The Scottish Parliament
Pàrlamaid na h-Alba

Official Report

ECONOMY, ENERGY AND TOURISM COMMITTEE

Wednesday 17 June 2015

Session 4

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ECONOMY, ENERGY AND TOURISM COMMITTEE
17th Meeting 2015, Session 4

CONVENER

*Murdo Fraser (Mid Scotland and Fife) (Con)

DEPUTY CONVENER

*Dennis Robertson (Aberdeenshire West) (SNP)

COMMITTEE MEMBERS

*Chic Brodie (South Scotland) (SNP)
*Patrick Harvie (Glasgow) (Green)
*Johann Lamont (Glasgow Pollok) (Lab)
*Richard Lyle (Central Scotland) (SNP)
*Gordon MacDonald (Edinburgh Pentlands) (SNP)
*Lewis Macdonald (North East Scotland) (Lab)
*Joan McAlpine (South Scotland) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Fergus Ewing (Minister for Business, Energy and Tourism)
John Fiennes (Department of Energy and Climate Change)
Dan Monzani (Department of Energy and Climate Change)
Dermot Rhatigan (Scottish Government)
Dr Graeme Sweeney (Thermal Generation and Carbon Capture and Storage Industry Leadership Group)

CLERK TO THE COMMITTEE

Douglas Wands

LOCATION

The James Clerk Maxwell Room (CR4)

Scottish Parliament

Economy, Energy and Tourism Committee

Wednesday 17 June 2015

[The Convener opened the meeting at 09:45]

Subordinate Legislation

Late Payment of Commercial Debts (Scotland) Regulations 2015 (SSI 2015/226)

Debt Arrangement Scheme (Scotland) Amendment Regulations 2015 (SSI 2015/216)

The Convener (Murdo Fraser): Good morning, ladies and gentlemen. I welcome members, our first panellists, who I will introduce in a moment, and visitors in the gallery to the 17th meeting in 2015 of the Economy, Energy and Tourism Committee. I remind everyone to turn off, or at least turn to silent, any mobile phones and other electronic devices, so that they do not interfere with the broadcasting equipment.

Agenda item 1 is consideration of two negative instruments, the first of which is the Late Payment of Commercial Debts (Scotland) Regulations 2015 (SSI 2015/226). As no members want to raise any issues on the instrument, are we content to note it?

Members *indicated agreement.*

The Convener: The second instrument is the Debt Arrangement Scheme (Scotland) Amendment Regulations 2015 (SSI 2015/216). As no members want to raise any issues on the instrument, are we content to note it?

Members *indicated agreement.*

Security of Supply

09:46

The Convener: Agenda item 2 is continuation of our inquiry into security of supply. Two panels are joining us this morning.

We invited Amber Rudd, who is the Secretary of State for Energy and Climate Change at the Department of Energy and Climate Change, to come to the committee. However, Westminster is sitting and it has a heavy legislative programme. As the United Kingdom Government has a majority of 12, I think that it is understandable that the minister was not able to make the trip to join us. We have two excellent substitutes from DECC in the form of John Fiennes, who is the director of energy strategy, networks and markets, and Dan Monzani, who is head of security of electricity supply. Thank you both for coming.

We will allow around one hour and 10 minutes for this session. I remind members, as I always do, to keep their questions short and to the point. Similarly, answers that are short and to the point would be helpful in covering the topics in the available time.

Do you want to say something by way of introduction and to set the scene, Mr Fiennes?

John Fiennes (Department of Energy and Climate Change): Thank you for the invitation. Security of supply is, obviously, an important issue, with lots of elements to it, so it is always valuable to share perspectives. I know that the committee has had a number of good discussions on the topic so far.

The secretary of state is sorry that she cannot be here, but she has certainly been keen to make early contact with the Scottish Government and looks forward to a positive working relationship on the range of issues that we have. The committee will understand that these are fairly early days for new ministers after our election. I hope that you will bear with me if there are areas in which you are seeking policy detail that I do not have. Obviously, I will do my best to answer your questions.

On the substance of the issue, you have had masses of evidence. A clear question is how you maintain and ensure a high level of security of supply efficiently in order to keep bills as low as possible. There is a quite a lot of action under way in the short term with National Grid and the Office of Gas and Electricity Markets to buy new balancing services.

For the medium term, we have the greater investment in networks to ensure connectivity within Great Britain, and the operation of the

capacity market. In the longer term, we have an active programme of promoting interconnection between GB and other European markets and, potentially, further afield. Work is also going on in order to ensure that we make the most efficient answer that we can to market signals.

We are making good progress. As I said, security of supply is an important issue and we expect it to remain a key focus for us over the coming months and years.

I will stop there, and leave as much time as possible for your questions and interests.

The Convener: Thank you, Mr Fiennes. I will start by picking up on some of your comments on the broader policy agenda. I think that we are all aware of the trilemma that faces policy makers on energy: balancing decarbonisation, affordability and security of supply. Where is the Government now in terms of the decarbonisation of the energy mix and our route towards that?

John Fiennes: There are perhaps two parts to the argument about that, the first of which is that there are some areas in which the trilemma points in different directions, but that is not universally the case. It might be worth bringing in the interconnection story a little bit. Earlier this year, we reached a final investment decision on a project that will connect the Norwegian electricity market with the GB market for the first time. The project is being taken forward by National Grid on our side and Statnett on the Norwegian side. The project is a win on all the dimensions of the trilemma because there is a lot of hydro generation in Norway, for which the Norwegians are seeking a market, and we are an attractive market for that because of our size and prices. The Norwegians are therefore very keen to have the connection.

The connection will help us to stabilise our system, and particularly to deal with any future surges in wind generation. There will therefore be quite a natural match between the generating mixes of the two countries, which is also projected to bring down consumer bills in this country. That is a low-carbon solution that has a positive element on security of supply and a potential bill-saving element.

Solutions like that exist, and I would have thought that the new Government would be interested in seeing whether more such things could happen. There is another project in principle for a connection from Norway to Peterhead run by NorthConnect, which again could be quite an interesting part of the future. It is wrong to think that such projects are always trade-offs.

More broadly on the decarbonisation agenda, the secretary of state will need to think through the detail of that and particularly what we do in the 2020s. She is very keen to make progress on the promotion of renewable power, but she will want to think very carefully about the financial commitments that she makes and where the financial resources are best directed among the range of technologies that there might be. There is a bit of time for doing that. We believe that we have made good progress through the renewables obligation and the early contracts for difference, which set us up extremely well for the 2020 milestone on the electricity side. I would expect there to be more work over the next year or so in the run-up to the spending review that looks at the position in the 2020s and sets a course.

The Convener: Thank you. That was quite helpful just to set the scene.

Dennis Robertson (Aberdeenshire West) (SNP): Good morning. Are energy and climate change equal priorities? In looking at ensuring the energy supply, are we also ensuring that we meet our climate change targets? Which is it?

John Fiennes: I would have to guess slightly where the secretary of state would be on that. I expect that she would say that security of electricity supply is the first thing that we have to achieve, because if we do not achieve that, people will reasonably ask what we are doing. Decarbonisation is not something that we do by accepting an unreliable power supply. I would therefore think that security of supply would be the primary objective.

We then have a question about our respective positions on the pace with which we decarbonise and its cost, which involves a series of interesting decisions. The technology is moving extremely fast in some areas, and it is no secret that the department has been pleased but surprised by the pace with which things like solar generation photovoltaic cells have come down in price over time. There is always a question about the extent to which we buy the technology that is in front of us just now and the extent to which we wait and promote research and development in the hope that something better will be there when we need it.

Those are exactly the sort of debates that will need to happen in the run-up to the spending review. We need to think about, having got to 2020, what will be the right pace and the right mix in the 2020s? How soon could some of the technologies operate without financial support? Ultimately that is a better place to be—where technologies are competing on their merits and without particular sets of Government intervention.

The operation of the CFD auctions has been quite interesting, in as much as we have set previously administered strike prices for a range of technologies and we have been pleased to see

the prices in the auction clearing at lower levels for those. We need to understand what that looks like. It is another illustration of the fact that, sitting where I sit, it is hard to know exactly what the market will be doing and offering in future.

Dan Monzani (Department of Energy and Climate Change): I will add a sentence or two on our comparison to the capacity market. We also had an auction that was technology neutral, and it cleared well below what we would have forecast and, indeed, what many independent external advisers and commentators would have predicted. That points to another way in which we are trying to optimise rather than to choose within the trilemma. We are trying to use competition to make the decarbonisation and the security of supply pathways as affordable as possible.

Dennis Robertson: You can probably see where I am coming from, which is whether we are looking to ensure that we make our climate change targets. To do that, we would look at what technologies are available or what energy supplies we can move forward with. In that context, does the United Kingdom Government's suggestion that it is going to remove the subsidies for onshore wind generation not send out a negative message for investors? Will that message not impact on the security of supply, and does it not remove an aspect of trying to achieve your climate change targets?

John Fiennes: We believe that we are on track for the carbon targets. We believe that we are on track for the electricity element of the 2020 targets.

From the security of supply point of view, wind is helpful, but in that context we are thinking about the reliable capacity that we can bank on at a time of system stress. That is why we derate wind in order to make sure that we do not assume it will be there if the wind is not blowing. Personally, I do not think that there will be a major issue from the security of supply point of view as the Government moves forward on its manifesto commitment. However, as I said at the start, these are fairly early days. We are thinking about this issue back at the shop. I hope that there will be more details on that soon.

The impact on the supply chain and commercial investment is absolutely in the minds of ministers, and they will factor it in when they develop the plans that they have to produce to meet their manifesto commitment.

Dennis Robertson: You can understand the reasoning behind the questions. We are concerned that, if the UK Government continues to send out what I consider to be a negative message, investors will walk away. Even those who have plans already may just say that they will walk away and take the hit. In that respect, we do not have security of supply.

I understand that wind is intermittent, but when it blows we get good results, with connection to the grid. Is the UK Government looking at an alternative? Hinckley Point does not come on stream until about 2030, I think. Will we have security of supply in that huge period between 2020 and 2030?

John Fiennes: As I said, the effect on investment confidence is a key consideration. There has been a lot of investment under the renewables obligation and a very good demand for the contract for difference. The contract for difference has been developed as a product that provides a gain to consumers but also provides a private law contract, which is extremely appealing to private sector investors. It is an instrument that they recognise, and we believe that they have confidence in it. We think that that was shown through the response to the final investment decision enabling for renewables, or FIDER, programme. There was a very strong demand from the market, which will provide a significant pipeline for those projects in the coming years.

By setting the levy control framework, which is an envelope of affordability agreed with the Treasury up to 2021, we have given a strong signal of future money to developers. That has gone down extremely well. As far as I know, that is the most positive forward commitment of money in Europe—I cannot think of any others.

There needs to be a debate about what happens in the 2020s and the best way to allocate scarce financial resources, and that is where the spending review comes in. I am sure that that debate will play out over the coming months. I would expect the Scottish Government to be an important player in that, as would others.

10:00

Dan Monzani: This is a good moment to mention how the capacity market will work alongside decarbonisation. Mr Robertson is right to say that many forms of low-carbon energy, including wind, contribute to security of supply at some level. We ensure that there is an overall security of supply that meets our reliability standard by working out the number of gigawatts of supply that we think we will need to meet peak demand; we then net off, four years in advance, how much renewable and other low-carbon generation will be in the mix.

In other words, whatever the position is with regard to our pathway to decarbonisation, we take that out of the equation and then buy what remaining capacity is necessary through the capacity auction. Four years ahead, we take an

assessment of what the generation will be and then ensure that we procure enough capacity to meet the reliability standard. We then fine tune that one year out.

Dennis Robertson: I probably understand most of that. I am interested in the gap that you mentioned, in the 2020s to 2030s. How can you say with any certainty that we will have security of supply during that gap, given that Longannet is likely to close earlier than expected and we do not know yet what is happening with carbon capture at Peterhead? I want to tease out what is happening in the gap. You have said that you are holding discussions and a review, but can you give us any indication on the direction of travel for the UK Government to meet that gap in the 2020s to 2030s?

John Fiennes: The UK Government has been clear: it wants to see new nuclear in the future. I have been trying to expand on the point that there are a number of things that may come in and it is hard to know which of them will materialise.

I talked about Norway, but there are also projects to connect Iceland to the GB market. Iceland is a market in which power generation is extremely cheap. Connecting it to the GB market would be an extremely ambitious thing to do, but there are some developers who believe that it can be done. There is some difference of opinion about what that might cost, but at the most optimistic estimate, people think that it could be quite a competitive and reliable offering.

Some people think that the cost of photovoltaic in combination with storage may drop to the point where that becomes cost competitive. There is a question about how much one can bank on that. There is also competition in carbon capture and storage at the moment and many people are interested in that, worldwide. We may find that CCS costs come down and that that becomes an attractive thing to do. That could be of greater help with your security of supply issue than things like wind power. The proof will be in how reliable these things are to operate. I would not like to say what the right derating factor for Peterhead's CCS project will be if it wins the money through the competition.

Ultimately there is the potential for more gas-fired power stations. A lot of new gas projects have planning permission to proceed. They are primarily closer to demand but, in a highly networked GB system, they would provide security of supply to Scotland as they do to all parts of GB.

