



Northern Ireland
Assembly

Committee for Enterprise, Trade and
Investment

OFFICIAL REPORT (Hansard)

Electricity Supply —
SONI Generation Adequacy Report:
Security of Supply Post-2015

27 June 2013

NORTHERN IRELAND ASSEMBLY

Committee for Enterprise, Trade and Investment

Electricity Supply — SONI Generation Adequacy Report: Security of Supply Post-2015

27 June 2013

Members present for all or part of the proceedings:

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

Witnesses:

Mr Dick Lewis	SONI
Mr Robin McCormick	SONI

The Deputy Chairperson: The Committee will be briefed today by Robin McCormick, the general manager of SONI; and Dick Lewis, the manager of grid planning for SONI. Gentlemen, you are very welcome. The Committee is in the process of agreeing to carry out a review of electricity policy, and we are hopeful that your review will help to inform that. You can make an opening statement, and we will come back with a couple of questions.

Mr Robin McCormick (SONI): Thank you for the opportunity to present to you. By way of introduction, we are the system operator and the market operator in Northern Ireland. So, independent of generators and supply companies, we operate the grid system and dispatch generators to meet the demand at every second of every day. We are a 24/7 operation. As market operators, we are responsible for impartially dealing with all generators on the island. They bid into the wholesale market, we set the wholesale price of electricity across the island and all suppliers buy energy at that wholesale price. All generators on the island contribute to the price that the suppliers pay for.

The market was established in 2007 and has broad benefits in attracting generation to the island and in providing for transparency in the wholesale aspect of pricing, which has been of benefit to everybody. We were formerly part of Northern Ireland Electricity, and, in March 2009, we were purchased by a company called EirGrid, which basically has the same function as us and is based in Dublin. Our licences require us to work in conjunction with each other because we now operate on an all-island basis. We have a number of roles, and we carry a number of licence obligations, one of which is to track the generation capacity that is available to us in Northern Ireland and on the island to ensure that we have sufficient generation capacity to meet demand into the future.

Recently, the statements that we have prepared have indicated that there are some security-of-supply issues on the horizon. That horizon is coming closer to us, which is probably why we are here. As we do that, we recognise the importance of generation capacity to meet demand and also of an adequate transmission network and adequate grid, both of which will help to attract industry to Northern Ireland. Industries look for a quality, secure supply of electricity as their foundation before they start to think about anything else, so we want to make sure that we send a message out that indicates whether we are comfortable that we have both those elements.

From our perspective, we have a security-of-supply issue that we are talking about regarding generation capacity, and we are also indicating that delays in the North/South interconnector are impacting on that. That is because, instead of looking at generation adequacy on the island, where there is adequate generation, we are having to look at Northern Ireland specifically, where there is a potential deficit in generation capacity as we move forward.

That is the introduction. I will ask Dick, who is responsible for the production of the generation adequacy statement, to run through the presentation to highlight some areas that we think will be of interest to you.

Mr Dick Lewis (SONI): Good morning, everyone. My first slide shows a historical demand growth pattern. The turbulence from 2008 onwards is largely driven by economic events, and you can see the dramatic impact that that had on demand consumption in Northern Ireland. Suffice to say that, with that amount of turbulence over the past three or four years, it has become increasingly difficult to predict what demand is going to be going forward.

The next slide is a demonstration of how we go about that. There is basically a low, median and high forecast. Economic factors are obviously implicit in the high forecast. There are a number of initiatives going forward that might impact on demand, not least energy efficiency, so we are trying to operate within an overall bandwidth. As Robin indicated, our job in real time is to match the demand we see exactly with the generation that we have available. In predicting what is going to happen over a seven- to 10-year horizon, it is particularly important for us to operate to identify the trends in demand — growth or reduction — and try to match the available generation in Northern Ireland or on the island to meet that demand. We have been doing this for a long number of years, as you can see from the previous slide, against an increasing demand pattern, and that is becoming a little bit uncertain as we are at the minute.

The situation is also a bit confused, and I know the Committee has considered this. At this point, there is no evidence of, or no one is talking to us about, new conventional generation in Northern Ireland. When I say conventional generation, I refer to a gas-fired, coal-fired or oil-fired conventional steam plant, which is totally predictable and controllable. I should point out that we are aware of some activity in the biomass sector, but it is relatively small scale, so from the point of view of this plan, it has not been considered.

