could become involved in installations for domestic properties, schools and hospitals. Could that fill the void in the construction industry, and, if so, would it aid recovery in the short term or the long term?

Ms Hill: The green new deal would be a great help to the construction sector, and I know that a business plan has been presented. Various Ministers are looking at how that could be funded. In the short term, there is an opportunity on the construction side that can be taken up relatively quickly.

Again, we are saying that construction companies should look at the renewables sector, and that is starting to happen; mechanical and electrical engineers through to concrete companies are starting to play a role. For example, traditional precast concrete companies are getting involved in anaerobic digestion plants and so forth. It is about getting the opportunity out there and holding the hand of the company so that it can see the opportunity.

Mr McClelland: Onshore wind farms with a combined capacity of 640 MW are already installed in Northern Ireland, mostly in the west of the Province. I believe that local contractors were used in the installation of those. In fact, last week, I spoke to the owner of a number of wind farms who assured me that the local supply chain was being used, which means companies providing concrete and stone and so on. A further 640 MW is in various stages of planning at present, so I expect that the installers, developers and utility companies that are building those wind farms will likewise use local companies in their supply chain. We have mentioned the likes of McLaughlin and Harvey, which is a local construction company that is already involved in the deployment of renewable energy and marine energy systems outside Northern Ireland. So, yes, there are good prospects for the construction industry.

Dr McDonnell: I am sorry that I missed your presentation. What is your estimate of the full employment and turnover potential of renewable energy?

Ms Hill: I know that you have had a lot of papers. The jobs estimate ranges from 400 to 24,000 jobs, but the different research papers indicate a huge variance in their estimate of potential. Nigel will comment on the most recent piece of work, which was done by the Department for Business, Innovation and Skills (BIS), formerly the Department for Business, Enterprise and Regulatory Reform (BERR). We went through it yesterday.

Mr McClelland: The Department for Business, Innovation and Skills has undertaken fairly comprehensive surveys across the UK of the prospects of jobs, not just across the renewables sector, but what is called the low-carbon sector, which includes building and environmental technologies. That Department's translated figures as of 2008-09 indicate that there were an estimated 31,000 jobs in Northern Ireland across the low-carbon sector. In renewable energy in particular, the figures estimated that there were approximately 3,800 jobs. The projected growth rate as of March 2010 of 4·9% would take us to a total of 15,161 jobs in renewable energy by 2015-16. That is an increase of 3,784 over those intervening years.

Dr McDonnell: Do you guys buy that?

Mr McClelland: The Department has used a comprehensive methodology and included the supply chain across all the sectors. As Olive mentioned earlier, the renewable energy supply chain embraces companies that provide legal services through to engineering companies that provide products and services. It embraces a wide range of jobs.

Dr McDonnell: Does Invest Northern Ireland accept that potential, or are you just observing that somebody has said that that potential is there?

Ms Hill: It is a reasonable reflection of the potential, but I add the caveat that we have seen that the issue is increasingly about sustaining jobs. Whether construction or engineering concerns move into the sector, we need to do more work on the job creation aspect, and I would make that differential.

However, I believe that the estimate of 15,000 jobs is a reasonable reflection.

Dr McDonnell: That is formidable, compared with the potential of foreign direct investment to create jobs and potential. I wondered whether Invest Northern Ireland had set a high enough priority for that block of jobs.

Ms Hill: The proposals will come in and will be assessed in the normal way. The change regarding renewables is that we have taken a much more proactive approach in getting them. The bulk of those 15,000 jobs will come from indigenous investment. Existing companies will move into renewables and will, hopefully, grow as a result.

Extracts from Committee for Enterprise, Trade and Investment: Official Report (Hansard) Renewable Energy Inquiry (04 November 2010) (Full report)

Members present for all or part of the proceedings:

Mr Paul Butler (Deputy Chairperson)

Mr Leslie Cree

Mr Paul Frew

Mr Paul Givan

Mrs Claire McGill

Mr Gerry McHugh

Mr Sean Neeson

Witnesses:

Ms Kirsty McManus – IBEC-CBI

Mr Nigel Smyth – CBI Northern Ireland

Mr Nigel Smyth: Thank you. I am the director of CBI Northern Ireland. I am joined by Kirsty McManus, who is the programme manager in the IBEC-CBI joint business council. I apologise on behalf of Reg McCabe, who is unable to join us because he came down with a throat infection and, so, did not come up from Dublin. I will make a short statement, then Kirsty will make some introductory remarks, after which we will be delighted to answer your questions.

We welcome the inquiry and the opportunity to provide evidence to the Committee. As the Committee is aware, energy policy is a key issue for our members in Northern Ireland. The development of the renewables market is of significant interest to us, and we believe that there are significant opportunities for the economy. The joint business council has been actively involved in that area of work and, hence, our submission has come through the council. Kirsty will make a few comments about that shortly.

