The Scottish Parliament
Pàrlamaid na h-Alba

Official Report

ECONOMY, ENERGY AND TOURISM COMMITTEE

Wednesday 6 June 2012

Session 4

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ECONOMY, ENERGY AND TOURISM COMMITTEE
19th Meeting 2012, Session 4

CONVENER

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

DEPUTY CONVENER

*John Wilson (Central Scotland) (SNP)

COMMITTEE MEMBERS

*Chic Brodie (South Scotland) (SNP)
*Rhoda Grant (Highlands and Islands) (Lab)
*Patrick Harvie (Glasgow) (Green)
*Angus MacDonald (Falkirk East) (SNP)
*Mike MacKenzie (Highlands and Islands) (SNP)
*Stuart McMillan (West Scotland) (SNP)
*John Park (Mid Scotland and Fife) (Lab)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Graham Brown (Burcote Wind Ltd)
Jamie Glackin (Renewable Energy Consultants Ltd)
Andrew Jamieson (ScottishPower Renewables)
Gavin McCallum (Clyde Blowers Capital)
Jason Ormiston (Vattenfall)
Ronnie Quinn (Crown Estate)
Steve Salt (West Coast Energy)
Jim Smith (SSE Renewables)

CLERK TO THE COMMITTEE

Tracey White

LOCATION

Committee Room 1

Scottish Parliament

Economy, Energy and Tourism Committee

Wednesday 6 June 2012

[The Convener *opened the meeting at 10:00*]

Renewable Energy Targets Inquiry

The Convener (Murdo Fraser): Good morning, ladies and gentlemen, and welcome to the 19th meeting in 2012 of the Economy, Energy and Tourism Committee. I welcome members, visitors in the gallery and our first panel of witnesses, whom I will introduce in a second. I remind members to turn off all mobile phones and other BlackBerry-type devices.

This morning we continue our inquiry into the Scottish Government's renewable energy targets and we have two panels of witnesses to give evidence. The first panel comprises Jamie Glackin, who is managing director of Renewable Energy Consultants Ltd; Gavin McCallum, who is investment director at Clyde Blowers Capital; Ronnie Quinn, who is the senior development manager at the Crown Estate; Jason Ormiston, who is the head of public and regulatory affairs at Vattenfall—I apologise for the misspelling of your name on the nameplate; Graham Brown, who is the managing director at Burcote Wind Ltd; and Steve Salt, who is the planning and development director at West Coast Energy. Welcome to you all.

Before we get into questions, would anyone like to make a brief introductory statement?

Steve Salt (West Coast Energy): Good morning, convener. Thank you for inviting me to appear as a witness at today's meeting. I represent West Coast Energy, which is an independent wind energy developer that is headquartered in north Wales and has offices in Edinburgh and Inverness. The company was established in 1996 and has, over the past 15 years, been responsible for constructing almost 700MW of wind power capacity in the UK, including 400MW in Scotland. We are currently constructing some 60MW across the United Kingdom, and have more than 100MW currently in planning in Scotland, with many more megawatts in the pipeline.

West Coast Energy believes that the renewable energy targets are challenging, but achievable. However, it is important to maintain public support. I would therefore like to share with the committee our community engagement and partnership initiatives, which we believe can make an important contribution to the 500MW target for community and locally owned renewable energy by 2020.

Graham Brown (Burcote Wind Ltd): Good morning, everyone, and thank you for the invitation. Burcote Wind is an independent renewable energy business that is focused on onshore wind. We are based in Dunfermline, where we employ six people. We specialise in onshore wind projects and currently have 10 pipeline projects, with a combined potential capacity of about 800MW. That would be sufficient to generate 2.6 million megawatt hours of electricity, which would be enough to meet the needs of more than half a million homes. In addition to that would be a total investment of more than £1 billion, which would create 110 permanent jobs and support 475 construction jobs. We believe strongly in the community-benefit aspect of what we are doing, and the cumulative community benefit from that sort of investment would be in excess of £60 million over 25 years. We very much identify with the Scottish Government's objectives. Among the areas that we want to talk about is potential obstacles that could hamper achievement of the objectives.

Jason Ormiston (Vattenfall): Thank you, convener, for the opportunity to address the committee. Since 2008, Vattenfall has invested more than £1.5 billion in the UK in onshore and offshore wind and in doing so has supported more than 1,500 British jobs. We have done that because we see the UK as an important growth market and we are determined to decarbonise our activity by 2050.