We are aware that, at the end of 2015, three generating sets at Ballylumford will come out of service. We are aware, through discussions with Kilroot, that it faces the same difficulty because of emissions legislation. Although, in 2016, it may be able to enter a national transition plan, the capacity of Kilroot becomes less certain and less predictable. We are also aware that the Moyle interconnector is down to at least half capacity at 250 megawatts, so when this statement was prepared, which was earlier this year, that was the consideration. We are aware that there has been dialogue and an exchange of information between the regulators and Moyle. As that situation develops, the capacity consideration will be looked at again. The statement that SONI prepares comes out every year. As the situation evolves, we will look at it afresh.

For background information: the renewables assumed in the plan were 1,300 megawatts of large-scale and small-scale wind, 150 megawatts of tidal generation and 130 megawatts of bioenergy/waste generation. Those are the figures that are assumed to meet the 40%, but they are not all in train. We are aware, for example, that there is much more wind generation potentially coming on line, but that is the figure that we estimate is required to meet the 40% figure by 2020.

The next slide is a little bit busy, but I will guide you through it. I will start with the green line at the top. That shows the all-island generating capacity, which is able to meet demand. What we are clearly showing is that, for the foreseeable future from 2013, there is sufficient generation on the island to meet demand.

The yellow line in the middle shows the Republic of Ireland, or Ireland, figure on its own, with the level decreasing. It is important to note that plants are being decommissioned in Ireland as well for exactly the same legislative purposes.

The blue line is the Northern Ireland-only position. That clearly shows that, in 2016, when you take out the three units from Ballylumford, you drop to a margin of some 200 megawatts. We bump along that line for the next number of years, albeit with uncertainty about Kilroot and Moyle. As we understand it from AES, if the plant is involved in the transition plan from 2016 onwards, it will go to reduced running hours from 2021, because that is when the plan expires. So, between the end of 2015 and 2020-21, we are in a difficult position, but from 2021 onwards, we potentially go into a deficit situation.

The point I want to highlight completely is that this is a probabilistic study carried out with the best information that we have at a point in time. It is saying, "This is our assumption about demand and growth or reduction over the next number of years. This is the amount of generating capacity that we are going to have available, and that is how we meet the margin." If, in real time, any one of the existing generators fails, if there are interruptions to the network, or if demand is not the same, that line will not be held to. So, at any point from 2013 onwards, if we lose one or two significant generators, we could be in deficit. What this is pointing out clearly is that, up to 2015, that is less likely; that, from 2016 onwards, it becomes increasingly likely; and that, from 2020-21 onwards, we are in real difficulty.

I have probably covered this, but on security of supply post-2015, Ballylumford capacity reduces by 510 megawatts, so the total amount of generation in Northern Ireland reduces from 2,592 megawatts to 2,082 megawatts. When this document was written, there was no clear plan to confirm the capacity of Moyle, so we have estimated that to be 250 megawatts. If that changes, and it is from 250 megawatts upwards, that would be very good and would ease the situation, but, as I say, there is no clear plan yet. The status of Kilroot is in doubt. I refer to the transitional national plan. AES keeps us in touch with how it is getting on with its discussions about entry into that plan, but it tells us what it is doing; we have no control to advise it or otherwise.

As I mentioned, there would be an impact right through of a single long-term outage to a generator. Generators are big, rotating machines, and if they have a failure, it can be quite catastrophic. The Northern Ireland generating adequacy margin will be tight until the commissioning of the second North/South tie line. We bring that to the fore because, in the absence of any proposals on the table or any discussion that anyone is having with us about conventional generation, we are obviously aware of the North/South interconnector — it is the only means we have at our disposal to consider how the adequacy position will change. Once the North/South interconnector comes along, the energy that is available in Ireland can be exported to Northern Ireland and we can close this deficit. So, we are making the point quite clearly that, in the absence of any other local proposals, the North/South interconnector is the only single proposal that we are aware of that would change the situation.

The key messages from today are that demand remains subdued and there are no signs of a return to the growth figures that we were aware of in the past. I also caution that, perhaps, demand growth will not return because the energy efficiency measures that are coming down the track might leave us in a flat condition. If that is the way it goes, that is what we will have to start planning for.

The present network limitations mean that the surplus in Ireland cannot be utilised in Northern Ireland. That refers specifically to the additional North/South tie line. In Ireland, there is a capacity surplus and it is forecasted that that will last for the next 10 years. I should have pointed out that the basis of the statement earlier this year was that the second North/South tie line would be commissioned and in operation from 2017 onwards. If that is not the case, it will obviously be a big game-changer. There is no new generation expected and there is uncertainty over Kilroot. If we lose one of our remaining two or three generators, we are down to one main generator in Coolkeeragh, two main units in Kilroot and one main gas turbine in Ballylumford. We are down to four units in Northern Ireland. That is the end of the presentation.