CBI is keen a promoter of the need to reduce the carbon intensity of energy production. We have taken a leading role at a national level around the climate change agenda.

We recognise that there are significant wind resources, in particular, on the island of Ireland, which we are keen to tap into. However, it needs to be cost effective. Grid investment needs to proceed timely and at the lowest cost. We remain very worried about whether the planning system can facilitate the necessary investment in the appropriate timescale. We also see opportunities for biomass, anaerobic digestion and energy from waste.

Our members are concerned about competitiveness and about ensuring that energy costs are no higher than they need to be. Many argue strongly, and with strong supporting evidence, that prices

in Northern Ireland are already too high. Policymakers must bear that in mind when considering supports and incentives that will be paid for by customers.

We believe that Government support by way of the renewable energy obligation is the best long-term policy instrument. Any modifications should be orderly and be signalled in advance so as not to undermine investment plans. The renewable heat incentive (RHI) is being taken forward in Great Britain, and we are keen to see it progress in Northern Ireland while recognising that there are tensions between maintaining competitor prices and using any form of customer levy to stimulate the market.

We do not see micro-generation as being a cost-effective technology at present. We do not believe that a case has been made for it to receive public subsidy. That is highlighted in our submission. We believe that cost effectiveness must be a key driver of policy. We support the strategic energy framework as part of the overall energy policy. The final report, which was published a few weeks ago, is more specific and more focused than the draft document. We also recognise that it is only a framework. We agree with the report's four pillars: competitive markets; security of supply; sustainability; and the importance of infrastructure development. We support the renewable target that has been set; it will be particularly challenging in light of the demands of planning. The Government could and should do more to incentivise investment by companies, particularly in energy efficiency, but also in renewable energies, perhaps through some form of rating rebate. In our submission we have outlined a specific proposal on the achievement of the Carbon Trust standard. We also accept that the Government should lead by example, but their track record is not particularly good.

I will move on to planning. We are extremely worried that, without some radical changes, the target for renewables will not be met. Planning policy statement 18 has been welcomed and has helped those who have sought to build wind farms. However, without the necessary grid, there will be a problem. We are likely to get to within 50% to 60% of the renewable energy target, using existing infrastructure and with some modest strengthening and better use of technology, but that is going to leave a substantial gap, even if a major biomass plant is built in the next few years.

The delays with the North/South interconnector are a reflection of what we might face. Delays there are costing customers on the island of Ireland an estimated £20 million a year. We understand that a public inquiry on that matter will not take place until 2012. In the short-to medium term, investment is largely required in the west of the Province. In the longer term we may need further interconnection with Great Britain, but we do not believe that that is an issue or concern at present. From the CBI's perspective, a key task is to ensure that the Planning Appeals Commission can undertake more than one public inquiry at a time. To have to wait two years for an inquiry into the North/South interconnector is totally unacceptable.

We foresee significant economic opportunities in the renewable energy sector. Many companies are already operating in that space, and there are significant research capabilities on the island of Ireland. Kirsty will mention that, as well as potential opportunities for partnerships with Scotland. We have received concerns about the cost of connections to the grid, not just from renewable energy projects. We welcome the fact that the Regulator intends to consult on that matter in the near future.

The Committee is aware that access to credit for all types of business investment — including costs, conditions and processing time — is significantly more difficult now. We do not believe that funding for renewable energy is any worse; in many cases it is probably a little better, particularly in well-established technologies such as the wind sector. It is clear that costs will be higher now. It is important to have more clarity and certainty about Government policy and the nature of the support and the incentives that they can provide. More uncertainty leads to higher risks, which, in turn, creates more difficulties in accessing finance.

By way of providing additional evidence, the CBI has just completed a national policy document on energy from waste. The report argues strongly that energy from waste will be vital in meeting our landfill, energy and climate change challenges. It is compatible with high levels of recycling and it is clean. It is economically viable on a wide scale. There are planning, financial and public procurement issues around that, and I am happy to provide the Committee with a copy of that.

Ms Kirsty McManus : I thank the Chairperson and the Committee for the opportunity to give evidence. As Nigel said, energy has been a key focus of the Joint Business Council, which is a partnership between IBEC, representing the Republic of Ireland, and CBI Northern Ireland. I will outline briefly some of the work that we are doing on energy, but, more specifically, in the renewable industry.

In 2009, the Joint Business Council held it's plenary in Edinburgh, facilitating the first tripartite energy forum for Northern Ireland, Ireland and Scotland. We brought together the three respective Ministers with the energy remit — Arlene Foster, Eamon Ryan and Jim Mather. On the day, 120 delegates from the energy sector and the wider business community attended, representing industry and government. One of the key outcomes from the summit was that the three regions should assess R&D capability in their respective universities' centres of excellence and work collectively on tripartite research projects; for example, renewables.