From the security of supply point of view, there are a number of ways in which the requirements could be met and, as I said before, there will be a debate about whether you want to lock into one particular solution or a range of solutions and how much you are prepared to spend to do that. Part of that argument depends on what view you take of fossil fuel prices. If you think that they will be high, renewables will look increasingly cost effective, marginally speaking. If you believe that they will be lower, that might give you a different view of the best way to go.

We are working hard with the Scottish Government in setting up the Oil and Gas Authority to maximise the recovery of oil and gas. You can see from that that we are not taking a particular view of where fossil fuel prices might be.

Gordon MacDonald (Edinburgh Pentlands) (SNP): I have a question on Dennis Robertson's earlier comments about the UK Government's intention to end onshore wind subsidies. Scotland has 37 onshore wind projects of 50MW or above that are awaiting the go-ahead. How will the announcement affect them? More important, you talked about investor confidence; given that the 37 projects will have incurred substantial costs to get to where they are, what kind of message will the announcement send to people who want to invest in renewables technology?

John Fiennes: It will depend on the details that are announced. When the Government made changes to the renewables obligation during the previous parliamentary session, it carefully considered the grace periods that were applicable to projects in order to strike the right balance between cost effectiveness and value for money for the consumer and recognising the expectations of the developers. Ministers are thinking carefully about those issues now. Equally, the ending of onshore wind subsidies was a manifesto commitment, so the direction of travel is quite clear, but you will need to wait until we see a bit more detail on the announcement.

Gordon MacDonald: You mentioned value for money. Ian Marchant, who is the chairman of Infinis Energy, said in a press release:

> "The proposed approach contradicts the government's manifesto commitment to 'meet our climate change commitments, cutting carbon emissions as cheaply as possible, to save you money'—as the cost of substituting more expensive technologies in place of onshore wind would add several hundred million pounds every year to bills."

How does that relate to value for money?

John Fiennes: We believe that we are on track to meet the electricity component of the 2020 renewables target. The 2030 target does not specify the renewables content, so member states can choose how they break it down between the different sectors. It is therefore possible to have a discussion about the right investment mix to have in the 2020s to position yourselves for the long term.

There are perhaps two more points here. At what point does a renewables technology no longer need financial support from the energy bill payer in order to be deployed? Thirdly, as well as a carbon impact, onshore wind schemes might have a visual and a broader environmental impact that the Government believes should be taken into account. However, going back to where I started, you will need to bear with it and wait and see the detail of what ministers say about those points. I expect that to come out shortly.

The Convener: To be clear, do we know when an announcement is likely to be made?

John Fiennes: I am afraid that I do not know.

Chic Brodie (South Scotland) (SNP): Norway and Iceland have been mentioned. I am not against foreign investment, but at present we have what is, in effect, a monopoly as regards system operation. Why would we consider such alternative investment, which has cost, currency, balance of payments, political and management implications? Why are we considering investment in Norway and Iceland rather than developing further hydro capacity in Scotland?

John Fiennes: It comes down to the economics of the situation.

Chic Brodie: But I have just laid that out.

John Fiennes: The price differential between Norwegian and UK power prices means that it is possible to import hydro at UK market prices with no need for additional financial support. We are talking about a very large bit of infrastructure that is paid for on the arbitrage between the two markets.

Why is there not more hydro development inside GB, given that there are companies that say, "We have these great schemes that would help stabilise the grid"? I might ask Dan Monzani to comment on the operation of the capacity mechanism, but I understand that those projects are eligible for 15-year contracts. The capacity mechanism is technology neutral, so if a hydro pumped-storage project offers value in security of supply and is the best way of achieving that aim, it should be able to win the contract. If it does not wish to compete in the capacity mechanism, it is possible for it to seek an agreement with National Grid to provide balancing services. One advantage of pumped hydro is that it is a fast response. It is also conceivable that a company could support such investment by providing insurance for people who are playing in the capacity market, who face penalties if their project is not available at a particular time—the penalties have been designed as a strong encouragement for people to be there at times of system stress. Such projects could proceed in a number of ways. Why are they not doing so?

It may be that something else is preventing projects from coming forward—perhaps there is some market failure that I have not yet described. It may be that although such projects are great pieces of engineering, they are not the most cost-effective way of ensuring security of supply. We must have that debate. People come and talk to us about those projects, and we are thinking about the market incentives for storage to see whether we have missed something that we should be bringing forward. If a piece of technology can allow us to address the security, carbon and cost implications with more efficiency, I am all for that. The question, however, is what that technology is.

Chic Brodie: But it is easier to invest in Norway, is it not?

John Fiennes: I would not say that they were alternatives. If anything, energy from Norway will displace thermal generation in this country, because it will be imported largely on a base-load basis. Pumped hydro gets used from time to time in particular instances of a sudden, urgent surge in demand. We would never be able to pay for the Norwegian infrastructure—the connector between us and Norway—if it was to be used only at times of extreme system stress. The arbitrage works only if there is consistent trade, because there is a systematic difference between the prices. The Norwegian hydro is in a different part of the market from the potential UK hydro, so I certainly would not see those as competitors.

Dan Monzani might want to add something about hydro and the capacity mechanism.

10:15

Dan Monzani: John Fiennes's description is exactly right. We do a couple of things in the capacity market. One is that we try to allow technologies to compete against one another, so that we can find out which is the most economic at delivering capacity. Obviously, we are talking here about capacity at peak. There are some interesting technologies around, such as hydro, interconnection and demand-side response, which have the potential to meet those peak demands in a cost-effective way.

Technological neutrality is extremely important, but the second element of the capacity market design is the way that it has been designed to mirror the electricity-only market. As John Fiennes says, you can earn revenues elsewhere, for example, through arbitrage or selling base-load power, which hopefully contains some element of remuneration for your capital costs and therefore pushes down the additional costs that energy bill payers have to pay in order to provide that capacity. By combining those two approaches, we

are trying to get the lowest cost for the consumer for delivering capacity at peak.

The Convener: I am conscious that other members want to come in, but I am also conscious of time and the number of other issues that we want to cover. I will bring other members back in later, but I want us to move on.

Lewis Macdonald (North East Scotland) (Lab): I would like to start on the supply side, and I know that colleagues will pick up on the demand side.

In GB, the supply side is dominated by a small number of quite powerful privatised corporations. Does the Government believe that it has the leverage that it needs in dealing with those major players? If so, how does the Government use the mechanisms that you have been discussing to achieve shifts in priorities by companies that are large corporations in their own right?

Dan Monzani: I will start at the micro level and John Fiennes can talk about the issue more generally. Within the capacity market, about 70 per cent of generation is done by the big six companies, but the rest is done by independents. One of the things that was important to us in relation to the capacity market was ensuring that, when new build was developed, it was not completely impossible for the big six to develop on balance sheet, nor was it impossible for independents to bring forward new projects. We found that, of the nine new-build CCGTs that pre-qualified for the last auction, seven were independents. We were quite pleased that the design of the auction allowed independents to enter and compete on a project finance basis against the big six, which were presumably making use of their balance sheets and the strengths that you identify.

The Convener: If I may just make a small point, if you use acronyms, it is helpful for the purposes of the official reporters if you spell out what you are referring to, at least in the first instance.

Dan Monzani: Sorry—a CCGT is a combined cycle gas turbine.

John Fiennes: The UK market is not very concentrated, by European standards. As Dan Monzani said, there is a significant amount of independent generation. Of course, there is an on-going Competition and Markets Authority investigation into whether there are any adverse effects on competition. It put out an updated issues statement earlier in the year. That is an independent process, and I have no special insight into where the authority will go with it. However, in that issues statement, it seemed that it was mainly talking about the retail end of the electricity and gas markets. There are some elements to do with locational pricing and so on, but those concern market design upstream, rather than the point that you are getting at.

As Dan Monzani said, we are seeking to frame policy in a way that allows independents to come in. That is being done partly on the generation side—by the way, but we think that the contract for difference is also good for independent generators. On the network side, we have a regime of competition with regard to the offshore links that we have and, along with Ofgem, we are looking to see whether we can introduce more competition for onshore assets, which we believe will keep National Grid on its toes.

The use of auctions is a powerful way to drive value and to ensure that we do not end up with control being exercised by one or more players. That approach is used partly through CFD and partly through the capacity mechanism. Dan Monzani might want to say a bit more about the extent to which the capacity mechanism has brought forward things that we would not have thought of immediately, such as small-scale gas generation that is operated, in effect, as a virtual power station. That could be quite interesting to Scotland, in time. One of the characteristics of the Scottish system at present is that there is a small number of quite large chunks of thermal generation. If a large chunk shuts down, there is a question about what that will mean.

As it happens, we think that Scotland is very well provided for as regards generation and, with the investment that has been made in transmission, it is pretty well placed. However, the transmission pricing changes when one of the large chunks comes off. It may be that a power station shuts, which would mean that transmission pricing in a particular area would drop significantly. There would then be a response, either in the shape of investment in new hydro, if lack of investment was what was keeping it back previously, or in smaller-scale thermal generation, to help to fill that gap. That is potentially quite an organic system.

One other point concerns National Grid's role as system operator. National Grid has a fully merchant arm, which does some interconnection business and various other things; a regulated arm for the transmission regime; and a system operator role, which is much more akin to a public policy function.

There has been quite a lot of debate about whether there is the right level of separation within National Grid. On the one hand, it has a lot of skills and strengths, and it is a very professional body. I believe that the committee heard from Mike Calviou—he certainly knows his stuff. National Grid has already taken action to strengthen the separation within it in order to give confidence that

what we are discussing is done in a way that is not affected by broader commercial incentives.

The committee may or may not have picked up that Ofgem is thinking about the issue. Through one of its projects, it is strengthening the planning and delivery role of the transmission and system operator. We are hoping to get the onshore competition going. One can imagine that, in future, if we end up with a system in which there is more storage and more demand-side response and less wire, the potential conflicts of interest between that area and the system planning role could become more stark.

I think that National Grid realises that, and it is thinking about what it can do in response. Personally, I do not worry about how National Grid is operating at present. In fact, when it first provided advice to us on the capacity mechanism, our view was that it was slightly understating—or very much understating—the potential benefit of interconnectors to system security in GB. If National Grid's merchant arm, so to speak, was influencing its advisory arm, one would expect the opposite to be happening. It has been a bit whiter than white, and further work has borne out the notion that interconnectors could make a more positive contribution to security of supply.

One issue is whether we should have an independent system operator—as some places in the world do—that might position us to move forward. Meanwhile, there is another debate going on about whether we should have a system architect. Some eminent engineers are saying, "Look—the electricity system is changing very rapidly by historical standards." A lot of new stuff is coming on in great volumes. We have always had a predict-and-provide model, but is that really where we need to be over the long term? Can we be sure that the system will remain secure and represent value for money? That is a fair question to ask, and I believe that the committee has had some debate about that. We have no particular view at this stage.

Lewis Macdonald: Another witness we heard from recently was Malcolm Keay, who made the point that there was nothing in the capacity market to optimise a particular mix of investment and different types of supply or to ensure the right balance between supply investment and demand investment. You described the capacity market as "technology neutral", not by accident but intentionally so, and a consequence of that is that a lot of the contracts that are let under the capacity market go to thermal generators to provide power reserve or back-up supply. Can something be done with the capacity market mechanism to incentivise new renewables and low-carbon technologies, looking ahead in particular to 2020?

John Fiennes: Absolutely—that is part of the intended future. Dan Monzani will talk about that in a moment.

In general, the issue is not purely the capacity market. We need to ask ourselves a number of questions. First, are we sure that there are no barriers to the things that you have mentioned that we have not seen? There might be barriers that we have put in the way. There might be plenty of demand-side response out there, but something in the way in which we have carried out the licensing—or something else—might be preventing those things from happening. That would be a daft thing to do, and we need to ask whether there are any such barriers.

Secondly, are the market signals of the right sort to allow people to take decisions? We are rolling out smart meters at present, and there is quite a lot more of that to come. A very large user of electricity will be quite aware of the price when they use it, but a medium-sized or smaller user might not be. If users do not have information about usage at particular times, it is quite hard to see how they will be able to secure the value, which is what will actually help everybody. As I said at the start of the meeting, it is one of those things that could result in gains with regard to carbon, security and cost effectiveness.

A huge amount of research and development is going on in that area. Ofgem operated the low-carbon networks scheme under the previous regulatory settlement, and it is operating some more arrangements now. However, it is not only the network and energy companies that are involved; companies such as Google are showing quite a lot of interest in developing technologies that could run over the top of those other things and provide people with services that they really want.

Again, this ought to be a very live area of debate; indeed, it is particularly important for Scotland, because of the development of renewables here. I was interested to read the *Official Report* of the committee's discussion with a representative from WWF Scotland. On the question whether we could run a system based entirely on renewables, that sort of response becomes very important. If you are interested in that area, I think that there could be a lot of co-operation in that respect.

I will hand over to Dan Monzani to talk about the capacity mechanism in particular.

Dan Monzani: On Lewis Macdonald's question about how to ensure that low-carbon technology can be part of the mix, the capacity market is solely focused on the prime objective of meeting reliability standards and keeping the lights on, which does not mean that it is not compatible with

our decarbonisation objectives. However, we are increasingly achieving decarbonisation of the base-load principally through mechanisms such as CFD that bring forward things such as onshore wind and nuclear to displace ageing plants.