The Deputy Chairperson: Do you have anything to add, Robin?

Mr McCormick: No. I think that gives you a sense of what the issues are.

The Deputy Chairperson: At the bottom of slide 8, you say that the North/South interconnector is the only solution under consideration. What other options could be considered and what should be looked at?

Mr McCormick: We are aware that the Department and the regulator have taken this on board. They recently published a statement, but that really just sets out what the issues are; it does not necessarily point to a solution. We would like to see as much activity as possible on this because we believe that a solution needs to be found in a timely manner. The guys who sit at the desk in the control room have to be able to deliver minute by minute, and, therefore, a solution has to be in place prior to the end of 2015.

There are probably a number of lines of attack. One is the derogation on the plant at Ballylumford. If it was possible to get a derogation that allowed the plant to continue to operate, it would be helpful for us until the North/South interconnector is built.

The Deputy Chairperson: What is that going to take?

Mr McCormick: I think that it will take a huge political effort to get a derogation. I know that Northern Ireland has a bit of a track record of looking for derogations, and this is another one. This is a short-term fix for a problem that we are aware of in advance. That is one possibility. It is possible to go out to the market to look for other generator solutions. There is a cost to what needs to be done at Ballylumford to make it compliant. So if we do not get a derogation and we were to make the Ballylumford plant compliant, a business case could be looked at and there may be other commercial opportunities that other generating companies could bring to the table if that was afforded to them.

The Deputy Chairperson: Has anybody looked at how much that work to Ballylumford would cost?

Mr McCormick: I think that there have been discussions between the Department, the regulator and AES on that. That would be part of the —

The Deputy Chairperson: Do you have that figure?

Mr Lewis: We are not party to those discussions.

Mr McCormick: It is probably half the number they quoted.

The Deputy Chairperson: Half the number they quoted, and it will cost twice as much.

Mr McCormick: I think that needs to be seriously looked at. The generation is in place. If a derogation is not forthcoming, we have to look at what the most economic option is to resolve this security-of-supply issue.

The Deputy Chairperson: Are you confident that the problem will be resolved?

Mr McCormick: There are a number of strands to this, and I suppose that each has a number of associated risks. For the North/South interconnector, we have date of 2017, but we cannot stand over that. The planning application has been made by NIE, but we have not got a date for the Planning Appeals Commission hearing yet. That has to go through due process and you have to come out the other end. You also have to build the line, which has to be done in conjunction with a project in the South of Ireland. So there are a number of risks with the delivery of that project by 2017.

There has been some progress with the restoration of the Moyle interconnector. Correspondence between Mutual Energy and the regulator has been published on that and there has been some indication of the costs. However, from my perspective, there is no Gantt chart or contract that says that we are going to deliver x by date y, which is what we need in order to be sure that we are addressing the problem. The Moyle interconnector will only every contribute to a solution; it will not be the solution to the security-of-supply issue.

The Deputy Chairperson: Are you confident that the problem will be resolved before we get to a situation in which there is not enough electricity?

Mr McCormick: I cannot be confident of that, because there is no evidence in front of me of things that are tangibly happening that are delivering solutions. One of the reasons for making ourselves available to the Committee is to explain what our role is. We wave the flag to say that there is an issue and we will do our best to try to make sure that that message is understood by the various parties that have responsibility. The Department and the regulator obviously have a key role to play in marshalling all the commercial organisations who can contribute to a solution.

Mr Frew: Regarding demand, historically, we have always grown steadily and then had a bump. We have bumped about a wee bit since 2008. What is the rationale or reason for that?

Mr Lewis: In our forecasting techniques, we always take it that there is an economic factor in demand. Economic success normally leads to increased demand. The more that people, industries and businesses consume, the greater the demand is. So, there is a direct correlation between economic factors and demand consumption — more houses, more business, more units. The downturn in 2008 obviously had a big impact on demand. The building sector, as you know, slowed down and almost stopped completely. That stopped the churn.

There is no significant industrial demand in Northern Ireland. It is a lower level type of activity. There are one or two big users that you would be familiar with, but a significant amount of electricity is not consumed at a higher level. Consumption is mostly made up of domestic customers and small businesses, and they are the ones who have felt the pinch.