Last September, our chief executive spoke in Edinburgh about the criteria that need to be met if we are to invest in renewables. He said that there needs to be a resource available, a route to market and smooth planning and permitting systems in place if Vattenfall is to continue to invest in the United Kingdom and in Scotland. Those criteria must continue to be in place, and we believe that is more likely if there is a genuine partnership between Government, industry and the Scottish people. Vattenfall believes that, if we can build, maintain and strengthen those ties, the 2020 targets are well achievable.

Ronnie Quinn (Crown Estate): As the senior development manager for the Crown Estate in Scotland I lead on energy matters. I was appointed this year partly to ensure that the determination to work alongside the Scottish Government and Marine Scotland on offshore renewables—offshore wind and wave and tidal projects—continues to be as strong as possible.

The role of the Crown Estate is well known, but commonly misunderstood. We are a landlord with a strong interest in developing the offshore industry in the UK. To that end, there is a pipeline of about 46GW of offshore wind in the UK. In Scottish waters, there is just under 10GW—just under 5GW in the Scottish territorial round and just under 5GW in the round 3 sites. In addition, we have wave and tidal projects in the Pentland Firth and Orkney waters and along the west coast, which add more than 1.6MW to the total.

Gavin McCallum (Clyde Blowers Capital): I represent Clyde Blowers Capital, which is based in Glasgow. We are owners and managers of engineering businesses. We currently own two large gearbox businesses, which are both well positioned to supply major components for offshore wind turbines and for wave and tidal turbines that also require transmission mechanisms. In January, David Brown announced a massive contract to supply Samsung with a new 7MW gearbox to be built for the offshore turbine that it plans to test offshore at Methil and launch in European waters. It is particularly keen to target aggressively the Scottish offshore sector and to look at assembly-jobs creation in Methil and the east coast.

We see tremendous opportunity in the renewables market, but it will be a missed opportunity if the supply chain is not put in place to develop new technologies and new products and to create jobs in Scotland. We see tremendous opportunity to do that and we are actively pursuing that through both companies, although we see some obstacles to overcome, which it would be good to share this morning.

Jamie Glackin (Renewable Energy Consultants Ltd): Renewable Energy Consultants is a consultant engineers company that specialises in the small side. All the other guys here this morning are talking about the big stuff, but we deal primarily with the wee stuff—microgeneration technologies, solar photovoltaic panels, heat pumps and micro wind. I hope that this morning I will get to share one or two of my thoughts on the heat and energy efficiency side of the 2020 targets. We also have a fair bit of experience of working with the social housing sector in Scotland, and I would like to share one or two thoughts concerning the fuel poverty aspect of the energy targets.

The Convener: Thank you very much. We have a large and varied panel with a number of different perspectives represented. I therefore ask members to direct their questions to specific panel members. If witnesses hear a question being asked of someone else and you would like to respond to it, try to catch my eye and I will bring you in. All six of you cannot answer every question or we will quickly run out of time. Let us try to manage things as best we can.

Mr Brown referred to obstacles to reaching the targets, which I think is, largely, what committee members would like to explore. There is a recognition that the Scottish Government's target is theoretically achievable, but the committee wants to explore what the barriers are to that. We have heard from a number of you about issues that have arisen in that regard.

In that vein, I start by asking about a particular barrier that we have heard about in evidence—access to finance and investment. The committee heard evidence last week from Citigroup that it is "borderline fantasy" to assume that the equity markets in the current climate would invest sufficient amounts to meet the profoundly challenging renewables targets. I start by asking witnesses whether they agree with that view. If you do, what needs to be done to make the approach more realistic?

Graham Brown: My first point about investment is that there needs to be certainty. That is one of the big issues in respect of renewables obligations certificates and so on. In addition, when reviews drag on, that causes significant uncertainty. We must recognise that the investment community is extremely mobile and that money can easily be transferred to any country.

The Government needs to ensure that it is very clear about what it offers and about the timescale. There has to be a long timeframe of certainty to ensure that the investment is made. That is even more critical for areas in which the technology is still at an early stage; for example, a much longer timeframe of certainty is needed for renewables technologies such as wave and tidal power. That is the case even for offshore wind power, in which some technical challenges must still be solved, and onshore wind, which is probably the most established form of renewable energy.

Jason Ormiston: Our chief executive spoke last year about Vattenfall's intentions for investment in renewables across northern Europe. We have plans to invest a significant amount—billions of pounds. However, our chief executive said clearly that Vattenfall cannot make promises about the locations for investment or, indeed, the technologies. It is clear, however, that we are keen to decarbonise and invest in renewables. We must create the right environment for that investment in a very competitive European situation.