It is also true that there are differential environmental costs in the energy-only markets. For example, the typical price that a coal plant will pay for the carbon that it emits is roughly double the price that a gas plant would pay. That means that, when it competes in the capacity markets, those costs are reflected in the bids that it is able to make. To some extent, the capacity market reflects the broader environmental measures that are affecting the wholesale markets, but it must be kept focused primarily on delivering security of supply, albeit that the costs of those who are bidding—and therefore the merit order of those who win and lose—will be affected by broader environment legislation.

In a world in which we are increasingly decarbonising the base-load, there is an interesting space, which we have discussed a great deal today, where there can be a mixture of different technologies, some of which will contribute to that low-carbon base-load. Technologies that specialise in dealing with peaking demand will typically not compete with the low-carbon base-load, which will have very low marginal costs and will therefore be running much of the time, but they might be really specialist at being able to respond flexibly or at reasonable cost at times of high demand.

10:30

As John Fiennes has pointed out, an interesting dynamic in the capacity market is how it has led to competition between technologies that we know and expect and innovation. To be honest, I did not expect to see such large numbers of small-scale gas plants that, in some cases, are coming together on networks. They are proving very efficient at meeting the peak periods of demand. That gives us quite an interesting picture of the market, in which we have a low-carbon base-load and some specialists dealing with the peaking that could be equally well served by demand-side response, interconnection, storage and pumped storage.

On your specific question whether we can do more, I have to say that we are certainly not complacent. Although we are trying to be technologically neutral, that does not mean that we are not spending a lot of time with each of the individual technology companies, trying to understand the barriers that they face.

One thing that we have done for the demand-side response sector is respond to its feedback that it would be able to compete most effectively one year rather than four years in advance of the delivery year. Essentially, we are running two prototypical transitional arrangements auctions, which are one-year-ahead auctions for capacity in 2016-17 and 2017-18, exclusively for the demand-side response sector to ensure that those companies can compete, and they will be able to build their business model and increase their efficiency in time to compete against all technologies in the 2017 auction at T minus 1. We expect to announce the parameters for the first of those transitional arrangements auctions in the next few weeks, and we look forward to seeing a liquid auction coming forward on that basis.

The Convener: I know that Patrick Harvie is keen to follow up on the demand-side response issue.

Patrick Harvie (Glasgow) (Green): Thanks, convener.

Mr Monzani, my question links in fairly smoothly with what you have been talking about. We have heard about the emphasis that there needs to be on demand-side response with regard to reducing overall demand and developing a more sophisticated approach to managing demand. It seems to me that that will require a long-term transformation of a whole host of areas of our lives and our economy. You have talked about the 15-year contracts that are available for supply through the capacity market, but why do we not have the same long-term approach to the demand side? We are all interested in seeing what happens with the one-year auction that you have mentioned, but there does not seem to be the same long-term commitment to ensuring that the projects can deliver a really substantial agenda of transformation.

Dan Monzani: We started from the position that everyone should have one-year contracts and that we would have an auction every year, and we have moved away from that position only where we thought that the capital requirements of particular projects were such that they would need to be able to amortise those capital costs over a longer time span. We therefore introduced three-year arrangements for those whose refurbishing capital investments were above a certain threshold and 15-year contracts for those who had new-build projects with a high level of capital expenditure. We continue to engage with the demand-side response sector, but it has not presented us with evidence of a large capital requirement that is equivalent to that for a new-build power station or a new-build storage facility.

Patrick Harvie: But surely the capital requirements for a local authority to transform its housing stock, for example, would be greater than

the capital requirements for one of the small gas stations that you mentioned a moment ago?

Dan Monzani: There are two different things to consider, which you identified in your opening remarks: lowering overall demand at all times—in other words, energy efficiency—and managing peak demand. As far as security of supply is concerned, we are focused on ensuring that we can meet peak demand, because that is when it is most difficult to keep the lights on.

It might well be that if you look at the cost per unit of—if you like—Government objective, energy efficiency in the housing stock turns out to be a very efficient measure. Indeed, I know that to be the case, because it is an area that I have worked on myself. However, it does not necessarily deliver very much capacity or reduce capacity need at peak demand, because the bulk of its benefit comes from reduced carbon emissions and reduced energy bill costs at all times of the day.

We have to be careful that we are not talking about buying different things. In terms of capital demands, I highlighted the demand-side response, because that is where we have a really exciting opportunity to flex our requirements at peak demand.

Patrick Harvie: I am also interested in the coherence between what we would describe as devolved responsibilities in Scotland and the issues for which one Government has responsibility in the bulk of GB. Over the years, I have been involved in trying to persuade the Scottish Government to do more about energy efficiency, and I know that one of the problems that it has kept coming up against is the risk of losing some of the money that the energy companies have to put in. That is defined at UK level, and the money might be spent somewhere other than Scotland, which means that we would not get more bang for the buck from any extra public funding that we might put in. We hope that that will be resolved under the Smith commission proposals, as certain responsibilities are handed to the Scottish Government.

However, are we not in the same position, particularly with regard to housing policy and—if there is more electrification of transport—devolved transport policy? Surely that more sophisticated demand-side response will still be split between two Governments. Are we going to continue to encounter in the rest of the demand-side response agenda a difficulty that replicates the problem with the energy company obligations?

Dan Monzani: John Fiennes will talk about the devolution picture in a second, but I think that it is worth reflecting on the benefits of dealing with security of supply at a whole-system level.

Scotland has a peak demand of about 5.4GW, while the demand for the whole of Great Britain is of the order of 10 times that at 53 or 54GW. With a larger system, there is greater scale and more diversity, and it is possible to manage high levels of intermittent generation. There are big benefits to be had in that respect.

It brings us back to John Fiennes's argument about how our increased interconnections with countries such as Norway and Iceland could help Scotland in particular and GB more generally. There are benefits from managing a system at a slightly larger scale—

Patrick Harvie: That system could potentially cover more than GB.

Dan Monzani: There is obviously a subsidiarity issue with regard to what might be best dealt with at regional or national level.

John Fiennes: This is a really interesting question, and I do not know for certain what the answer is. Through the Smith commission, we have ended up with quite a good balance that brings energy efficiency levers more into line with building regulations and other local authority levers, with a no-detriment element for other parts of GB. There is tremendous potential there.

During the Smith process, I was not aware of people talking to my team or me about the links between energy, transport and heating. Thinking it through on the spot, I would say that the heating and electricity systems are more separate. They will probably converge, but it will happen over quite a long timeframe. What I would expect to happen in the first instance is that energy will flow from the power system into the heat system. When wholesale prices are very low, using power for space or water heating is a very efficient way of keeping energy in a useful form for later the same day or the next. That sort of approach, which is based on the power-price differentials at different times of day, should be possible.

Individuals, local communities and the Scottish Government will have opportunities to think about their solution with regard to heat and whether to position themselves to take advantage of the changing dynamics in the power sector. I am not sure that there is a—

Patrick Harvie: Can I explore an example with you?

John Fiennes: Please do.

Patrick Harvie: Let us assume that at some point in the future we have a longer-term commitment to demand-side response, so that longer-term contracts can be available for those kind of projects; much more electrification of transport; and a Scottish Government that decides that the most efficient and best value-for-money

policy on demand-side response is transport planning and the design of transport infrastructure. Such matters are currently funded by the Scottish Government from within its own resources, but would it be possible to make a bid to ensure that the funding comes from the energy system—the GB capacity market—rather than from devolved Scottish resources?

John Fiennes: Do you know the answer to that, Dan?

Dan Monzani: Yes. To bid into the capacity market you have to be a capacity market user—in other words, either a generator or someone who can reduce demand, not one of the ancillary services that supports those things. You cannot bid in a transport network, and you cannot bid in an electricity network. However, given that some of the costs flow around the system in different ways, if you have embedded in your transport system technology that makes use of the batteries in electric vehicles in a way that allows to demand to be lowered at peak times, either by stopping batteries from charging or by drawing on stored energy, you might well be able to bid that capacity into the capacity market.

One of the potential advantages of electric vehicles is that they can charge during the night. After all, with systems that use a lot of renewables, the wind can be blowing at a time when you do not want the energy, and having the ability to draw off some of that energy at the right times might be as important as not having demand at peak times. That could be a profitable move in the energy market and, as I have mentioned, it would also allow you to bid as a capacity market user in the capacity market.

John Fiennes: It sounds like the answer to your question is yes, Mr Harvie. However, even if the security of supply benefits in that respect can be captured, there might still be a question about the extent to which taxpayers' money is put in to secure other benefits. If any particular thoughts in that respect start to come out in more detail, it will be well worth having a conversation about them.

Patrick Harvie: I am concerned that if the current constitutional situation pertains, we could end up reproducing the problem of knowing that we could do more in Scotland but finding it impossible, because the two systems do not fit together properly.

Dan Monzani: Of course, with any separation of systems, dialogue is very important. Working through these things jointly with Scottish Government officials is an important part of the way in which we try to work.

Patrick Harvie: Do I have time for one more question, convener?

The Convener: It will have to be very brief, because we are getting behind.

Patrick Harvie: My last question is on a slightly broader area than the demand side of things. The subject of this inquiry is security of supply, but other witnesses have asked whether it is the right concept to be discussing if we are seeing more distributed generation, more distributed storage and more interconnection, as well as the demand-side response. Has the link between where generation and consumption happen become less relevant?

John Fiennes: The term "security of supply" is shorthand; what we are really talking about is whether people are getting reliable energy services that allow them to go about their business and do what they want to do when they want to do it. That is what we are trying to capture.

You are right; the phrase is a little bit of a hangover from the idea that the solution to security is supply. Given that that is absolutely not where the policy is, we should perhaps be reflecting on whether we are using the right term. The phrase "security of supply" has a lot of currency at the moment, but the policy itself absolutely supports the full range of responses that Patrick Harvie has talked about.

The Convener: Johann Lamont has some questions on a similar area.

Johann Lamont (Glasgow Pollok) (Lab): I suppose that this is a matter of policy to be decided between the Scottish Government and the UK Government. It has been suggested that the security of supply debate creates an uncertainty that makes it less likely that people will move to a fully renewable means of getting energy. Is that reflected in the discussions that you have? Certainly, one witness put it to us that to keep talking about security of supply almost creates the circumstance in which it is less likely that people will invest in renewables or have the confidence to take the risk of fully developing renewables technologies. Do you think that that is the case?

Is the issue complicated by the fact that at the UK level nuclear energy is seen as a reasonable way of helping with security of supply, whereas in Scotland that is not the case?

10:45

Dan Monzani: I will deal with that extremely important comms point first. We would win half the battle by securing the system and the other half by ensuring that people believe that we are going to secure the system, both by building confidence that we can manage the transition to a low-carbon future and by allowing businesses to make investment decisions, confident in the knowledge

that they will have the supply of energy that they need.

We have spent a bit of time talking with business stakeholders—and journalists, of course—trying to ensure that they understand the steps that we are taking. They know that we have a plan, and they know that we used it last winter and that it worked effectively to maintain adequate security margins to meet our security standard. The same plan is in place now. In fact, we have acted somewhat earlier in preparation for this winter. We have spent a lot of time with business stakeholders in particular, ensuring that they understand those messages.

You are right: when we discuss security of supply, we can get a response in the media that implies that we are minutes away from blackout, which we certainly are not. We spend an awful lot of time ensuring that we are not getting near that point at all; we are absolutely maintaining an adequate security standard across the whole of Great Britain.

John Fiennes: The challenge has got more complicated over the past few years. That is partly to do with coal prices being very low and what that means when coal plant has to come off the system progressively because of European legislation, which creates a cliff edge. It is also partly to do with the power mix changing. Previously, a gas-fired power station would have been run pretty consistently. Increasingly in future, it will need to run from time to time, because of the change in renewable generation, among other things. The whole thing is moving. That is partly why we have some pretty chunky action under way in order to ensure that things remain okay.

I hope that all that does not chill renewables investment. I argue that if we cannot explain to people that it will be okay, that is what will undermine things. The action that we have taken is more likely to indicate that it is fine to invest in renewables. It makes a lot of sense for Scotland to exploit its renewable resources as part of the GB mix, as we can see how the whole thing fits together. If Scotland were an island in the middle of the Atlantic and we said, “Right, we’re going to be entirely wind now,” that would be a different kettle of fish, but it ought to be an unlocking thing to say that security of supply is sorted by these mechanisms. That is consistent with our low-carbon future.

I have not seen an impact on the enthusiasm for development or the broad support for decarbonising power in the UK Parliament. When the electricity market reform legislation went through, it commanded significant cross-party support, and it still does. In a way, that is probably part of the answer.

Dan Monzani: I offer two facts. Looking forward, it is easy for people to think how impossible transition looks. Looking backward, however, it is striking to see how much we have achieved. In 2014, 19 per cent of power came from renewables, which is quite a big increase over a relatively short period. Over the three years to this winter, around 10GW of coal and oil will have come off the system. That is quite a remarkable transition in a relatively short period, and we have achieved that while maintaining stable levels of supply that meet our reliability standard.

John Fiennes: I realise that I have not yet responded on the nuclear energy point—I am sorry about that. Plainly, around GB and the UK, people feel differently about different power sources. We need to respect and work with those differences. The same thought is probably behind what the Conservative Party manifesto said about onshore wind planning. These things work well only when the people nearby are prepared to accept them.

There was a brief comment earlier about whether the new Hinkley Point reactor is going to come on stream and whether it will fill the gap. That is one thing that may be relevant. Nuclear power stations offer very large chunks of base-load generation, and they have some risks from a security of supply point of view, but so does every other power source. The UK Government’s view is that, as part of a balanced portfolio, they have their part to play, but we completely understand that people in different parts of the country look at them differently.