In many ways, you could say that it was a response to that or it was a price signal. Whatever way you want to describe it, we saw the fall off in demand. When you are seeing continual growth, it is easy to extrapolate that forward and say, "This is what is going to happen based on history." However, when it fluctuates for a while, it is very difficult to find the trend line. The other issue, we find, is that there is not really that amount of information published about the Northern Ireland economy and how it is going to develop. Much is said about other economies and about GB/UK, but there is little that you can take from that for Northern Ireland only. There is a PricewaterhouseCoopers report, and a few banks come out with comments, but they are usually so heavily caveated, for the very reasons you explained, that we cannot actually use them as indicators. We are left to take a best estimate, and that is why we do it as a range.

Mr Frew: You talk about Northern Ireland having a low industrial base. How similar are we to the Republic of Ireland in that regard?

Mr Lewis: The Republic of Ireland has picked up a number of high-end users, particularly in the IT sector. We have limited data warehousing. There is industry in Northern Ireland — do not get me wrong — but we are talking about big users. In Ireland, they have the likes of Intel and Google coming along and starting to look at data warehousing. So you are talking about, potentially, a 40 megawatt or 50 megawatt load. The highest load we would have is in the 12 to 15 megawatt range.

Mr Frew: The reason I ask is to compare the two jurisdictions because of the difference in policy between them. The Republic seems to load the cost onto the householder in order to benefit big industry. How do you view that?

Mr McCormick: All we can do is observe the economic activity and the resultant consumption and demand. We do not set tariffs. We set the wholesale electricity price. The retail price paid when someone buys from a supply company is set either by the supply company itself because it is unregulated, or by the regulator, who takes into account all the various elements of the normal tariff and sets the price. Whether the costs are distributed equally across all customer types is really a policy decision.

Mr Frew: You used the phrase "deficit position". I understand that phrase, but what does it mean for Northern Ireland with regard to shortages and security of supply?

Mr McCormick: Dick outlined how we do that. This graph is a statistical analysis, so it makes assumptions about demand and how often a generator will be forced out. It uses that against a standard of supply, so the deficit is below that standard.

Mr Frew: What will it mean in practical terms? What will it mean for a local industry that employs 1,000 people, or the householder who struggles to pay bills?

Mr McCormick: There are two things. This graph gives an indication as to how much generation capacity you should reasonably expect to have in order to secure supplies. The physical reality of day-by-day security of supply is dependent on the performance of those generators and the demand on that day. So what we are saying is that, as we move towards that line, the risk of loss of supply increases. You are then asking what happens if an area of Northern Ireland is off supply for four hours because there is not sufficient generation capacity. Well, they simply do not do business. The lights are out; they cannot do business; it is disruptive; and it is not what a modern economy expects of its electricity supply.

Mr Frew: Look at your graph — you described it as busy. If we fall below that threshold between surplus and deficit, what is the risk? You say that the risk of power shortages and outages increases greatly. Have you a percentage of risk? Are you saying it is highly likely that there will be outages and shortages in some areas? Is it 100% certain that we are going to have periodic shortages?

Mr McCormick: It is difficult to be as specific as that. The analysis, which is statistical in nature, is based on a forecast demand, and a lot of those things can move around. One issue that we have in Northern Ireland — and Dick set it out — is that we have quite a small number of generators. Therefore, the statistic analysis will say that you will lose a certain amount of capacity because little things fail and generators are repaired after a short period of time. If we were to lose one of the large generators in the middle of November and it turned out to be a particularly difficult failure and we maybe had to send the turbine back to the turbine manufacturer plant to be repaired and it was out for three or four months, that would have a huge impact because the mathematics of it simply would not work anymore. We simply would not have enough megawatts available to meet a peak demand.

Mr Frew: How vital is the North/South interconnector?

Mr McCormick: It is fundamental to the operation of the wholesale electricity market and the balance between the demand and the generation capacity on the island. If we are saying that we have adequate generation across the island but do not have enough capacity to transport that energy around the island, it is fundamental, and the lack of it at the moment is translated into what are called constraint costs. You have to run more expensive generators because you cannot transport the energy in sufficient quantities through the North/South interconnector.

Mr Frew: So, at the minute, it is costing us money because we do not have it?

Mr McCormick: It is costing every customer on the island money.

Mr Frew: Will there come a point when we drop below the threshold and that will cost power?

Mr McCormick: It will cost an increasing amount and, ultimately, will result in shortage of supply if circumstances arise.