We are taking that agenda further. At the moment, we believe that the three regions have significant renewable energy resources. They share a common interest to optimise innovation, research and development in renewable energy technologies. Renewables research is ongoing in each region's third-level research centres, and a number of tripartite research projects have been established, most notably the INTERREG-funded initiatives of the Isles project and BioMara.

Therefore, the Joint Business Council has been working closely with the Energy Technology Partnership (ETP), which we also refer to in our written evidence to the Committee. We are exploring renewables opportunities with ETP in Scotland on a tripartite approach that links industry, academia and research.

As I said, ETP is an alliance of Scottish universities engaged in world-class energy research, development and demonstration. It involves 250 academics and 600 researchers and is an example of best practice for Northern Ireland. ETP has been successful in securing the services of 100 PhD students who will focus on renewable energy. ETP has also secured more than £300 million in funding from Europe and beyond. We are taking that agenda further by looking at opportunities for us to work more closely with the Joint Business Council and ETP on renewables to make Northern Ireland, Scotland and the Republic an area of renewable energy technology best practice in Europe.

That outlines the work that is going on in the Joint Business Council. Nigel and I are happy to take the Committee's questions.

Northern Ireland Assembly Questions

AQW 19371/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister for Social Development whether his Department has any plans to seek finance from the UK Green Investment Bank to tackle fuel poverty.

04/02/2013

Awaiting Answer

AQW 19223/11-15

Mr Alastair Ross (DUP - East Antrim) To ask the Minister of Education what provisions are in place to provide each of the new school builds announced in January 2013 with renewable energy resources and water recycling facilities.

31/01/2013

All major works projects must include measures to achieve a Building Research Establishment Environment Assessment Method (BREEAM) rating of 'excellent' for new schemes or 'very good' for refurbishment schemes. The BREEAM assessment uses recognised measures of performance set against established benchmarks to evaluate a building's specification, design, construction and use. These measures include aspects related to energy and water use, the internal environment (health and well-being), pollution, transport, materials, waste, ecology and management processes.

In addition, design proposals for a new school must include consideration of renewable energy as part of the business case submitted to the Department for approval.

My Department is committed to the promotion of sustainability and the new school builds that I announced last month will have to comply with the requirements outlined above.

AQW 18637/11-15

Mr Trevor Lunn (ALL - Lagan Valley) To ask the Minister of Enterprise, Trade and Investment to detail what funding for home insulation is available through the Sustainable Energy Programme.

18/01/2013

The Northern Ireland Sustainable Energy Programme (NISEP) is run by the independent Utility Regulator. However, the Department understands that for the current 2012/13 schemes a figure of £2,333,178 has been allocated to home insulation (cavity wall and loft) only schemes.

A further £4,560,109 has been allocated to domestic schemes which provide whole house solutions to priority (vulnerable) customers i.e. a full package of heating system, cavity wall and loft insulation and hot water cylinder jacket. It is not possible to identify at this stage how

much of this funding will be spent on the insulation measures as some properties will already have adequate insulation.

AQW 17932/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister of the Environment what he is doing to create consistency across planning divisions on decisions relating to renewable energy projects.

12/12/2012

The Department welcomes the contribution that renewable projects make to the reduction of carbon emissions and acknowledges the importance of processing these types of applications in a consistent and timely manner.

In order to improve consistency in decision making I have established a Sub Group of the Planning Forum to look at measures to improve planning performance for renewables and to consider issues such as licensing requirements, resources and structures.

To date this work has resulted in the majority of renewable applications being redirected from Strategic Planning Division to the Area Office network which has increased capacity to speed up the decision making process. Prior to the redistribution of this work training was rolled out across the Area Offices to ensure consistency in decision making.

Performance within each area office is carefully monitored and a Performance Action Plan has been put in place in order to improve and manage performance. This action plan identifies a number of initiatives and allows for the monitoring and active management of performance within agreed timescales.

However, applications for wind turbines differ in complexity and in quality of submission and are attracting increasing levels of objection. Consultation with a number of statutory and non-statutory bodies is required to inform the decision making process and all of these issues may prolong the processing of an application.

To improve the consultation process and to reduce the number of consultations staff have been provided with additional training to ensure consistency in consultation and reminded that they should only consult in the correct circumstances and avoid unnecessary consultations and delays.

I will continue to work with key stakeholders to ensure that Planning delivers in an efficient and timely manner and continue to monitor performance to ensure consistency across the area office network.

AQW 17693/11-15

Mr Dominic Bradley (SDLP - Newry and Armagh) To ask the Minister of Finance and Personnel how much money was retained from the closure of Energy Efficiency Homes Scheme and the Low Carbon Homes Scheme for the Green New Deal; and when this funding will be utilised.