Joan McAlpine (South Scotland) (SNP): I will go straight to your point about nuclear. Two weeks ago, when I spoke to the witness from Ofgem, she was clear that the decision to invest in Hinkley Point C was a political one. Do you agree with that?

John Fiennes: It was absolutely a decision taken by ministers rather than by Ofgem, as were the decisions in the previous Parliament about how much levy control framework moneys to make available and the distinction around the different competitive pots. At the moment, we have a process for exploring the potential of the lagoon in Swansea and what the economics of that would look like. The decision to enter that process was political and, ultimately, the decision on whether to put resource into it will also be political.

Joan McAlpine: Hinkley Point C has a 35-year contract, compared with the 15-year contracts that are given to renewables, including pumped storage, which we talked about earlier. SSE and Scottish Power told us that transmission charging makes it difficult for them to go ahead with pumped-storage proposals for which they have

planning permission. Therefore, one would think that there is a form of discrimination in favour of nuclear and against pumped storage. Certainly, those companies say that they cannot go ahead with the schemes under the current regime.

John Fiennes: Under the coalition Government, there was a policy of no public subsidy for new nuclear, which was set out in Parliament. There has certainly been a careful examination of equal treatment between new nuclear and other technologies, although that does not mean that the treatment is exactly the same. In many respects, the treatment of new nuclear developers is more onerous than the treatment of other developers. I suspect that the question of pumped storage, which we talked about earlier, is slightly different. If the barrier is transmission charging, that situation may change. There might be some other barrier that prevents those projects from coming forward, or it might be that the projects do not actually offer best value. I am not taking a view on that, because I do not know.

Joan McAlpine: How could it be argued that they do not offer best value and Hinkley Point C does?

John Fiennes: The assessment of value for money for Hinkley Point C was based on a range of low-carbon alternatives. The gas plus carbon price was examined, as were renewable alternatives. Taken in the round, ministers concluded that the CFD that was on offer offered best value, and it was put to the European Commission for approval on that basis. However, those debates are still going on, and I cannot say today what the new ministers' views are, because I simply have not been part of those conversations.

Joan McAlpine: As you say, there is a political dimension.

John Fiennes: It is a decision for ministers.

Joan McAlpine: The European Commission has said that the scheme will put money on to consumers' bills.

John Fiennes: Any contract for difference with a strike price that is higher than the average price of power in the market will add to consumer bills. The extent to which one thinks that it will do that depends on one's view of the forward power price.

Joan McAlpine: You and Ofgem have accepted that we operate within a political framework. I imagine that there is a large capital cost involved in the interconnectors that you mentioned earlier. Do you have any idea what that will be? Do you have even a ballpark figure for the interconnectors to Iceland and Norway?

John Fiennes: They are extremely costly, but I am afraid that I do not have the numbers for the Iceland or Norway schemes in my head. However, they will be funded on the balance sheets of the companies that promote the schemes. In effect, the companies bring forward the money and take a bet that they will be able to make it back through the price differentials between the markets. From that point of view, they operate in a merchant way. It is not a completely merchant way because they operate within the cap-and-floor regime, which means that, if they make extremely good returns, they will share some of that benefit with the energy bill payer and, if the projects make extremely poor returns for some reason, despite being operational, their debt will be covered.

Ofgem has developed that regime, which means that the promoters take a significant commercial risk in deciding to promote the projects. The system is designed to ensure that they build projects that they think will add a significant amount of value.

Joan McAlpine: One might suggest that, if you design a regime that makes it more cost efficient to build an interconnector to Iceland or Norway than it is to build pumped storage in Scotland, that is a political decision.

Dan Monzani: They offer slightly different products. Interconnection can provide base-load power and capacity at peak, so we get two different things of value from it; pumped storage is a specialist in providing capacity. Those things compete for the capacity elements of what they can provide through the capacity market. There is no political dimension to that; the political choice was to allow them to compete equally against each other as technologies. Whether they can earn revenues in other markets—for example, in the electricity market only, as interconnection can—is, of course, a normal merchant process that they would go through. By and large, that allows them to be more competitive and lowers the amount of consumer support that interconnection needs in comparison with another technology that might offer only one benefit.

Joan McAlpine: There are transmission charges that affect Scottish energy production but not the energy that we import from those other countries. Why is that?

John Fiennes: Sorry—do you mind repeating that question?

Joan McAlpine: The providers of energy that we import from other parts of Europe through an interconnector do not face the transmission charges that an energy provider in this country faces.

John Fiennes: I have to confess to not knowing the detail of the charging arrangements for interconnectors. I am pretty certain that they face

the same charges, but I do not know the answer to the question, so I will write to you.

Joan McAlpine: My understanding is that they do not.

If I could—

The Convener: You can have one more question and then we need to move on.

Joan McAlpine: My question concerns the upgrade of the transmission system, which is happening everywhere. I represent the south-west of Scotland, where the transmission line between Stranraer and Carlisle needs upgraded. When Kersti Berge was in front of us the week before last, she said that Ofgem was considering putting many of those projects out to tender. Scottish Power Energy Networks is already consulting on the project between Stranraer and Carlisle. If the Government decided to change policy and put it out tender, the process would be slowed down considerably. Can you indicate whether it is likely to be put out to tender?

John Fiennes: I cannot give you an indication on that particular project. In fact, it is Ofgem that suggests that greater onshore competition would pay dividends for consumers, but I expect that it will be sensible about the matter. If that project is already making progress of the kind that you describe, we would certainly need to consider carefully whether it was the right one to start with. My understanding of the policy is not that it means that all projects would be delayed and put out to tender immediately. It is a relatively new thing to do for such assets, so we would need to be sensible about it.

Joan McAlpine: Scottish Power Energy Networks started the process several years ago and then, out of the blue, comes the suggestion that the project might be put out to tender, which seems a bit silly and wasteful, really.

John Fiennes: That came out of a project that Ofgem has been running. Ministers are certainly interested in it because it offers the prospect of greater savings for the consumer, but I am sure that they will be sensible about it.

The Convener: We have 10 minutes left and three members want to come back in. I ask them all to be brief.

Lewis Macdonald: We should touch on carbon capture and storage. The relationship between the Government and companies in the production of oil and gas is being considered today at an Oil & Gas UK conference in Aberdeen.

My first question is about the storage of carbon in depleted offshore reservoirs. What is the position in relation to liability? In other words, do the private investors who are taking forward schemes for carbon capture and storage expect the Government to cover liability in the event of CO_2 escaping from those carbon stores?

11:00

I have a second, connected question. A couple of weeks ago, we heard evidence from Stuart Haszeldine, who works in the area. He suggested that the Crown Estate's ownership of the pore space relating to those reservoirs might be affected by the Smith agreement on the Crown Estate. If that is the case, would that liability therefore be devolved to the Scottish Government?

John Fiennes: That is quite a complicated area, although I know a bit about it. My understanding is that the question of liability is part of the debate about the terms of any support under a contract that is awarded following the CCS competition, but to the best of my knowledge, it has not yet been resolved.

You are right that it is proposed that responsibility for offshore CO_2 storage be transferred under the Scotland Bill that is currently being considered by the House of Commons. That would mean that the Scottish Government would need to put in place leasing plans. However, I suspect that the answer to your question about ultimate liability is that it would depend on the nature of the contract that is negotiated in parallel with the CCS competition. I do not think that that has been resolved yet.

Lewis Macdonald: That is very helpful. The current position is that, at the end of the demonstration phase, the contract would be negotiated by the Department of Energy and Climate Change, but would the position be changed by devolution? Would the Scottish Government have to be at the table? Would it take over that negotiation for Scottish reservoirs?

John Fiennes: To be honest, that question is outside my area of expertise, and I would not like to offer you an answer to it. However, I will take it back to colleagues.

Lewis Macdonald: Thank you very much.

Gordon MacDonald: We have touched on the subject of strike prices a number of times, but I want to ask about a specific case. On 2 December, the Prime Minister wrote to the leader of Western Isles Council, Angus Campbell, making it clear that a strike price for island generation would be forthcoming. When do you expect the UK Government to announce that strike price? How important is it to ensure that we harness the renewable energy generation potential for our islands?

John Fiennes: I will fall back slightly on what I said about ministers still working through matters. The secretary of state has had a conversation with Fergus Ewing in which they committed to work together on that issue. I am sure that that announcement will happen but, unfortunately, I cannot give a timetable today.

Gordon MacDonald: It is six months since that letter came through. Obviously, it is important that the announcement is made as quickly as possible, as the islands have waited for a long time for an answer. Is there no indication at all as to whether that will happen this year, next year or in 10 years' time?

John Fiennes: It would clearly be very disappointing if it happened in 10 years' time, but I am afraid that I cannot offer any more indication of the timing because I just do not have the information.

The Convener: To be fair, I think that we were told in a previous session that it would happen in the autumn of this year.

Gordon MacDonald: I am just looking for clarification.

The Convener: Fine. Yes.

Chic Brodie: Good morning. I thank the witnesses for their explanation of National Grid's role in transmission operation and system operation. However, it is a monopoly and decisions are taken at the top. Would we be better off with a publicly owned and managed system operator?

John Fiennes: That is a live debate.

Chic Brodie: What is the status of that debate? At least the issue is apparently further up the agenda.

John Fiennes: I beg your pardon?

Chic Brodie: At least the issue appears to be further up the agenda than it was. In fact, it was not even on the agenda. Can you tell us where the debate is at?

John Fiennes: That formed part of the initial briefing that we shared with our ministers, but they have a number of things on their desks and will need to think about that.

As I said earlier, it seems to me that National Grid has skills and strengths and that the current system works well. It has already made some changes to ensure that it is fair and seen to be fair.

It seems to me that Ofgem is thinking about the matter as well, particularly for the future. The question is whether having more storage and more demand-side response would strengthen the case for having an independent system operator. I am sure that ministers will want to take a view on that. It seems to me to be a fairly finely balanced argument.

Chic Brodie: I have just one more question. In an open letter of March 2015, National Grid's director of transmission services said:

> "To ensure that we can maintain system stability, in even the most extreme circumstances, we are in discussions with thermal generators in Scotland to procure some additional voltage control support, from April 2016. A final decision, outlining our plans, will be announced by the end of March 2015."

We have not seen that decision. Have you seen it?

Dan Monzani: I have. A voltage control contract with Peterhead was announced. We can probably dig out some details, or ask National Grid to do so, if you would like.

Chic Brodie: Of the overall plan?

Dan Monzani: Sorry?

Chic Brodie: Is it just Peterhead that was talked about? Is there an overall plan? The issue is overall system sustainability.

Dan Monzani: My understanding is that it was not about capacity but about managing system quality and security for the remote possibility that a number of thermal plants in Scotland are unavailable. I think that it is a one in 600-year possibility that National Grid would not be able to maintain voltage stability without one further capacity unit. It therefore went out to tender and Peterhead was the successful unit. It is therefore now comfortable that it has all the tools that it needs to maintain system integrity in Scotland.

Chic Brodie: Thank you.

The Convener: We are at the end of our time. I thank the—

Patrick Harvie: Convener, Mr Fiennes offered to supply further information in writing. It would be helpful to know whether we will be able to see that before we consider our draft report.

The Convener: Yes, indeed. However, we are not intending to consider the draft report until September, so that gives Mr Fiennes sufficient time to respond to our inquiries, unless he is extremely busy over the summer.

Patrick Harvie: That is fine.

The Convener: I thank both witnesses very much for coming along. I appreciate their taking the time to come to Edinburgh to speak to the committee.

We will have a short suspension to allow a changeover of witnesses.

11:07

Meeting suspended.

11:13

On resuming—

The Convener: I reconvene the meeting and welcome our second panel of witnesses. We have Fergus Ewing, the Minister for Business, Energy and Tourism, who is joined today by Dr Graeme Sweeney, who is the co-chair of the Scottish Government's thermal generation and carbon capture and storage industry leadership group, and Dermot Rhatigan, who is head of energy markets at the Scottish Government.

Before we get into questions, do you want to make an opening statement?

The Minister for Business, Energy and Tourism (Fergus Ewing): Yes. Thank you, convener, and good morning to all. I am pleased to have the chance to address the committee on the matter of energy security. As you said, convener, I am joined today by Dr Graeme Sweeney, who is co-chair of the Scottish Government's thermal generation and CCS industry leadership group. Graeme is also a member of the Scottish energy advisory board, which is co-chaired by the First Minister. Alongside me, too, is Dermot Rhatigan, who is a senior policy adviser in the Scottish Government's electricity division and whose work relates to the market for electricity.

I welcome the inquiry, the timing of which is apt. Our energy system is in transition as we grapple with key demands around energy security, affordability and reducing carbon emissions. The UK Government reform of the electricity market has introduced new support mechanisms for renewables and capacity; the energy mix is changing as the contribution of renewable energy grows and other forms of generation retire.

11:15

We have some concerns about the direction of UK policy and regulations, for example in respect of transmission charges and their implications for our security of supply in Scotland. From a security of supply perspective, we are particularly concerned that UK capacity margins have declined from 15 per cent in 2009 to as low as 2 per cent in 2016.