Mr Frew: Have you forecast when that critical year will be? If we keep stumbling on with no North/South interconnector here, will there be a year when it becomes a problem? We know the year that we fall into deficit, but is there another year —

Mr McCormick: There is an inherent risk now that you could lose supply. If a number of generators failed or transmission lines tripped out, it is possible that you could lose supply. We lost supply a number of months ago because of a combination of weather and how that impacted on the transmission system. It was not a generation issue; it was a transmission issue. However, similar sets of circumstances can arise on the generation side. The risk increases the closer you get to the line. Measured against the standard, the closer you get to the line, the greater the risk that a set of circumstances will arise where you are not able to supply energy to customers in Northern Ireland.

Mr Frew: This is my last question. Your forecast is that we do rise with regards to large tidal and offshore wind projects that are earmarked. However, they are still a long way off with regard to planning, and the connection to the grid is a different application altogether. In the example of the large tidal scheme up on the north coast, they have to travel through all of north Antrim to Kells to get connected to the grid. How confident are we that we can get those large tidal and offshore wind projects up and going in the time forecast, which, I think, is by 2020? What state is our grid in to cope with that capacity and the change in generation from traditional generation to offshore, wind and tidal?

Mr McCormick: I will answer that in a number of ways. First, the planning of the transmission network and the investment in the network is the responsibility of NIE. European legislation means that it has been decided that, from next year, SONI will take responsibility for making those planning decisions. That will be an additional workload on us. Not only will people come along and request a connection to the system, as they do at the moment, but we will physically make the plans for that. I hope that that will increase the efficiency of that element. The process of delivering those projects is fraught. The North/South interconnector project is a very good example of how difficult it is. That would suggest that, in investment decisions, we need to find a clean way of making efficient and timely infrastructure decisions on the basis of a strategic view of where we are going. It is not good practice to have delays, such as the recent delay of the Northern Ireland electricity price control, built into a timely strategic investment decision-making process. We need to get better at that because it takes time to consult the public and give them the opportunity to have their say in major infrastructure projects. That needs to be built into the timeliness of the initial decisions.

Mrs Overend: Thanks very much for coming in today. This is as serious an issue as you can get for Northern Ireland in that the lights could, potentially, go out, affecting not only businesses but everyday life for consumers. The concern is that security of supply is not assured in the future. How effective are renewables as a supply feature? Can we really depend on them in the future? Will we depend on them much more? The wind does not always blow.

Mr McCormick: As a system operator, we know that only too well. Sometimes, very few megawatts are generated by wind. At other times, we are almost at maximum capacity from the wind farms that we have. One of our major challenges as a system operator is operationally maximising the amount of wind that we can carry on the system. It is not as straightforward as just letting the wind blow and letting the energy from wind farms flow onto the system. There are some limits. So, at the moment, for example, we believe that we can cope with about 50% of demand being met by wind generation.

Mrs Overend: Sorry, what percentage?

Mr McCormick: Fifty per cent. So, if the demand on a day is 1,000 megawatts, we believe that we can cope with 500 megawatts, 50% of that being generated from wind. If there is more wind available, we have to curtail it. We have to turn the blades of the wind turbines, so that there is less output. Increasingly, we are looking at options to trade that energy across into GB if it is economically efficient to do so. So we are looking at ways to maximise wind. We believe that we understand from a technical perspective how to move from 50% to 75%. In the next number of years, we will be working across the island to make that a reality.

The other thing that we are doing to help the system operate more efficiently is that we are looking at ways to encourage conventional generators to be more flexible, because the wind can blow and then suddenly stop. You need to have conventional generators that can come in and react quickly to that. So we are looking at ways of managing that.

In overall generation adequacy, we take account of the amount of wind that there is on a network and account for that in the calculations that we have done here. It is a small percentage of the overall capacity.

Mrs Overend: OK. Thanks. Do you think that we should look at other options for renewable energy that might be more secure, not just wind?

Mr McCormick: We are looking at a number of other options. One that is being looked at is tidal energy. Another is biomass. All those technologies and support mechanisms are there. So it is really a market decision as to which technology is pushed through. Our job is to respond to a connection request from a commercial entity that says it wants to generate either wind or biomass or whatever its preference is. We have to make sure that we respond to that and, in the normal course of events, we would expect to be able to provide it with an infrastructure behind that connection that would allow it to do its business in full.

Mrs Overend: Do you think that we are right in trying to increase our renewables targets? Do you think that is the best source of energy supply to make sure that we have a secure supply of electricity?

Mr McCormick: There is the strategic energy framework, which the Executive have approved, which calls for a 40% renewables target.

Mrs Overend: I know that they have; I am just asking for your opinion on it.