05/12/2012

The funding realised from the closure of Energy Efficiency Homes Scheme and the Low Carbon Homes Scheme was to provide funding towards the Green New Deal programme. As determined by the business case, the option selected for the Green New Deal programme is the Northern Ireland Housing Executive Boiler Replacement Scheme, which is scheduled to run for the next three years.

This year £183,000 in administrative and revenue savings associated with the closure of the schemes will be transferred from DFP to DSD in the January monitoring round in line with the agreed policy position.

There are also savings to be generated in 2013-14 and 2014-15 and these will be finalised and transferred at that time.

AQO 3010/11-15

Mr Gordon Dunne (DUP - North Down) To ask the Minister for Social Development what measures are available to encourage alternative energy sources to help reduce householders' over reliance on oil as their main energy source.

22/11/2012

In September 2012, I launched a new Boiler Replacement Scheme, following on from the pilot scheme which ended in March 2012. The new scheme offers a grant to of up to £1,000 towards the cost of replacing old, inefficient boilers, if the householders have an income of less than £40,000.

Householders with an income of up to £20,000 could be eligible for a maximum grant of £1,000 and householders who earn between £20,000 and £40,000 could be eligible for a maximum grant of up to £500.

The level of grant will depend on whether householders replace oil with oil or oil with gas or indeed they can arrange to install a wood pellet boiler. Householders can choose an installer of their choice as long as they are appropriately qualified.

The Housing Executive has received almost 22,000 expressions of interest in the scheme and over 15,000 application forms have been issued.

£12 million has been allocated to the scheme over the next three years, with £4 million available for grants before the end of March 2013.

Northern Ireland Assembly

20 November 2012

Renewable Energy

5. Mrs Hale asked the Minister of Enterprise, Trade and Investment what level of assistance will be in place to support investors in renewable energy generation after 2016. (AQO 2905/11-15)

Mrs Foster: The closure of the Northern Ireland renewables obligation (NIRO) to new generation in 2017, as part of UK-wide electricity market reform, will require the introduction of separate incentive mechanisms for large- and small-scale renewable electricity generation. A UK-wide feed-in tariff with contracts for difference will be in place to support renewable electricity generation above five megawatts installed capacity commissioning from 2016. A separate, less complex feed-in tariff will support small-scale renewable electricity generation below five megawatts.

Mrs Hale: I thank the Minister for her answer. I am sure that she is aware that there is a lot of interest in anaerobic digestion projects as a renewable energy source. What assurances can she give people who are starting digestion projects that support will be available post-2016?

Mrs Foster: I thank the Member for her question. There are currently six anaerobic digestion stations accredited under the NIRO, and they are contributing to the mix of renewable technologies. I was very pleased to visit one such anaerobic digestion plant at Ballyrashane Creamery in Coleraine. That is a very good example of a local company taking its environmental obligations seriously, but doing it in a way that makes a difference to its energy costs bottom line. I was very pleased to see the way in which that has developed.

I cannot confirm the amount of support that will be available post-2016, but, as in all other cases for Northern Ireland, we will be evidence-led. We will look for evidence to see what sort of incentive is needed at that particular time, and then we will ensure that we have the proper mix in the Northern Ireland energy solutions. It is important that we have a diverse range of energy products. I understand that there are approximately 80 plants at various stages of the planning application process for anaerobic digestion projects, and I think that that shows the interest that is there across Northern Ireland.

Mr McKay: Go raibh maith agat, a LeasCheann Comhairle. When does the Minister expect legislation and incentives to be in place to support the development of our deep geothermal resources, especially in places such as Ballymena?

Mrs Foster: The Member will know that I intend that the second phase of renewable heat will come on stream next year. We are looking at all the renewable heat processes and the different technologies and sources, and that is something that I hope to be able to clarify early next year.

Mr Copeland: Does the Minister have any plans to increase the number of renewables obligation certificates per 255 kilowatt wind turbine? That would incentivise and help to increase their number across Northern Ireland in order to meet her 2020 targets.

Mrs Foster: We are on course to meet our 2020 targets as it is, and, frankly, the evidence is not there to support an increase. As I have said, all our incentive rates are set by looking at

the industry, seeing what is available and taking an evidence-based approach to our incentives. Therefore, I have no plans to increase the incentives as the Member has asked.

AQW 16860/11-15

Mr Alex Easton (DUP - North Down) To ask the Minister of Enterprise, Trade and Investment to outline the potential for creating local renewable energy sources.

16/11/2012

The Strategic Energy Framework's target of 40% renewable electricity by 2020 is solely derived from the level of Northern Ireland's natural renewable resource.

Development rights for 600MW offshore wind and 200MW of tidal energy were announced in October.