There is no certainty on UK renewables policy beyond 2020. Recent statements from DECC concerning onshore wind have the potential to damage investor confidence. Electricity is an important part of total energy demand, but other components, principally heat and transport, are even greater in scale, as many witnesses in the inquiry have pointed out. We need to consider the interactions between those parts of the energy system.

Most policy powers over energy matters are reserved to Westminster and some UK decisions reflect priorities that are different to those of the Scottish Government. We have sought to work constructively with the UK Government wherever possible and will continue to do so. I am keen to set up a joint intergovernmental group to work with the UK Government on storage solutions. That proposal from the Scottish Government is partly a result of our examination of the useful evidence that the committee has received so far.

Before we take questions, I have a few initial points to note. First, Scotland has huge energy resources; we are the most energy-rich nation in the European Union. The choices that we make on energy have profound impacts on Scotland's social and economic welfare. As evidence to the committee has shown, we need greater clarity around responsibilities for security of supply and the direction of UK policy. We must maintain a balanced mix of energy sources. That has always been our position. Our energy focus goes far beyond electricity; we recognise the importance of a comprehensive and holistic approach to the energy system. I look forward to discussing that and other topics with the committee this morning.

The Convener: Thank you, minister. You have touched on a range of topics that we are keen to cover. We have about an hour, so I ask members to keep their questions short and to the point. Minister, I ask that your responses be equally short and to the point. Please feel free to bring in your officials as and when you wish.

On the broad policy area, you have mentioned the "Electricity Generation Policy Statement—2013" from the Scottish Government. We have heard some evidence that it needs to be updated. You will probably be familiar with comments that were made by Professor Paul Younger of the University of Glasgow on the strategy. We also heard from Gina Hanrahan of WWF, who said that WWF believes that the EGPS is

"no longer fit for purpose." —[*Official Report, Economy, Energy and Tourism Committee*, 3 June 2015; c 13.]

We also heard from Professor Stuart Haszeldine of the University of Edinburgh, who said in written evidence:

"The expected closure of Longannet should alert Scottish Government to its lack of coherent strategy for electricity generation, energy supply and climate ambition delivery in the period post 2020."

Why do you lack a coherent strategy?

Fergus Ewing: We do not lack a coherent strategy.

The Convener: That is not the view of Professor Haszeldine.

Fergus Ewing: I work closely with Professor Stuart Haszeldine and I met Paul Younger very recently. It is undoubtedly the case that the EGPS was prepared some time ago and that since then there have been several significant developments, including the threatened closure of Longannet and the introduction of EMR. Following the election, there is also considerable uncertainty about the UK's policy for the future of onshore wind.

There have been substantial changes. Therefore, it will be appropriate to consider the necessity of updating the EGPS, which I accept. All documents that have been prepared in the past need to be reviewed and reconsidered. However, that is not the key issue that faces us today. The key issue is what are the right choices that Scotland and the UK should be making. As far as I could ascertain from my reading of most of the committee's oral evidence over the past three weeks, there are an awful lot of meaty policy issues that we can come on to discuss. Like all historical documents, the EGPS must be refreshed: I see the need for doing that.

Dermot Rhatigan (Scottish Government): We keep all such documents under review. Our challenge in relation to coherence is UK policy—the committee has had a lot of evidence about the coherence of UK policy. As the minister said, the situation is changing; we have a new Government at Westminster, which is taking decisions on energy policy that will affect how we proceed in Scotland.

There will be an opportunity to review the EGPS. We will not look at it on its own, but alongside other documents that relate to heat and transport. We try all the time to bring the three together and to make them more consistent and coherent across the piece.

The review opportunity might be after the next Scottish Parliament election, but I am not sure. We have not taken a decision about that yet.

The Convener: The defence for incoherence is that it is alright for us to be incoherent because Westminster is incoherent, too.

Other members want to come in on this issue.

Dennis Robertson: Good morning, minister. In your opening statement, you touched on the UK Government's onshore subsidies, which it proposes to remove. Given that we have had significant investment for a lot of the projects, are you concerned that the projects may not continue? Should there be a period of grace for the companies to ensure that they continue with the appropriate subsidy?

Fergus Ewing: I have seen the press reports, so I am aware of the UK Government's apparent intention to remove or reduce onshore wind subsidies. We wait to see precisely what, if any, decision will be taken and when.

To respond in general to the question, there are three concerns about any move to reduce the level of renewables obligation certificates support for onshore wind, and perhaps to do so, as the press has reported, a year early in 2016, rather than in 2017 as planned. To put the matter in context, I think that it was only in 2013 that the appropriate level of subsidy for each method of electricity generation from renewables was reviewed. In other words, only two years ago, there was a thorough official UK Government review. That review concluded, among other things, that the amount of onshore wind support should be reduced from 1 ROC to 0.9 ROC. We supported that. In other words, there was agreement that that was justified, not least because the onshore wind costs have been coming down, so a lower subsidy is appropriate.

As I said, that decision was made only two years ago. It was made on the basis that the EMR system would come in in 2017. I mention that because that is the investment context and those were the rules, as set by the UK Government, under which investors made decisions to invest huge amounts of money. If Amber Rudd decides to bring forward the ending of the ROC regime by a year, there will be a huge amount of sunk investment in projects that will no longer be able to go ahead, despite investors having acted on the basis of the UK regime as it was and as the UK Government promised it would be.

There are three sources of concern. First, consumers will face higher electricity costs for the simple reason that onshore wind is the least expensive large-scale method of generating renewable electricity. That was demonstrated by the first round of CFDs, when the option price was about £80 or £82 per megawatt hour for generating electricity from onshore wind. I recollect that the strike price for offshore wind was about £114 to £120. If, as I understand it, the UK Government will have more offshore than onshore wind power, it is a simple mathematical equation to work out that there will be an extra and avoidable cost to the consumer, who will have to pay a huge amount more. I have not done the computation, but Keith Anderson has. He is on record as saying that the additional cost to the consumer of the decision that we expect the UK Government to make—we will have to wait and see what it does, and we have urged it not to pursue such a policy—would be between

£2,000 million and £3,000 million. I would have thought that the UK Government would wish to avoid exposing the consumer to an unnecessary cost that such a well-respected leading industry figure—the boss of Scottish Power—has estimated at that amount. That does not seem to be a sensible or rational decision.

The second group of people whom I think will suffer greatly if such a decision is taken are communities. If a Damoclean sword is to be swiped, community projects that have difficulty in getting grid connections on the distribution network may be left stranded. They may be the first to say, "The game's a bogey, we can't go ahead with these projects." It is not all about big companies that are able to look after themselves; it is also about community projects. Finally, the sunk investment in schemes that may not go ahead will cost a number of jobs and a significant amount of investment. I understand from the industry that 75 per cent of the projects that are at risk are in Scotland, so the brunt of any decision along the lines that have been predicted will fall on this country.

The Convener: Thank you, minister. It would be helpful to have slightly shorter answers to the questions.

Dennis Robertson: Would you support a grace period for companies that have already made an investment, in order to ensure that they can go ahead with their projects.

Fergus Ewing: We do not believe that early closure of renewables obligation certificates is a sensible decision, and I have already conveyed our concerns in a letter to Amber Rudd. Such a decision would expose the UK Government—and therefore the taxpayer and the consumer—to the serious risk of judicial review, the outcome of which may be uncertain. However, if there is to be such a decision, it must be ameliorated by a grace period that should be widely drawn to cover projects and planning.

Dennis Robertson: Do you welcome the Scottish Conservative support from Jamie McGrigor, who said that it is Conservative Party policy to support onshore wind?

Fergus Ewing: I very much welcome that and I look forward to an endorsement from you, convener, of that clear statement from your colleague, Jamie McGrigor. I do not have the document in front of me, but I remember it because it was brought to my attention. He said that Scottish Conservatives support appropriately sited onshore wind. I hope that it is not only Mr McGrigor who supports that. I know that you do not have to disclose a financial interest in this issue, as some of your colleagues do.

The Convener: Minister, I am conscious of the fact that you will have to determine that particular appeal, so it might be better not to go too far down this route but, as you mentioned me, it is probably fair to say that I have always agreed that onshore wind has a part to play in the energy mix, and that that has always been my party's policy position.

Fergus Ewing: I appreciate that. I should say that I think that the project concerned will not come before me, but I do not comment on any particular projects. That is a perfectly fair comment.

11:30

Lewis Macdonald: You mentioned the EGPS, and you talked about coherence. The policy statement is less than two years old, so surely the issue is not so much about coherence and more about the statement's impact. The Scottish Government says that it wants 2.5GW of new thermal power in Scotland, but nobody is listening. The Scottish Government can say anything that it wants, but it does not have the clout to actually influence the big privatised companies that control the market.

Fergus Ewing: That is a very good argument for independence, if I may say so. Plainly, we sought to have the powers precisely so that we would have a say over those matters. However, I agree to an extent. Incidentally and just for the record, and from memory, Lang Banks of the WWF—which the convener quoted earlier—said that our EGPS is perfectly feasible and that achievement of the 2020 target is technically possible. Gina Hanrahan, who gave evidence to the committee, also said that WWF welcomes our decarbonisation target of 2030.

Regarding thermal generation, we think that there needs to be a balance and we said that we need 2.5GW of thermal generation, progressively fitted with carbon capture and storage, within a timescale. That is part of our EGPS, which contains a commitment to generate 100 per cent of the electricity that we consume from renewable sources by 2020.

As Scottish Power has indicated, the main reason—the causa causans—why it is minded to close Longannet is that it faces higher transmission charges than if it were generating electricity in, for example, Surrey. That also applies to Peterhead, which is operating at much-reduced capacity because of the economics, as was stated in evidence at a previous hearing of the committee. Surely no one could expect any company to make an investment in new thermal plant as long as the transmission charges are of the order of £30 million per station more than they would be if the station was in Surrey.

Lewis Macdonald: The serious question that I asked was not a constitutional one; it was about how the public sector—government at whatever level—deals with corporations of the scale of Scottish Power. Simply quoting Scottish Power with approval does not exactly demonstrate a willingness or capacity to take on those players and to try to influence the market. How does the Scottish Government intend to use the powers that it has to influence the decisions that those companies make?

Fergus Ewing: We have worked closely with Scottish Power, SSE and a huge number of other companies. I submit that we have, particularly in renewables, done so with great success.

What influence do we have? Mr Macdonald should go and speak to companies and see what they think about the Scottish Government and our reputation on renewables. Increasingly in the past four years, they have told me that they welcome the policy certainty in Scotland but are concerned about the policy confusion and uncertainty that has existed down south. At one point, the UK Government went ahead with a review of ROCs, and with 0.9 ROCs for onshore wind. Then, in a manifesto, the Conservatives said that they would scrap new subsidies—mark my words, that is "new subsidies"—and now they are apparently minded to scrap or reduce existing subsidies: not new subsidies, but existing ones. It is no wonder that the companies that I have spoken to over several years are happy with the approach of the Scottish Government of trying to decarbonise energy over a realistic timeframe and clearly encouraging renewable energy. Perhaps that is why we have had so many companies seeking to make their developments in Scotland.

Lewis Macdonald: It is telling that, when asked about how Government can develop policy independently of corporations, you simply quote your good relations with those corporations. The problem is that you are not addressing the question of leverage.

I want to move on to a slightly different question. You have said a lot about onshore wind, but what is the Scottish Government doing to examine other possible areas of renewables technology? I note that you were critical of the UK Government. DECC has certainly been positive about solar photovoltaic energy—we heard that from the witnesses from DECC this morning. What is the Scottish Government doing to replicate that commitment to developing photovoltaic energy in Scotland? I am sure that you are aware of the balance of the evidence that we heard this morning, so can you say to what extent you believe that other renewables technologies can contribute to the targets in the 2020s?

Fergus Ewing: First, it was not industry that set the target of 100 per cent renewables; it was the Scottish Government. If there is some sort of suggestion that companies are driving our policy, that does not stand up to scrutiny.

To answer the question, we of course believe that there should be a mix of renewables, and our policy has clearly supported that. We have been extremely supportive of solar power and also of hydro, tidal and marine, biomass and anaerobic digestion. This morning, I remarked on the need to consider storage solutions, including pumped storage, which we might deal with later but also those that were raised in evidence by witnesses, such as Tesla batteries, liquid air, hydro and hydrogen. I read the evidence that was given by numerous witnesses who made a number of telling points. Also important are energy efficiency measures, which should never be neglected or forgotten about.

I do not think that anyone has ever criticised the Scottish Government for not supporting renewables. I do not know whether Mr Macdonald is doing so now. If so, I say good luck.

Lewis Macdonald: I am asking a specific question. DECC has given a specific commitment at a UK level to a significant deployment—1GW—of solar PV on Government buildings. Will the Scottish Government seek to replicate that commitment?

Fergus Ewing: The Scottish Government and I are looking at that. We have been looking at that for a considerable amount of time. I am not the lead on Government building energy solutions, but I know that the Scottish Government is thinking about energy efficiency measures, and solar power can play a part in that. Mr Macdonald makes a serious point, and I can provide him with total assurance that that is work in progress and is important to us.

Richard Lyle (Central Scotland) (SNP): During the election, I saw a lot of solar panels on school roofs. I know that these matters do not come within your remit but, in your discussions with the housing minister, do you intend to consider making it a condition that solar panels are installed on the roofs of new-build housing association and council houses? Most people are thinking about that these days. Would you encourage that?