On that basis, many of the utilities companies have cash available to invest, but it is limited and they face significant challenges. Mr Brown talked about the regulatory uncertainty, which is having an impact on confidence. However, with electricity market reform there is an opportunity to create a

fertile environment for investment in renewables across the UK. The recent UK Government's draft energy bill has given us more detail about how that will work, but an unsettling amount of detail has been left out and remains unexplained by the UK Government. We are keen to see that situation resolved as quickly as possible. Until it is and we understand what the long-term future looks like for investment in renewables, we face a challenging environment for the sector. However, if the Government gets it right, investors will come in and the £110 billion investment that the UK Government has identified as being required to deliver its 2020 targets can be found.

10:15

Gavin McCallum: In addition to policy certainty, the other big thing that equity investors want is to know that the turbines, in the case of offshore wind, can be built at the expected cost and will deliver the expected performance. One of the obstacles to that, which is actually an opportunity for Scotland, is the need for continual investment in world-class research and development and testing facilities.

The challenge is to drive down the cost of offshore wind and all the other renewables technologies every year for the next 20 years. To do that, the industry—including companies such as ours—need access to world-class test facilities so that they can test technologies, demonstrate that they work and drive down costs. In doing that, we will give investors including Citigroup and others confidence that the technologies work and that they will deliver the expected costs and generate the expected electricity. That is not a one-time thing. It is something that we will need to do every single year during the development of the products over the next 20 years, and if we do it, we will significantly improve the confidence of equity investors.

Ronnie Quinn: I have two quick points to add. First, I endorse Mr Brown's point that the market for finance is a global market. The scale of the finance and investment that will be required over the next 10 to 15 years is £50 billion to £100 billion, and we will be competing not in a Scottish market, a UK market or even a European market, but in the global market.

Secondly, the offshore wind investors conference that the Crown Estate co-hosted in London last year was the first attempt to re-educate the investment market on the changes that are happening in offshore wind. The market is completely different from what it was in 2000, 2005 or even 2008. Things are changing, and one of those changes will be announced later this week or next week. Following the work that has been done on the cost of energy, the Crown Estate will publish a report—12 June sticks in my memory—that will state that the magical figure of £100 per megawatt hour is achievable by 2020. That should give investors greater confidence in offshore wind and its capabilities, and we hope that the UK task force will point out how that can be achieved. You will hear about that later today, I think.

The Convener: Thank you. I have a supplementary question to ask before we move on. Mr Ormiston mentioned electricity market reform and the draft energy bill that was published recently. In general terms, is electricity market reform a help or a hindrance to meeting the 2020 targets, or is it too early to say?

Jason Ormiston: In and of itself, EMR should not be a hindrance, but the transition from the renewables obligation to EMR presents a challenge for the sector. We are still waiting for the conclusions of the renewables obligation banding review and—if the newspapers at the weekend are to be believed—some of the conclusions might be challenging. We will have three or four years in which the transition from the RO to EMR will be made; it is during that period that there will be the greatest levels of uncertainty and concern. Vattenfall believes that EMR can be made to work and will be successful in delivering investment. It is what economists call the evils of transition that worry many people in the sector.

The Convener: If anyone has a devastating critique of what Mr Ormiston has said, now is the time to give it. If you all agree with him, we will move on.

Graham Brown: I make the point that the ROC system works well. Why should we change something that is working? It almost seems perverse to do that. We are where we are, but I think that most people round the table would agree that the current ROC system works.

The Convener: Okay. Thank you for that. We need to move on to a different area, on which John Wilson will begin.

John Wilson (Central Scotland) (SNP): I want to ask Mr Salt a couple of questions that are based on West Coast Energy's written submission. In the section on planning and consents, you state:

"Decision makers are often not sufficiently equipped in terms of technical expertise or staff resource to process and make judgements on what are comparatively complex, technical projects".

On the following page you say:

"Where refusals by the planning officer have led to appeals being determined by the Local Review Body ... in some cases it appears that LRBs are ill-equipped to make decisions due to the complexity and level of technicality of projects."

If local planners are not equipped, how do we resolve that issue and equip them? It is not always the planning officer who makes the decision; it is sometimes the planning committee of the local democratically elected council that does so. How do we resolve issues around individuals gaining the expertise and technical knowledge to process planning applications?