The draft On Shore Renewable Electricity Action Plan has identified potential on shore renewable generation mixes ranging from 1400 MW – 2360 MW of installed renewable capacity. It will be for the market to bring forward the most cost effective renewable technologies.

AQO 2907/11-15

Ms Anna Lo MBE (ALL - South Belfast) To ask the Minister of Enterprise, Trade and Investment if she plans to create jobs through the expansion of indigenous and low carbon energy sources in order to meet targets for a low carbon future.

08/11/2012

Northern Ireland already has a significant Low Carbon Environmental Goods & Services sector with over 1,500 companies employing some 31,000 people. The long term goal is to grow this further and Invest NI has developed an active programme across FDI, Trade & Supply Chain that has engaged with over 800 businesses and responded to over 1400 enquiries in the past year. I am also committed to extending the natural gas network in Northern Ireland which will provide a lower carbon energy source to additional consumers and create employment opportunities.

Northern Ireland Assembly

22 October 2012

Renewable Energy

5. **Mr Weir** asked the Minister of Enterprise, Trade and Investment what is the extent of the involvement of Northern Ireland-based companies in offshore renewable energy projects. (AQO 2720/11-15)

Mrs Foster: Some 250 Northern Ireland companies are already actively selling into the offshore renewable markets. It is estimated that Northern Ireland-based companies secured sales of £52 million in offshore contracts in 2011-2012. Those include companies such as Harland & Wolff, B9 Energy, McLaughlin & Harvey, Barton Industrial Services, Doran Consulting, RPS and Farrans. The recent announcement of offshore wind and tidal development rights in Northern Ireland waters to three consortia has been made, which included the local company B9 Energy Offshore Developments. That really does present further opportunities for Northern Ireland firms.

Mr Weir: I thank the Minister for her answer. What impact has the announcement that was made within the past fortnight had on the job situation and the supply chain for Northern Ireland?

Mrs Foster: It is a very positive story. Indeed, just last week, I was at an offshore wind and ocean energy international conference in Dublin, where we had the opportunity to present the case for Northern Ireland alongside a Canadian Minister and, of course, Pat Rabbitte from the Republic of Ireland. All those offshore announcements are about multimillion-pound private sector investments. No government funds are going into any of them. It is around £1·8 billion for the 600 megawatts offshore wind project alone. Invest NI has been working closely with companies that may be in the supply chain for all the offshore installations. It has engaged with 800 businesses and responded to 1,400 inquiries in just the past year alone, so there are huge opportunities around offshore renewables.

Mrs McKevitt: Does the Minister intend to ensure that the benefits of those projects will be for the North, particularly the jobs, and does she agree that early consultation with stakeholders in the communities where the projects are proposed is essential in order for the locals to have their say?

Mrs Foster: I thank the Member for that question. As she is probably aware, meetings have already been held with the developers to discuss the statutory requirements for the consenting and licensing regime. Part of that will be about how they communicate and interact with the communities in their particular areas. I am very aware of the fact that it is critical for local communities and other marine users, such as the fishing sector, to be a part of that engagement right from the beginning so that there are no misunderstandings. Indeed, people in those sectors may see opportunities to become involved in that work — to diversify, as it were. We will continue to work with developers and the stakeholders so that timely and meaningful engagement takes place with both of them.

Mr McMullan: Go raibh maith agat, a Cheann Comhairle. Does the Minister agree that there is a significant opportunity for those who have recently lost their job in FG Wilson to adapt their skills to the growing engineering sectors such as renewable energy? What advice has she provided to former FG Wilson employees in that regard?

Mrs Foster: I thank the Member for his question. He is right: some of the skills that have been employed in FG Wilson for many years could be transferable in the same way that people in Harland and Wolff have been able to transfer their skills into building offshore renewable substations. The transformation in the work that is going on in the shipyard now is quite incredible. DONG Energy, which has set up its hub in the harbour, will be looking for workers, and there are many other companies in the supply chain that will be able to make use of the skills that are available to them. Invest Northern Ireland will continue to work with the Department for Employment and Learning so that we can make sure that those skills are matched up with particular companies.

Mr Swann: Will the Minister give us an assessment of how the new offshore renewal projects will affect our renewable energy targets?

Mrs Foster: I thank the Member for his question. The announcement has been made in relation to the leasing. However, given that we have to go through strategic environmental assessments and planning permissions and so on, the installation will probably not be in place until towards the end of this decade. That said, 600 megawatts of offshore wind and 200 megawatts of tidal energy will significantly enhance what we have been doing thus far. At the moment, our onshore wind provides 400 megawatts of renewable generation, which equates to 14%, if you take into account everything involved in the electricity target. That is estimated to rise to 700 megawatts or 800 megawatts by 2020, which equates to that magic 20% target. Onshore wind will provide us with that, but I say to the Member that, as well as the onshore and offshore wind and tidal energy sources, we need to invest heavily in our grid infrastructure if we are to tie everything together.