Mr McCormick: Well, the benefits are clear and are well articulated in that document for reductions in emissions, reductions in our dependency on fossil fuels and the volatility of prices of fossil fuels that we are importing. So, from that perspective, that all makes sense, and we are working to try to facilitate the delivery of that policy.

Mrs Overend: Do you think it could end up costing us more money? Our concern for businesses and consumers is that electricity is so expensive. Do you think the increase in renewables will impact on that price and that the price of energy will continue to increase as a result?

Mr McCormick: We look after the wholesale electricity market, so we can see the impact that wind generation has on that element of it. I am conscious that wind developers and renewables developers have additional out-of-market support mechanisms. It is hard for me to put together a complete picture of the economics of it all, but the general consensus is that fossil fuel prices will increase, and if they increase at the rate at which the World Energy Council believes they will, going for a renewables option is the right thing to do. That involves making investments in the grid to facilitate it, providing the support mechanisms to get them into the market in advance of when they otherwise would have been there. The increase in fossil fuel prices is likely not to give you time to react to the price. We have seen the increases and the volatility in fossil fuel prices over a number of years.

Mrs Overend: I appreciate what you are saying, but I am remembering the conversation we had when the Utility Regulator was in about the price of a bag of spuds and how the cost of the fossil fuels sets the price and affects what the renewables are setting their price at. If we are saying that fossil fuels will be more expensive, as you say, those renewables providers will then say that they will set their price marginally lower, so they are going to make a huge profit. In an ideal world, it would cost much less, but if they are going to use the market to set their price, energy prices are just set to steamroll, are they not?

Mr McCormick: I think the price of electricity inevitably will rise if fossil fuel prices are increasing. This is a hedge against that. Yes, I imagine that the new entries — the wind farms — will make a profit based on the risks they are taking in their business. I cannot comment on the individual profitability because I do not see their full business cases. I think the market that is run on the island is probably as transparent as any other market. All the information is there to see what the price is, how it was set, how the various components and categories of generators have fared in it. That is important from my perspective, to make that information available, so that some of those discussions can be had with the correct facts. If it was a bilateral market, no one would see what those deals were below the level of the balancing market. We have a very transparent market that allows some of those discussions to happen.

Mrs Overend: Just to go back, you said that there needed to be some investments to help the renewables to get into the grid. What did you say those investments needed to be?

Mr McCormick: I said that the support mechanisms are there to bring those technologies to market quicker than the other ways would have done. The 40% target for 2020 is a signpost; it is not a dead end. There will be something beyond that. The decision has been taken to introduce support mechanisms to get the wind and the renewables into the market early so that when the fossil fuel prices increase, as they are forecast to do, there is access to that cheaper energy.

Mrs Overend: The incentive for them to get in is the huge profits.

Mr McCormick: It is at the moment, but those support mechanisms are not forever. The electricity market reform proposals in the UK are starting to roll out, with a move away from renewable obligation certificates to a feed-in tariff and a contract for differences, where a price will be set each year that will reflect the different technologies and where they are in their maturity.

Mrs Overend: Thanks very much for that. It is something else that we need to look at further.

The Deputy Chairperson: What else could be done to incentivise small-scale generation, particularly to make it more attractive for businesses and communities to generate their own power?

Mr McCormick: That is probably outside my remit. The impact of small-scale microgeneration from a system perspective is unlikely to impact the discussion that we have had today. There will not be sufficient investment in very small microgeneration to have any material impact on what we are seeing here. We will be seeing small individual wind farms or wind turbines. We have done some work to try to assess what the system would look like if that went to its fullest extent. We reckon between 50 megawatts and 70 megawatts of individual wind turbines out there as a possibility. That has an impact on what we are looking at. Although the micro one has an impact on the individual — there is potential for support mechanisms for them — it does not address that type of issue.

The Deputy Chairperson: I think that that is all the questions, Robin. Thanks very much for coming. The Committee has agreed to carry out a review of electricity pricing, and I hope that we will agree terms of reference later. Will you be willing to come back at some stage during the autumn as part of your role as a single electricity market operator to brief us on pricing policy in the single electricity market?

Mr McCormick: Certainly. If we know in advance what we need to analyse, we are happy to come as a market operator to give you a view of how the market has been operating.

The Deputy Chairperson: Thanks for that. A number of members are not here, so there may be a number of questions that have not been asked. If we forward them to you in writing, will you come back to us with a written response?

Mr McCormick: Yes. I am happy to respond.

The Deputy Chairperson: Thanks very much.