Steve Salt: Thank you for that question. The elected members in local authorities have a very difficult job to do in reconciling the Scottish Government's targets with concerns that are expressed locally. It is a difficult job and there are obviously tensions between different authorities and different political leaderships in that regard. In responding to that, the planning officers have a difficult job too, but I detect that the resources, the required skills and the number of people in planning authorities for dealing with planning matters must be strengthened. We as an industry, and ourselves at West Coast Energy, find that there are long lead times for getting responses from planning authorities and statutory agencies. Resources need to be put into the system to enable it to meet the demand and push for the targets.

It is probably too early to take a view on whether local review bodies are working for delivering the targets. I am a bit concerned about their being judge and jury. From our perspective, if a decision is taken locally that we believe is incorrect, we would like the ability to test that at a higher level.

John Wilson: Thank you for that response. In your opening remarks you said that West Coast Energy operates in Wales as well as in Scotland. Are there major differences between Wales and Scotland in how planning applications are dealt with and processed? The committee is concerned with trying to resolve issues that developers have identified, where we can.

Steve Salt: There is certainly a different approach in leadership. The Scottish Government is strongly committed to renewable energy and its leadership in that regard is why we invest in Scotland. We are a Wales-based company, so you might have thought that we make all our investment decisions and invest most of our risk money in Wales, but that is not the case. We have chosen to develop and invest in Scotland and to open offices in Scotland because of that strong leadership.

The targets are extremely important. There are targets in Wales, but we find that they are not often applied or given sufficient weight in the planning balance. The Scottish Government's targets are important to us as a company when we are looking at where we want to invest. One of those targets—if I may talk about it briefly—is the 500MW target for community renewables. Other parts of the UK talk a lot about community involvement in community renewables, but Scotland is developing that approach in an important way. We need to win hearts and minds, and fighting with communities is not the way forward. West Coast Energy is trying to develop community partnerships and we are beginning to reap rewards from that. I would like to talk about that later, if possible.

John Wilson: You referred to the Scottish Government's encouragement to the renewables sector to invest in Scotland. My question was whether local authorities in Scotland deal with issues in local planning decisions differently from local authorities in Wales.

The Scottish Government favours the renewables sector, but we are concerned about barriers to achieving the targets for 2020. Can we learn lessons from other jurisdictions in the UK about dealing with planning concerns that organisations such as yours have raised, in considering how best we can develop and enhance the planning process? Can we learn from the planning authority decision-making process in Wales?

Steve Salt: You ask about the Welsh dimension. Unfortunately, there is still a strong disconnect in the local decision-making process, and pressure is brought to bear on decision makers by groups that do not want renewable energy development. We do not find that in a lot of parts of Scotland, where we find that local authorities are connected in policy terms and are making the right decisions to meet the targets.

It is difficult to give you lessons from Wales. Local authorities are doing their best. However, in some areas of Scotland, there is a disconnect between the local decision-making process and the Scottish Government's policy.

Angus MacDonald (Falkirk East) (SNP): I will pick up on that point. Vattenfall's submission says that the

"planning system is inadequately resourced"

and is unpredictable. I take on board Mr Salt's points. I come from a local government background and, before I was elected to this place, I was a member of a couple of local review bodies. I share some of the concern about the technical knowledge of some members of planning committees and local review bodies. The lack of technical knowledge on planning committees is clearly an issue. Do Mr Ormiston and Mr Salt feel that it is imperative to improve training for members of planning committees and local review bodies?

Jason Ormiston: A few years ago—before 2007—a previous Administration initiated a round

of training seminars and sessions for councillors and planning officials. Those sessions, which were run by the then Scottish Executive rather than the industry, told people about the planning policy that was in place and explained the process for developing wind energy. That was well received by the local authorities that hosted the Executive-run seminars.

I stand to be corrected, but I do not think that those exercises have been repeated. Perhaps there is an opportunity for Scottish Government officials to go out and talk again to people about policy and about the effects and benefits of the technology. That might be a helpful initiative.

Steve Salt: I said initially that there is an amazing amount of pressure on local authority decision makers. Giving them additional training to understand the importance of the targets and the way to approach the planning balance is something that we would suggest to the committee. I come from a planning background and I know that the planning balance is a very subjective issue. Nevertheless, I think that a lot of weight is given to aspects that are not planning aspects. A lot of pressure is brought to bear on local decision makers by people who do not want projects to succeed, and it is important for members to understand the core principles of the planning decision process. The decision makers have a difficult job, but it would be useful for them to know what is material weight and what is not material weight.

10:30

Angus MacDonald: I tend to agree with you about that. Do you feel that a more centralised approach should be adopted to strategic planning?