Fergus Ewing: It is certainly sensible to consider using the roofs of the public estate for solar panels. There is an element of that in Scotland, but I think that there is room for a lot more of it. I do not have responsibility for what happens in schools or, indeed, on top of schools, but I am sure that that suggestion should be considered fully. If Mr Lyle would like to write to

the education secretary, I would be entirely supportive of that being explored.

Richard Lyle: I would also write to the housing minister about encouraging the installation of solar panels on new-build private, council and housing association houses.

For a number of years, we have been told that Scottish Power was exporting well over 20 per cent of its generation, or had extra capacity in power. Given that Westminster's mismanagement of energy policies has resulted in a capacity margin that, as you said, is as low as 2 per cent by some estimates, can Scotland rely on generation from south of the border, or does it make more sense for us to ensure that we have sufficient generation here in Scotland?

Fergus Ewing: There are a number of questions in there.

I mentioned in my opening remarks that the security margin has dwindled to a level that many commentators may feel is parlously low. I am looking for a quotation that I cannot find, but I can kind of remember it anyway.

Various academic experts, including Sir John Armitt, who used to advise the Labour Party, have opined that a better margin would be in the region of 10 to 20 per cent. I will bring in Professor Sweeney in a minute, who tells me that it is Dieter Helm, the professor of energy policy at the University of Oxford, who recommends a margin north of 10 per cent but probably less than 20. Anyone can see that a margin of 2 per cent or thereabouts is parlously low.

Other problems occur when the margin is as low as that. When supply and demand are equally balanced, the suppliers can push up the prices; if there is oversupply, prices come down. A low margin is not good for the consumer.

We have had extensive discussions with National Grid about this and we take different views. I will ask Graeme Sweeney to talk about some of our concerns about security of supply, including black start and voltage stability, some of which has been considered by your witnesses.

One of the suggestions that we understand National Grid considered over the past year or so in relation to what would happen if Longannet were to cease operation, was the introduction of power barges. That was something that we eventually discovered that National Grid was considering. When it initiated the consideration of using power barges in Scotland, it did not raise the matter with us. We were extremely concerned about that, because such a method of meeting supply is normally associated with developing countries where there is no major electricity supply, not a country such as Scotland. The implications for maintenance of security services and other issues were not matters that we had the opportunity to consider, because National Grid did not consult us about them. That is why I welcome the assurances that National Grid has now made about having a more transparent relationship with this Parliament, brought about in part by the work of members of this committee.

We are concerned about the security of supply; we think there are considerable problems with it. There are a number of aspects to that, not all of which I have touched on. However, whether from Scotland or on a GB basis, a margin of 2 to 5 per cent is not sensible; it is bad news and it is something that must now be addressed.

The Convener: Minister, I exhort you again to give slightly shorter answers.

Fergus Ewing: They are complicated questions. I do not think that I even answered all the questions there, because there were about three and I answered only one of them.

Dr Graeme Sweeney (Thermal Generation and Carbon Capture and Storage Industry Leadership Group): The committee rightly asks what we are doing. As always, I like to act within the space that we have to create new options for the future. So, what are we doing?

We took the matter of security of supply appropriately seriously. We commissioned a review, led by Alistair Buchanan, which confirmed our suspicions. The expert commission on energy regulation added its view that this was likely to be a serious issue and we commenced an interaction with National Grid, particularly around this winter that has just passed. As it turned out it was a relatively mild winter, but that was not the point. Through that process we have understood a great deal more about how National Grid undertakes the task of ensuring security of supply, but not sufficient to be able to understand exactly what may happen in the future.

The key issue that has arisen out of this, clarity over which has come out of this process, is the matter of black start. We should be absolutely clear that, post the closure of Longannet, our black-start performance will deteriorate substantially. Before the closure, it is about 12 hours; it may go out to as much as 30 hours afterwards. That leads to the matter going on the risk registers of companies, which are less likely to invest in the future.

Electricity is not just about keeping the lights on, as it is often characterised, it is about keeping the water pumping and the telecoms working. These are real matters of concern. The energisation of that system would require almost all of the pumped hydro to be available, prior to the re-

energisation after the black start. All of this is a clear set of concerns.

11:45

It is also clear to us, as a result of this process, that we do not understand how National Grid does quality trade-offs. How did it even think that the power barges should be part of the solution set? We will know more. National Grid has committed to us that it will bring to the Parliament an annual Scottish capacity assessment for open and transparent review. That is huge progress over where we were before.

You have heard evidence on this. It is clear that the only place south of the Wash or south of the Watford Gap—it depends on how you view it—where any thermal capacity is going to be built is as close to London as a capacity licence can be obtained. In part, that is because National Grid prefers wires to generation capacity. Therefore, it wants to connect everything. From our point of view, the case for a regional factor to determine that there should be continuing activity forms part of our overall economic growth. We need to formulate a policy platform, through whatever our interactions are, that gets us to a change in terms and conditions. Otherwise, there will indeed be substantial erosions of our capacity to perform.

Richard Lyle: Thank you, Dr Sweeney. I cannot remember which witness said this, but they said, "You don't need to worry. They can all close down. All we need to do is turn the voltage down." What would you say to that?

Dr Sweeney: I understand. You could indeed undertake general synthetic measures. You can change the voltage. By the way, we do that now. You can also operate at a different cycle or phase. We do all that now. On the days when we have been close to the margin, we have done all that already. I would not recommend that you rely on that as a forward solution. It is part of the toolkit, but it will not solve the problem.

The Convener: I return to the point about the capacity margin, which is quite important. We took a lot of evidence on it, and I am looking at the *Official Report* for 20 May. At that meeting, we had with us a whole host of experts: Professor Ian Arbon from the Institution of Mechanical Engineers; Professor Keith Bell from the University of Strathclyde; Brian Galloway from Scottish Power; Professor Gareth Harrison from the University of Edinburgh; Professor Colin McInnes from the University of Glasgow; Dr Edward Owens from Heriot-Watt University; Michael Rieley from Scottish Renewables; Lawrence Slade from Energy UK; and Dr Alan Walker from the Royal Academy of Engineering. Professor Bell was very clear during that evidence session. He did not believe that the capacity margin set by National Grid was too low. I asked the rest of the panel if anyone disagreed with him, and nobody did. That whole array of people who have spoken to the committee disagree with the evidence that you have just told us.

Dr Sweeney: I understand the point. A little bit of this depends on how you ask the question. By the way, you did have evidence from Professor Helm, which said that, although the historical capacity margins were too high—and I agree with that—the issue was whether very low capacity margins were sustainable going forward. The critical question is: what are you going to rely on? We would argue that having very low capacity margins is unlikely to help us with our net black-start conditions, and that they are unlikely to promote economic growth for us.

There is an overall case for optimising the way in which we drive welfare here, as opposed to taking an entirely mechanical view of what the minimum margin that we can live with might be. It is clear that, on occasions, with the capacity margins that we have now, we have managed to survive when there have been very very low contributions from the renewables system. That has been testament to the way in which the system operates. We would argue that the margin needs to be higher, and we would argue that the case for regional-based criteria for investment is clear and that it should be made with a loud voice.

The Convener: Would you also accept that additional capacity needs to be paid for, and that that will impact on consumers' bills?

Dr Sweeney: I understand that capacity needs to be paid for. The more telling point is that, in the absence of capacity, the costs of outages need to be paid for, too. We need a resilient system, and we need to have an economically optimised outcome. We do not want to build too much capacity, but we do not want too little capacity, because the economic activities that are reduced as a result are substantial.

Dermot Rhatigan: I just want to add a couple of points to what Dr Sweeney said. You start to meet consequences of a lower capacity margin even before the lights go off. That is the point that the minister is highlighting from Dieter Helm, who said that, as the capacity margin falls, prices inevitably go up. That is not a factor that National Grid has to work into its assessments and it does not have to account for it, but it seems to be logical. As the gap between demand and supply narrows, prices go up. That is one consequence.

In Scottish Water's evidence, Chris Toop said that it is taking action now to reduce its reliance on the grid because it has identified the issue. There is another cost there.

The other thing that I picked up from Scottish Power Energy Networks' written evidence was that you need to think about capacity and the overall level of power in the system. However, it also said that the important local issue is flexibility. There might not be a GB issue, but there has been an issue in Scotland. We know that because National Grid has had to procure additional voltage control service before the western high-voltage direct current cable links up, and that action also has a cost.

Finally, in his evidence, Keith Bell said that he does not think that there is a capacity issue as such. However, it is interesting that he also said that National Grid does not have to make a calculation between whether an area such as Scotland needs more generation or more grid. That trade-off is not always made. It could be that a cheaper solution for Scotland would be to have more generation, and I think that Graeme Sweeney is making that point too.

Those points give a more rounded picture of why narrowing capacity margins are a problem even before the lights start to go out.

Lewis Macdonald: Dr Sweeney did not dispute Keith Bell's assertion that there is no capacity issue, or so it seems to me, but I am interested to know what the vision is. If the Government makes a revised electricity generation policy statement, does it still anticipate the need for new thermal plant and would that still be the case if the CCS demonstration projects fail to demonstrate commercial viability at scale?

Dr Sweeney: It is curious that the thermal power plants that are most likely to progress in Scotland are intimately linked with the CCS story. You could however argue that that is a good thing for meeting overall energy and climate change targets. If the thermal plants progress, we will achieve about half of what was in the EGPS and that is already a substantial step forward.

The resilience of the system is key. We need a proper plan as opposed to a set of independent marketplace interventions that add up to the resilient system that we want. We all want high penetration of renewables—that is clear—but we are not talking about doing one thing or the other. We have to do them all and there is a clear economic case for including thermal power with CCS in the long run. At the European level, by the way, it will cost €4 trillion more to decarbonise without CCS.

Let me make one more point about all this, because these issues are links in the case that we need to make. Many industrial activities have carbon process emissions that also need to be dealt with. They make the CCS story particularly important. We can either offshore the CO_2, or we can offshore the jobs and, with 1.3 million jobs at stake, we ought to be clear about that. Regional factors also come into play.

One of the key things that would change all the outcomes is clarity about the use the CO_2 for enhanced oil recovery in the North Sea. I recommend that you have a look at the Scottish carbon capture and storage group's joint industry project report that was released yesterday.

Those things all come together as part of how that storage should build up. We should absolutely make greater use of renewables, but we need CCS. If we do not have it, we will end up with a situation in which we cannot evacuate the CO_2 from the power stations in the south; we will miss our climate targets; and we will have no regional stability in the way that we have previously described.

Lewis Macdonald: Let me be clear about what is not in the answer that you have just given. If carbon capture and storage does not prove to be effective and successful on a commercial scale, there is no Government plan B.

Fergus Ewing: I will answer that question on behalf of the Government. First, the committee heard in evidence from Stuart Haszeldine that the Peterhead project—which he said is simpler than the white rose project—is expected to come on stream before the end of the current decade. We should not postulate failure when the expert witness on the topic has said that the technology is likely to succeed. I have had the opportunity to visit Peterhead and see the presentation. It is expected that the project will go ahead, and Shell and SSE are wholly committed to it.

Secondly, we would like to see more CCS projects going ahead in Scotland. Professor Haszeldine pointed out that there is another interesting development with Summit Power, which would allow a CCS project to go ahead using coal, with the decarbonisation of the use of coal as a method of providing electricity.

We should not postulate failure when we are getting—for the first time ever, happily—quite close to limited success.

Lewis Macdonald: We should not postulate failure, minister—

Fergus Ewing: That is what you are doing.

Lewis Macdonald: No, not at all. I hope that the project proves to be very successful. However, it is a demonstration project, and my question is this: if it does not prove to be successful, what is plan B?

Fergus Ewing: My understanding—which may be imperfect—is that the UK Government is supportive of CCS, and I look forward to having a constructive relationship with Amber Rudd and

working together on the delivery of more CCS projects. Indeed, we think that there—[*Interruption*.] I do not know that this is a matter for jocularity, convener—

The Convener: I am interested in hearing you answer the question that Mr Macdonald has asked three times.

Fergus Ewing: I am answering the question. Mr Macdonald said that we need a plan B. Why should we have a plan B when we are going ahead with one CCS project, there is another one on the way and there is a willing partner in the UK to develop more CCS projects? The question of a plan B does not really arise.

Lewis Macdonald: It is a demonstration project.

Dr Sweeney: I said earlier that we should seek to ensure that the capacity mechanism, when it comes into play, has a regional correction factor in it for a range of reasons. That would provide a route to thermal power. It is clear that those policy changes need to be in place.

We often talk about this stuff as if it were extraordinarily high risk and entirely unknown, but it is useful for us to understand where we sit competitively. We characterise ourselves as the people who care most about getting energy supply and climate policy to converge so that we can meet targets in both those areas. We often characterise the North Americans as not caring about that stuff at all, yet the Americans are putting 60 million tonnes of CO_2 underground every year and learning how to do all that at scale. The Canadians, the Australians and the Chinese are doing it. The task for us is to get out there and do it, too.

If we want a specific view on the matter, we should go to Saskatchewan, which has a relationship with Canada that is somewhat like Scotland's relationship with the United Kingdom. Saskatchewan has brought such projects online already.

It is not beyond us to implement CCS. All the portents are good.

Chic Brodie: Convener, you rightly said that we have heard a whole array of different positions with regard to capacity margins. Reference has been made to Professor Bell. He did not say that everything was all right—he said:

"It is right that some National Grid scenarios suggest that the margins will get small in the next couple of years."—[*Official Report*, *Economy, Energy and Tourism Committee*, 20 May 2015; c 19.]