AQW 15546/11-15

Mrs Sandra Overend (UUP - Mid Ulster) To ask the Minister of Enterprise, Trade and Investment to outline the business supply chain opportunities for local companies following the announcement of the successful bidders for the development rights from the three offshore renewable energy sites in coastal waters.

15/10/2012

The supply chain opportunities associated with the development of offshore energy projects in Northern Ireland coastal waters will evolve through the various stages of consenting, design, manufacture, installation and deployment over the next 8 years.

Invest NI has met with all of the successful developers to present the capability of Northern Ireland companies to be part of their supply chains as they take forward these projects. In addition Invest NI took a trade mission to the International Conference in Ocean Energy which was held in Dublin recently to showcase our capability in the marine sector. Both tidal developers attended this conference and Invest NI were proactive in arranging meetings with local companies such as McLaughlin & Harvey, RPS, Harland & Wolff and with representatives from our research centres. I was speaking at this event and was able to meet with some of the Northern Ireland companies and developers who were present.

Invest NI will be encouraging companies to engage with the developers as early as possible to understand the opportunities and how they can access the various contracts that are available. As part of the process each developer will also be undertaking public consultation with local communities and Invest NI will work with each consortium to highlight the supply chain opportunities.

AQO 2668/11-15

Mr Adrian McQuillan (DUP - East Londonderry) To ask the Minister of Agriculture and Rural Development what action she intends to take to help the agriculture sector to contribute to the government target of producing 40 percent of electric and 10 percent of heat from renewable sources by 2020.

04/10/2012

I am keen to see the agriculture sector make a significant contribution to the targets of 40% of electricity and 10% of heat should come from renewable sources. My department contributed to the Strategic Energy Framework document which defined these targets. In 2010, my department published its Renewable Energy Action Plan (REAP) which outlined our priorities in this area and defined how DARD intends to encourage the growth of renewable energy technologies on-farm. The actions outlined in this plan include:-

- increasing awareness of the benefits of renewable energy amongst the agricultural sector;
- providing renewable energy training to increase the skills base amongst the local farming industry;
- supporting a programme of scientific research at AFBI to inform business decisions amongst the farming industry and to add to the local knowledge base;
- supporting the construction of renewable energy technologies through the Biomass Processing Challenge Fund.

The REAP is encompassed within OFMDFM's Sustainable Development Strategy, as well as DETI's Strategic Energy Framework and Sustainable Energy Action Plan. I want to ensure the Action Plan is as effective as possible and is updated regularly to react to change. I have asked an external group of stakeholders to review my department's progress and to make further recommendations to add value to the process. I have also supported

other renewable energy technologies such as wind turbines and solar panels through the Rural Development Programme.

AQW 14462/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister of Enterprise, Trade and Investment for her assessment of the level of biomass heating that can be sustained (i) with existing indigenous fuel sources; and (ii) from indigenous sources in the future.

19/09/2012

Research carried out by my Department into the potential development of the Northern Ireland renewable heat market in 2010 suggested that heating from existing biomass resources could account for up to 5% of Northern Ireland's total heat demand. It was also assessed that with future development in this market and increased growth of energy crops that by 2020 indigenous biomass resource could account for 10% of total heat demand.

My Department is seeking to develop the renewable heat market through the introduction of the Renewable Heat Incentive and has set a target of 10% renewable heat by 2020.

AQW 14259/11-15

Mr Alex Easton (DUP - North Down) To ask the Minister for Social Development what schemes his Department offers to assist people to insulate their homes.

14/09/2012

The Warm Homes Scheme continues to be my Department's primary tool for improving the energy efficiency of homes. The Scheme is open to owner occupiers or those who privately rent their home who are in receipt of a qualifying benefit. The Scheme offers a range of heating and insulation measures including loft and cavity wall insulation. The Scheme continues to be hugely successful and further information is available by contacting the scheme managers on 0800 988 0559.

The Housing Executive implemented a major programme to install cavity wall insulation in the mid to late 1980s. Loft insulation has been installed through a combination of Housing Executive external cyclical maintenance and other schemes. Also as part of their programme to replace heating in their stock the Housing Executive upgrade roof space insulation in line with Building Control requirements. The Housing Executive topped up insulation in approximately 700 of their properties using NI Sustainable Energy Programme (NISEP) Funds and they are currently working on a potential scheme for a further 400 dwellings this year using the same funds.

AQW 13953/11-15

Mr Alex Easton (DUP - North Down) To ask the Minister of Enterprise, Trade and Investment what plans her Department has for the introduction of wind farms.