While we do not want to talk about the constitutional problem, let us talk about the competency problem. There are two elephants in the room: a bull elephant and a baby elephant. The bull elephant is National Grid and the baby elephant is Ofgem. Do we actually believe that National Grid—a very large and monopolistic body that, two years ago, made £3.8 billion in profits—is the right body to act and to be depended on as a systems operator?

Fergus Ewing: I do not think that National Grid's technical expertise is in doubt. Various witnesses supported that view. The question is more about who is ultimately responsible for security of supply in the UK. I would argue that it is the UK Secretary of State for Energy and Climate Change, and, ultimately, the UK Cabinet.

12:00

That should be the answer to the question. However, when the First Minister and I raised the issue with the UK Government earlier this year, the UK Government immediately took the position that National Grid is the arbiter in such matters. That is an inherently unsatisfactory position. Although I have no particular complaint about the fact that National Grid is a private company, nonetheless one cannot exclude consideration of the fact that it has a commercial interest in maximising profits for its shareholders.

A bit more clarity about who has ultimate responsibility for UK energy policy is desirable. In theory it is the UK Cabinet, but in practice it is National Grid. I am not sure that that is satisfactory. I am not casting aspersions on anyone; I am just saying that it is not a perfect recipe for success.

Dr Sweeney: I would say that it is not in National Grid's remit to keep the lights on—as we tend to describe security of supply. Operationally, National Grid separates generation from transmission anyway, and it is hard to see how it could be accountable for the outcome in that case. We have made the point about the way in which it operates. Looking back at the report from the expert commission on energy regulation that was published last year, one can see that the proposal for any putative independent regulator in Scotland was that it would be different from that structure and have clear accountability for the delivery of the strategy to keep the lights on.

It is very difficult—so difficult, I would say, that there is no one to go and talk to about it—to get a coherent answer to the problem. Change is required, because the changes that we are going through are not marginal changes to what we had previously. We had a huge and super legacy, and we benefited from that over a period of time. The forward changes are substantial, particularly on the demand side. We are going to move to a completely different world. We need somebody to plan to be resilient in that world, and we need to know who that is.

Joan McAlpine: I welcome the minister's announcement this morning that he is going to approach the UK Government about setting up a joint working body on storage solutions. Can you tell us, minister, what the Scottish Government's priority is with regard to storage solutions?

Fergus Ewing: We believe that storage solutions should play a greater part in the overall mix. In a letter last November, I suggested to the UK Government that a group should be set up to consider pumped-storage solutions, but that suggestion was rejected in January this year by the then UK energy minister.

However, my proposal this morning is that we should widen the remit of such a group from considering pumped storage to considering storage solutions as a whole. Since last year, we have been aware of the considerable debate about the wider range of storage solutions that exist throughout the world. One of the witnesses who appeared before the committee put it well in saying that there should be storage solutions at transmission, distribution and household levels, not just one solution.

On a macro level, the real opportunities are in pumped storage. We have two existing stations in Cruachan and Foyers, but we also have—as Mr Macdonald pointed out in a previous question—two consented schemes around the great glen that could serve an excellent purpose.

Mr Rhatigan can provide some useful technical information for Joan McAlpine.

Dermot Rhatigan: We speak regularly to all the companies in Scotland, so I will focus on the large-scale point about pumped storage. As Mr Ewing said, we want storage at all levels, from the system level at the top to the local level within houses and businesses. A lot of evidence to the committee suggests the value of storage, but storage does not seem to be coming forward in the way that it is hoped for. In many cases, it does not yet seem to stack up economically.

At the large scale, the companies that have pumped-storage schemes on the drawing board cannot progress them because they are capital-intensive projects that will need to work over long periods of time—decades—if they are to pay back. The capacity market as it is currently designed does not support that new investment in large-scale storage.

One solution that might come forward, which would be similar to the deal for interconnectors, is a cap-and-floor mechanism whereby, if the storage that was developed was not making a minimum amount, revenues below a certain point would be made up and, if it proved to be more economically successful than had been thought at the beginning, revenues would be paid back to the taxpayer. We are thinking about how the policy could be designed, which is why we want to develop the group that the minister mentioned with industry and the UK Government.

Joan McAlpine: Two weeks ago, when Ofgem gave evidence, the Ofgem representative admitted that the reason why Hinkley Point C is getting more public subsidy than pumped storage, with a 35-year contract compared to a 15-year one, is a political decision and that Ofgem is working within that political framework. How do we overcome the obstacle that the decision is not based on what is most economical because there is an ideological decision driving it?

Dermot Rhatigan: The UK Government has the option to agree bilateral contracts that would underpin the building of new pumped storage. As I said, arrangements are being made to support the development of new interconnectors, and the UK Government is having to reach a regulatory settlement that sets caps and floors to allow them to be built. The mechanism that will unlock new pumped storage will probably be something like that, but the capacity market needs to change so that longer-term contracts can be given to underpin the building of such assets.

We think that pumped storage is uniquely beneficial. It has many benefits at the system level. It is fast, it comes on quickly—in a matter of seconds—from spinning reserve and it is incredibly reliable. It is probably the most reliable type of generation that exists, and its availability at peak times is near to 100 per cent. It also helps to reduce costs in other parts of the system. Where there are constraints, with renewable energy having to be constrained, or where more transmission upgrades need to be built, pumped storage offsets some of those costs.

However, despite all those benefits, there is not yet a policy mechanism that allows the companies that have schemes on the drawing board to progress them and make a financial decision.

Joan McAlpine: Dr Sweeney, you mentioned black start. Do you see an expansion of hydro pumped storage as being important in dealing with black start in the future?

Dr Sweeney: Yes, we do. It is a critical part of the mix.

Joan McAlpine: When you talked about the need for regionally based criteria for investment, were you thinking along those lines? Should we have a regionally based criterion for investment in pumped storage?

Dr Sweeney: Indeed. Regional criteria are not to be limited to any particular part of the solution. We need them across the piece as part of the way in which we undertake the task.

Joan McAlpine: Thank you. If the convener will bear with me, I will ask the minister the constituency question that I asked DECC earlier this morning.

The minister is aware that SP Energy Networks has, for some time, been looking at upgrading the transmission line between Stranraer and Carlisle. Two weeks ago, when Ofgem gave evidence to the committee, it said that it was looking at putting such schemes out to tender. I spoke to SP Energy Networks in Glasgow on Monday, and it was unsure about what that means for its plans to upgrade the line. That has serious implications for businesses in my area, because parts of the line date back to the 1930s, but I could not get an answer on that from DECC this morning. Does that concern you? The whole thing is already out to consultation, but it would be slowed down for a number of years if it were put out to tender.

Fergus Ewing: I am not aware of all the details, so perhaps the best thing that I can do, rather than comment on matters of which I am unsighted, is look into that and write to the committee to clarify the situation.

The Convener: Thank you.

Joan McAlpine: Okay. Thank you very much.

Gordon MacDonald: Some of the evidence that we have heard over the last few weeks has suggested that when Longannet closes—putting to one side the black start issues—there may be times when we have to import electricity from the rest of the UK, especially when the wind is not blowing, although overall we will remain a net exporter of electricity. Has any work been done to calculate how often that need to import electricity is likely to happen?

Fergus Ewing: At the moment we are part of the GB energy system and we support the integrated electricity system. However, we still export the vast majority of the time: about 98 per cent of the time, Scotland is exporting electricity. The loss of Longannet will significantly alter that balance, which is a matter for concern, especially when it is evident that although there is scope for new thermal generation—in Cockenzie for example, where I granted consent for a new gas power station, or in Peterhead where most of the capacity has been mothballed—that is not going to happen because of the transmission charges.

Mr MacDonald is right to say that as well as the economic consequences of the loss of Longannet, which is of serious concern in the Fife area—we are talking to Fife Council about the social concerns, too—there will be consequences for Hunterston, the railways and many contractors. There will also be an adverse effect on our export of electricity down south. Mr Rhatigan may want to add something on the technical aspects of that.

Dermot Rhatigan: The pattern of exports and imports will change. There is an awful lot of further renewables capacity in the planning system in Scotland; as the minister said earlier, that is dependent on the continuation of the support systems that are currently in place. On days when it is very windy, we will be exporting heavily and on other days we will be importing.

When Mike Calviou appeared before the committee in March, he said that most of the time, even without Longannet, Scotland will still be exporting power. The design of the grid that National Grid and the Scottish transmission companies are taking forward significantly improves the ability to import and export, particularly after the west coast high voltage direct current link is connected.

Gordon MacDonald: We are now in a situation in which we will be exporting most of the time but there is still a need for base-load capacity in Scotland. Much of the evidence has suggested that we can depend on the rest of the UK, but up to a quarter of the UK's generating capacity is due to close and we are also aware that the UK is becoming more dependent on interconnectors. When the Belgian and Norwegian interconnectors come on, the interconnector power will almost double. Is it sensible for us to have to depend on the rest of the UK for electricity or does it make more sense to ensure that we have sufficient base-load here to meet our own requirements?

Dermot Rhatigan: The outcome is driven by the market signals. As Mr Ewing has said, there is scope to increase our output in Scotland, from Peterhead, but at the moment, given the gas prices and the way in which the transmission charges system works, that capacity will not be used. At the moment the market signals are driving more imports to Scotland from other countries.

12:15

The Government does not oppose more interconnection capacity—we want that to happen, as it can bring real benefits to consumers. An interconnection project is planned to link from Norway to Scotland as well. Potentially, that has significant consumer benefits for Scotland but whether it will go ahead depends on the economics of the project. With a lot of these projects, it is hard to know how things will turn out in the next few years because they are not driven by a plan; they are literally driven by how the market is evolving.

Some of the plants that are due to close in England may stay open for longer. They may be, to some extent, propped up by short-term contracts from the National Grid or they may get

short-term capacity contracts that allow them to continue a little longer. However, it is quite hard to get a picture of what will happen much further into the future because the market is very dynamic and it is not working towards a plan; it is being driven by economics.

Gordon MacDonald: Much of the power-generating capacity south of the border—in plants that are due to be closed—is going to be replaced by the new nuclear plants that the UK Government is intending to build. In April, there were press reports about a nuclear plant in Normandy that is similar to the one that is planned for the UK, which said that there were "manufacturing anomalies" in components that are "particularly important for safety".

Does the Scottish Government support the UK Government's plans to build new nuclear plants, particularly given the cost to taxpayers or to bill payers? Also, what concerns does the Scottish Government have about the technical problems facing the French nuclear industry and what they might mean for the new nuclear programme?

The Convener: Perhaps you could give a brief response to that, minister.

Fergus Ewing: There is no doubt that the proposed Hinkley Point power station is extremely expensive—more expensive than onshore wind power over a longer period. The subsidies are to last 35 years as opposed to 15 years, and the headline strike price is £92.50. That price is index linked, so it will increase. In addition to that, there are loan guarantees and, on top of all that, out of DECC's budget of £3 billion, more than £2 billion is spent on meeting the decommissioning costs of existing nuclear power stations.

Briefly, nuclear power stations in both Flamanville in France and Olkiluoto in Finland have gone massively over budget. A Treasury source—presumably a non-official source—said over the weekend that consideration has been given to the viability of going ahead with Hinkley Point. There is also the potential challenge from Austria and there are doubts from the European Union, so there are quite a few critics of the Hinkley Point project, primarily on the grounds that, as Peter Atherton has said,

"At £5 million per MW of capacity, Hinkley will be, by my reckoning, the most expensive conventional power station in the world."

The Convener: Before I bring in Patrick Harvie, I want to briefly follow up on two points. First, on your last point about nuclear power, minister, I will simply refer you to the evidence that we took on 20 May from Professor McInnes, Professor Harrison and Professor Bell on whole-system costs and how we have to compare base-loads from nuclear energy with intermittent power from wind energy, with the additional cost of back-up and storage. However, I appreciate that those are matters of political debate.

I also want to follow up on the question of transmission charging because you mentioned it twice. What is the Scottish Government's proposal on transmission charging?

Fergus Ewing: For about a decade, we have campaigned for a fairer regime—a postage stamp regime—in which charging would be the same throughout the UK. The former First Minister led the charge in that campaign.

The process has been long—it has taken several years—but Ofgem, as I think you know, convener, was minded to recommend a proposal that would mean, in effect, a reduction in the level of transmission charges in Scotland. We were supportive of that proposal, although we would have liked it to go further.

As you also know, the decision, which was to have been introduced, I think, in April next year or even this year, is being delayed until at least next year, with the possibility of it being further delayed. That is an example of where the UK's regulatory system has failed in just about every respect.

The Convener: As you know, minister, the delay is because of a judicial review. That is the problem.

I am glad that you have clarified that you seek a postage stamp system. Ofgem told us on 3 June that it had looked at such a system, and that it had not pursued it because it had

"found that that would add about £7 billion to consumers' bills."—[*Official Report, Economy, Energy and Tourism Committee*, 3 June 2015; c 28.]

In reply to a question from my colleague Dennis Robertson, you cited Keith Anderson from Scottish Power and talked about additional costs of £2 billion or £3 billion to consumers. You said—I wrote it down—that that would not be

"a sensible or rational decision."

The last time that I studied arithmetic, £7 billion was a higher figure than £2 billion or £3 billion. If it is not "sensible or rational" to add £2 billion or £3 billion to consumers' bills, why would it be sensible to add £7 billion to them?