07/09/2012

The Strategic Energy Framework for Northern Ireland includes a target of 40% electricity consumption from renewable sources by 2020. There are a number of renewable technologies, both on-shore and off-shore, which will contribute to the 40% renewable electricity target. However, it is a matter for the market, not government, to bring forward the range of renewable energy technologies.

There are currently 27 onshore wind farms already in operation in Northern Ireland and supported under the Northern Ireland Renewables Obligation. Their combined installed capacity is 396 MW.

AQW 12683/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister for Social Development following the passing of the Assembly motion on 19th September 2011 calling on the Minister to increase funding for the Green New Deal to outline what actions he has taken on the motion in order to fulfil his duties under the Ministerial pledge of office, "to support, and to act in accordance with, all decisions of the Executive Committee and Assembly".

07/06/2012

When the motion was made in September 2011, the Green New Deal business proposal had not been finalised. The Green New Deal proposal was received by my department in October 2011 and was subject to robust scrutiny as part of the economic appraisal by all of the departments represented on the Cross Departmental Group. It was then assessed by the Department Of Finance and Personnel who ultimately had the final decision on the proposals submitted.

Without quoting extensively from the appraisal, despite the potential for non-monetary and wider economic benefits offered by the Green New Deal proposal, it had significant risks in relation to fundamental issues around finance, security and bad debt. These were very real and serious issues, which despite repeated discussions between both the Green New Deal Group and my department, were never resolved. Nothing has been presented to us that can lead to a different conclusion.

To increase funding to such a high risk proposal would be neglecting my responsibility as a Minister ‘to observe the highest standards of propriety and regularity involving impartiality, integrity and objectivity in relationship to the stewardship of public funds’.

Northern Ireland Assembly

22 May 2012

Green New Deal

1. Mr Lyttle asked the Minister for Social Development to outline the results of the economic appraisal carried out in relation to the £12 million budget allocated for the green new deal. (AQO 2016/11-15)

Mr McCausland (The Minister for Social Development): A cross-departmental group, which was chaired by my Department and included representatives from the Department of Enterprise, Trade and Investment (DETI), the Department of Agriculture and Rural Development (DARD) and the Department of Finance and Personnel (DFP), developed a full economic appraisal to determine the most cost-effective use of the £12 million available to deliver maximum domestic energy efficiency improvements.

The economic appraisal was developed in accordance with the guidance in the Northern Ireland Guide to Expenditure Appraisal and Evaluation. The criteria used for the options within the economic appraisal were to determine the most cost-effective way of spending the £12 million, ensuring that the maximum benefit could be realised from the expenditure.

The options considered were a business proposal from the Northern Ireland Green New Deal Group and a business proposal from the Northern Ireland Housing Executive for increasing the domestic energy and thermal efficiency of the domestic building stock in Northern Ireland using the funding available. The options were assessed on the basis of what they proposed to deliver in the context of improving energy efficiency in domestic properties, any associated benefits or costs, wider economic benefits in relation to private sector expenditure, direct job creation income and multiplier effects. It also assessed any associated risks around the potential to deliver the proposal, including where those risks may lie.

The options submitted by the Northern Ireland Housing Executive have been successful and approved by DFP. I hope to be making an announcement on the details of that in the next few days.

Mr Lyttle: I thank the Minister for the update in that regard, but given that it is 18 months after that £12 million funding was confirmed, is this another case of Northern Ireland missing an opportunity to improve energy efficiency in our homes and create jobs that is being taken in the rest of the UK?

Mr McCausland: No, I do not think it is. The money that was allocated will all be spent on improving energy efficiency, which is, of course, one of our priorities in government. There were reasons for the delays — some of those were about getting information in order to carry out the proper appraisal — but we are in a position where all the money will be spent, and spent on the purpose for which it was intended, which is a government priority.

Mr G Robinson: Does the Minister agree that, whatever option is chosen, the proposals and their associated outworkings will be aimed at tackling some of the causes of fuel poverty across Northern Ireland?

Mr McCausland: The money will indeed be spent in a way that will help to address fuel poverty by improving energy efficiency. We are all familiar with the causes of fuel poverty, and one of the ways of addressing it is by improving the energy efficiency of homes. It is not the only issue that we are taking forward in that regard. It is not the only measure to address fuel poverty. There is a range of measures that we have in that context, such as the warm homes scheme, and so on, but all those are certainly directed towards that single aim.

Mr Flanagan: I thank the Minister for his answers. He will hopefully agree with me that the green new deal offers great opportunities for political leaders to create the right conditions for the private sector to deliver on key social and environmental objectives. Does he also agree with me that to compare and contrast an economic appraisal put forward by the Housing Executive, with its massive army of staff, and an economic appraisal put forward by the Green New Deal Group, which was headed up by a small number of committed volunteers, is a very narrow-minded thing to do, and that perhaps more credence should have been given to an economic appraisal put forward by a very small group, given that very little support was given by government?

Mr McCausland: The position is that an economic appraisal looks at what is put in front of it. It has to be carried out fairly and honestly, and we have reached a conclusion on the basis of the economic appraisal. People with considerable experience were involved in the Green New Deal Group's proposal, and I am sure their proposal benefited from that experience. They were afforded every opportunity to strengthen and build on it during the process. The process was almost iterative at times, but the outcome is the one that we have now concluded.

Mr Kinahan: I thank the Minister for his answers, although I am a little confused. Are all the studies and economic appraisals now complete? Are the timelines going to be followed? We have been told that the money will be spent, but when will it be spent? What is the real reason for its being stuck between two Departments? Perhaps we have just had a hint from Sinn Féin that it does not agree with the way in which we are going forward. What is holding up the green new deal?

Mr McCausland: The Member's questions betray some measure of confusion, because I thought that I had been quite clear: we have now reached a decision on the way forward. The money that is allocated will be spent on improving the energy efficiency of homes and addressing fuel poverty. It is a good proposal, and I will be making the announcement about it very soon. I am sure that the Member will be patient as he waits for that announcement. There were issues that led to the timescale for coming to the decision. It was most certainly not an issue between Departments. It was about affording the Green New Deal Group every opportunity to put forward as strong a case as it possibly could.

AQW 11993/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister of Finance and Personnel to detail (i) what will happen to the £4m set aside for the Green New Deal if it is not spent; and (ii) what flexibility exists to spend the money on other projects.

21/05/2012

On 18 May 2012, DFP Supply approved a business case submitted by DSD to consider 'Options for Increasing Domestic Energy & Thermal Efficiency in Northern Ireland'.

This case was the outworking of the cross-departmental group created to consider the Green New Deal Coalition's (GNDC) business model and the GND proposal was one of two shortlisted options. Although innovative, the GND business model was not sufficiently advanced and retained a prohibitive level of risk in relation to both financial and non-monetary aspects of the model.

The preferred option, which will avail of the funding allocated for a 'Green New Deal' solution is a Northern Ireland Housing Executive led boiler replacement programme that will generate some £27million in terms of wider economic benefits over the next three years.

This response covers both parts (i) and (ii) of the question.

AQW 8353/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister for Social Development, pursuant to AQW 7523/11-15, whether the cost benefit analysis of the Green New Deal will include the direct and associated benefits of (i) job creation for the construction industry; (ii) the economy wide multiplier effect, created through lower levels of imported energy consumption; and (iii) a reduction in costs to the Health Service due to lower levels of fuel poverty.

15/02/2012

The economic appraisal for the £12m that has been set aside over the next three years for a Green New Deal solution has been developed in accordance with the guidance in the Northern Ireland Guide to Expenditure Appraisal and Evaluation (NIGEAE). The criteria being used for the options within the economic appraisal is to determine the most cost effective way of spending the £12m, ensuring that the maximum benefit is realised from the expenditure. This means that options are assessed on the basis of what they propose to deliver in the context of improving energy efficiency in domestic properties, any associated benefits or costs, wider economic benefits in relation to private sector expenditure, direct job creation/income and multiplier effects. It also assesses any associated risks around the potential to deliver the proposal including where those risks may lie.

AQW 7610/11-15

Mr Steven Agnew (GP - North Down) To ask the Minister for Social Development for his assessment of the potential to obtain funding through the Green Investment Bank; and whether it could help fund the Green New Deal.

02/02/2012

A Cross Departmental Group which is chaired by my Department and includes representatives from DETI, DARD and DFP have developed a full economic appraisal to determine the most cost effective way of delivering a Green New deal solution with the £12m that has been set aside by the NI Executive, ensuring that the maximum benefit is realised from the expenditure.

When the economic appraisal has been approved a detailed forward work programme will be developed for the preferred option within the appraisal. The forward work programme will include the potential to exploit other funding streams to increase additional funding for a Green New Deal solution over and above the £12m that is currently available. Obtaining funding from The Green Investment Bank (GIB) will be one of the funding streams that will be explored once greater detail is known about the establishment of the bank and the funding that it has at its disposal.

AQO 90/11-15

Mr Stewart Dickson (ALL - East Antrim) To ask the Minister of Enterprise, Trade and Investment whether her Department will implement a strategy to develop the green economy.

02/06/2011

The framework for the new Economic Strategy, which is currently being developed by the Executive Sub-Committee on the Economy, has identified the important contribution made by the green economy in encouraging business growth and growing the private sector.

Within my Department, Invest NI has developed a strategy to maximise the return to Northern Ireland from heightened global activity in the development and deployment of renewable energy and resource efficient technologies. This includes identifying opportunities in the renewable energy sector and promoting and implementing energy and resource efficiency measures within business.