Fergus Ewing: As I said, we are supportive of the minded-to proposals of Ofgem, which do not produce that extra cost. On BBC radio on 17 February, in relation to the transmission charges in Scotland, you said:

"the way the current system is setup, it does discriminate against Longannet, and that's a matter of concern for me."

That, too, is a matter of concern for me but, I am sad to say, the UK Government has chosen to do absolutely nothing about that, and we are mired—

The Convener: To be fair, minister, that is untrue, because project transmit addresses the issues and delivers a substantial cut in transmission charges for Scottish producers.

Fergus Ewing: If it comes into effect.

You are right to say that the decision is subject to judicial review, but the decision will be made too late, will it not? That is the point that I am making.

The UK Government has declined our invitation to intervene. We are in agreement that the charges are discriminatory. From a business point of view, how can they be anything else?

We have been working with Ofgem and the National Grid. We were prepared to accept the minded-to proposals, which would not have the effect that you have described, so I would dispute your thesis to that extent.

The Convener: I need to bring in Patrick Harvie, so I will make this my final question on the topic.

We also heard from Ofgem that, if we were to move to a postage stamp model, which is your proposed position, there would be an increase in consumers' bills in the north of Scotland—among your constituents—and a decrease in consumers' bills in the south of England. Your position is that consumers in London should pay less and consumers in the north of Scotland should pay more.

Fergus Ewing: No, that is not our position at all—

The Convener: Ofgem claimed that that would be the impact of postage stamp charging.

Fergus Ewing: That is not our view. Of course, you are not mentioning that consumers in the north of Scotland face additional charges that are unique in the UK. We have identified that as being unfair.

The bigger picture is that, if the UK Government chooses to use the most expensive electricity generating methods such as new nuclear—which, incidentally, will cost a sum that is four times more for one power station at Hinkley Point than the aggregate subsidy for renewables under the first 10 years of its existence—instead of onshore wind, then, as anyone can see, the consumer will have to pay more unnecessarily.

The Convener: We will go around in circles on the respective costs of the technologies, so I will bring in Patrick Harvie.

Patrick Harvie: I will explore demand-side issues.

It is fair to say that there is broad agreement from all the witnesses we have heard from that a great deal more must be done on demand-side management, as well as demand reduction overall. That is also the view of both Governments. In your opening remarks, minister, you talked about the need for a holistic approach to electricity, heat and transport and you said that they should be seen as part of a coherent energy system.

We have discussed the fact that there is a bit of a problem with solar photovoltaic. You said that that is a matter for another minister. I suspect that, if we looked at the demand-side reduction on transport, you would say that there is a balance of responsibilities across ministerial portfolios in relation to that, too. How does the Scottish Government envisage the debate moving on and achieving a coherent and holistic approach to demand reduction and demand-side management across all three aspects of our energy system? What needs to be done to get to that point?

Fergus Ewing: All Scottish Government ministers work together to achieve the objectives of decarbonising our means of electricity supply and tackling energy efficiency, as Mr Harvie rightly says. We work together on those things.

The target reduction in total final energy demand is 12 per cent by 2020. It is reasonable to point out that, as a practical means of demonstrating our support for energy efficiency, we have devoted a considerable amount of money to helping tenants and home owners introduce energy efficiency measures into their homes. I believe that that support has totalled around £0.5 billion since 2009, and it has had broad support from across the parties, including from Mr Harvie. There is a lot more to be done, but all ministers are in the course of doing it.

When I mentioned that other ministers would be concerned with solar panels being put on roofs, it was simply because other ministers are responsible for the public estate and not me. I can assure you that we all work very closely together and meet regularly to discuss these issues; for example, I meet with Margaret Burgess. There is a common will to achieve the objectives that we share with Mr Harvie.

Patrick Harvie: I am not at all trying to make a combative point. I am sure that the minister would recognise that this is a developing agenda and that we are not there yet. I am trying to explore what direction the debate needs to go and what more the Government feels it needs to do to develop that agenda, particularly with regard to the relationship between different Government

departments. For example, a national infrastructure priority status has been given to some of the measures on heat. Will the same approach be taken on electricity and transport? Is that the kind of direction that you envisage going in the future?

Fergus Ewing: I think that the heat programme is indicative of our broad support across the portfolio areas. I cannot speak to my colleagues' specific commitments, but we have come forward with a heat plan and a networked programme of delivery for it. There are quite ambitious targets, such as for extending the use of district heating across Scotland. That is not the topic of this inquiry but, as witnesses have pointed out, four fifths of all energy use in Scotland is on heat, so it would be wrong to ignore it. We want to see district heating taken forward.

One of your witnesses rightly pointed out the waste of the heat that goes into the Forth river from Longannet power station. There are companies in Scotland, such as Star Refrigeration, that are taking forward cooling systems; that is another area where we need to make progress.

A third example—I will stop after that, given your admonition to be brief, convener—is that the energy company obligation could, we believe, be run more effectively from Scotland. We welcome devolution of powers in that area.

Patrick Harvie: I was keen for that matter, which I explored with our previous panel, to be put on the agenda for devolution. I hope that that could avoid some kind of mismatch occurring when the Scottish Government tries to do more. Do you share my concern that there is still the risk of similar problems arising in the disconnect that can exist between Scottish decision making and UK or GB decision making?

Whether it is under the current constitution or a GB electricity market that serves independent jurisdictions, political as well as regulatory decisions are still likely to be made at the UK level, which will make it harder to achieve the demand-side response agenda when it connects to devolved issues. What is necessary to achieve that kind of coherence—I first explored it within the Scottish Government—between the two Governments?

Fergus Ewing: I whole-heartedly agree with Mr Harvie that there is a risk of a disconnect between the Scottish and UK Governments. To be serious, convener, there is a concrete example of that. Last autumn there was a considerable delay in the UK Government informing the Scottish Government about the extent and nature of the announcement about energy efficiency measures and the nature of the budget. An announcement was made at the Liberal Democrat party conference, but the details of the amount of money that we were to get and how it would be spent were not forthcoming for several weeks thereafter.

There is a risk of a disconnect. We try to work constructively with the UK Government but—perhaps for the first time—I whole-heartedly agree with Mr Harvie on a matter that he has raised.

Patrick Harvie: I am sure that that is as uncomfortable for you as it is for me. However, regardless of the party politics involved and the constitutional debate, there will always be the danger of decisions at the UK level that do not make it easy for us to achieve the things that we all agree should be achieved on the demand side in Scotland. I am trying to get an opportunity to explore solutions for that. How do we oil the wheels a bit and ensure that that works better rather than ensure that we have opportunities to blame one another for the problems?

12:30

Fergus Ewing: That is a fair question, and I will give you what I hope is a constructive and straightforward answer. One of the ways of doing what you seek is by working with the UK Government on, for example, joint governmental committees. I have suggested today that there should be one for storage that focuses on pump storage.

I point out that there has been one such group—the islands delivery group to devise solutions to connect the Western Isles and the northern isles to the grid. I think that that was sui generis and that there is no other joint governmental group on a specific policy project and task. Without going too much into the details of that joint committee's work, the progress that we made on it would not have been made had there not been that joint committee. That is one of the reasons why I made what I hope was a positive suggestion in my opening remarks about extending the use of joint committees to work together on serious and challenging problems. That is one of the ways to overcome the risks that I think Mr Harvie—to be serious—correctly describes.

Patrick Harvie: Can you confirm whether there is currently an adviser on the Scottish energy advisory board who brings specific skills and experience to bear on demand-side response? If not, do you intend to consider that?

Fergus Ewing: We have such a vast array of skills and experience available—including Dr Sweeney, for example—that I am sure that we have such a person. However, to take the question seriously, I will go away and think about it, and I will write to the convener to say specifically whether that is the case.

Patrick Harvie: That is helpful—thank you.

The Convener: I appreciate that we are behind time, but we will have one more questioner: Johann Lamont.

Johann Lamont: I welcome the idea of a joint ministerial group between the Scottish and UK Governments but, as a practical suggestion, I wonder whether having a joint ministerial group of Scottish ministers on achieving our climate change targets would be useful, so that you do not have to get Mr Lyle to write a letter to the education secretary. Such a group could look at how to create an incentive through funding for housing associations to look at energy issues or, if new schools are being built, what can be built in at the very early stage to maximise the benefits from that.

I am particularly interested in two points. First, we all know that the issue of energy is deeply political. It is entirely legitimate for your Government to have the position on nuclear power stations that it has, and other Governments will have a different view. Given the pressure around climate change, do you agree that we cannot consider the issue of energy simply on the basis of cost? You said that what is being decided at UK level on onshore wind does not make sense, because onshore is cheaper. Does that mean that the Scottish Government has a presumption in favour of proposals for onshore rather than offshore? You will know that many people's view is that we are near capacity in onshore wind—I do not know whether I agree with that—so they want offshore rather than onshore to be developed. If your position is based simply on cost, I presume that that will have implications for developing projects offshore.

Fergus Ewing: There were three questions there. To be brief, we do not consider only costs. I said in my opening remarks that we consider the trilemma of costs, security of supply and carbon emissions. We therefore consider the consumer, the planet and the practicalities of energy generation.

We have no presumption in favour of onshore wind. We will support wind farms only when they are appropriately sited. Members will be familiar with the process for ensuring that, which is robust and taken extremely seriously, and all decisions on wind farms are made entirely on their merits. That is also the case with decisions on offshore and with any other ministerial decisions that have to be taken under section 36 of the Electricity Act 1989.

We already have a grouping of ministers of the kind that Johann Lamont suggested—the Cabinet sub-committee on climate change—which is doing its work reasonably well. I assure her that, as she will know from her time in ministerial office, there is close co-operation between ministers through every conceivable means of communication. Regularly do I meet Margaret Burgess in particular to discuss these matters, and I will continue so to do.

Johann Lamont: I will talk a bit about security of supply. Dr Sweeney says that it is not simply a technical issue. However, if you took the view that it is a technical issue that can be addressed—that is the view that I take—would you share the concerns of the witnesses who believe that security of supply inhibits us from going full throttle for renewables developments?

Fergus Ewing: I apologise, but I am not quite sure of the point that you are making. I want to answer the question, so perhaps you might rephrase it.

Johann Lamont: The danger is that, if we accept that security of supply is more than simply a technical issue that we need to sort, we create a bit of paralysis in the system, because we say that we need to continue to get the balance right and to import certain amounts of energy, which inhibits the development of renewables options.

Fergus Ewing: I do not agree with that. I understand the theory, but the risks at the moment in developing further renewables capacity are: first, that we do not know the long-term targets because the UK Government has not committed to a decarbonisation target by 2030; secondly, that we do not know what announcement will be made about onshore renewables, although we are advised that there is likely to be one; and thirdly, that the situation is causing commercial mayhem and grave concern among communities in Scotland.

Those are the greatest sources of uncertainty, which has arisen after a brief period of certainty. There was a hiatus of certainty amid huge periods of uncertainty when the EMR was being devised. We thought that the uncertainty was over, but it has been reintroduced by the UK Government decision that was floated in the newspapers. We hope that the UK Government will listen to the voices of communities, consumers and companies and reflect those views in any decision that it takes.

Johann Lamont: What can the Scottish Government do to address the sense that people have in relation to security of supply that taking a renewables approach is unreliable, that the lights might go off and that we need to think about how we manage all that? It seems to me that talking up uncertainty might be in the interest of some people who have an interest in supply.

Fergus Ewing: As I have always said, we need a variety of sources of generation to meet our

electricity needs. The nature of that variety will change from fossil fuels to various types of renewables. We undoubtedly need more storage solutions to counteract the intermittency of renewables, which is why we have argued the case for several years.

From an operator's point of view, National Grid is perfectly happy and enthusiastic about onshore wind, as I learned when I visited its headquarters some time ago to educate myself about how it operates the grid. I agree that there is some public disquiet about the matter, which has perhaps been stimulated by overexcited news coverage, but the operators—the people who work in the industry—recognise the enormous value of renewable energy, and the Scottish Government will press on with its ambitious vision for Scotland as the renewables powerhouse of the UK and, indeed, Europe.

Johann Lamont: I take it that you would prefer not to manage any security of supply issues with nuclear energy.

Fergus Ewing: That is a different topic, but I am perfectly happy to answer on it, as I have done before on many occasions. We do not believe that new nuclear power stations are the right way ahead, for various reasons that I have covered. Those include cost, particularly the enormous costs of decommissioning, which I hope that the committee will consider in its report. Those costs are truly mind-boggling and account for about two thirds of DECC's budget per annum—I think that that is right, but perhaps the committee could check it.

Our existing nuclear power stations—Hunterston and Torness—have been well managed and run over the years. Hunterston has had a life extension to 2023 and we expect Torness to have an extension to possibly 2030—those are the dates that are in my mind—so they will be generating for some time to come. After all the money that has been sunk into nuclear power stations, it is sensible for them to operate safely and provide for our electricity needs, particularly when we are in danger of losing further thermal generation from coal.

We have adopted a pragmatic and principled approach to nuclear power, but we are on a transition to meeting our electricity needs from more renewable sources. That is the direction in which we will continue to travel in Scotland and we seek to work constructively with the UK Government towards that end.

The Convener: That concludes our questions. I am sorry that we are a bit over time, minister. I thank you and your officials for your time this morning.

12:40

Meeting continued in private until 12:47.

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