Steve Salt: No. From our perspective, it is important that the local politicians make the decisions. However, they seem to be under a lot of pressure from the small minority who do not want onshore wind in Scotland to continue. Onshore wind must be the major player in the achievement of the targets. We have only eight years left and although offshore wind will play an important part, there are issues and technical obstacles. There must be a better way of moving forward with onshore wind.

As a company, we do not want to be involved in the inquiry process and in having the Government take a view on projects. Therefore, the industry needs to engage much more with communities and partner them in delivering renewables and onshore projects. The material weight will then be the strength of support for or opposition to a project. West Coast Energy is pioneering approaches to working with communities that are beginning to reap rewards, and I commend some of those ideas to the committee.

Jamie Glackin: On the microgeneration side, we have the same problems with the planning process. I have read the *Official Reports* of previous meetings, and everyone seems to get bogged down with the planning issues. However, there are problems between one local authority in Scotland and the next. The centralisation that you suggest is not a bad idea, certainly on the microgeneration side. We have experienced issues even within the same local authority when two planning officers have had completely different views on what is, in effect, a small piece of kit.

Mr Wilson mentioned Wales. We are currently working with the Welsh Government, through British Gas, on the nest project. We have noticed that, with regard to planning submissions, some local authorities have taken on board the English permitted development system and some local authorities have not gone that far but have the same system that we have. In Scotland, as has been mentioned before, a heat pump is permitted only at a distance greater than 100m from the curtilage of the next dwelling. Frankly, unless someone lives in a very remote location, that will not apply.

I would say that there is a role for the centralisation of some areas of energy. Large-scale developments clearly require local input, but for the smaller, easier wins centralisation could and probably should be considered.

Jason Ormiston: I will combine my answers to Mr Wilson's and Mr MacDonald's questions. In Wales, a strategic approach has been taken to onshore wind development and areas have been identified for search and development, but that has not delivered the rate of deployment that people are looking for. I am not sure that that approach would be a solution for Scotland, although it has been part of the on-going debate about planning for onshore wind for many years. The wind farms that have been developed are, by and large, very good and accepted by the communities, and they have a benefit. It seems that what might be considered to be a handbrake turn in planning policy towards a more national strategic planning approach would have a significant impact on confidence in investment in onshore wind.

Graham Brown: I endorse the comments on there being significant variation in how various authorities start to look at plans. That is a key point.

On the positive side, the renaming of the energy consents unit—[*Interruption*.]

The Convener: Order. Hold on a second. Will whoever has a phone that is ringing please turn it off? Thank you.

I am sorry, Mr Brown. You may carry on.

Graham Brown: The renaming of the energy consents unit to the energy consents and deployment unit, so that the word "deployment" is included in its name, is extremely welcome. That starts to deal with the larger projects and to address them more from a strategic level in looking at the Scottish Government's overall objectives, but the unit needs to be given teeth. It probably needs more resources and more power.

Stuart McMillan (West Scotland) (SNP): I will follow on from that line of questioning. Obviously, we have the current planning process, but in earlier evidence a suggestion was made about a more centralised approach; we have just touched on that. If there was an overarching, centralised approach for all energy or even for energy sectors, local politicians in local authorities could well feel that they were being sidetracked. If two or three local authorities got together and formed energy planning teams, could that be a better way forward? Experts in their fields could work across two or three local authority areas; they could have a better understanding and provide better information to enable local elected members to take decisions. Such an approach could remove the situation that Mr Glackin mentioned, in which two planning officers in one planning authority provided different information.

Jason Ormiston: There have been strategic plans between local authorities in the past. Exactly that approach has been taken, and those plans had planning guidance behind them. I am struggling to think whether they continued after the Planning etc (Scotland) Act 2006. I am pretty sure that they did, but I think that that act does not include provision for future strategic engagement between local authorities. Others may be able to fill in the gaps, but I think that that approach has already been adopted and it may still continue.

Steve Salt: I think that it has been adopted. In Wales, the sharing of resources has been tried for waste and mineral planning. Perhaps that approach could work in Scotland, as there are pressures on planning authorities and staff time.

We have talked about the technical skills that are required to assess renewable energy projects of all types. Perhaps there could be a technical assessment and a weighing of the planning balance involving only planning issues by planning officers who are fully conversant with all the issues. A report could then be sent to the decision makers. That could be a useful way forward to speed up the decision-making process where there are dedicated teams.

Our company suffers from the timescales that are associated with our projects, so if such an approach speeded up the process while ensuring that the relevant weight was given to the issues in the assessment report, it might be acceptable and helpful.

Jamie Glackin: It would probably be a step in the right direction. I think that all the witnesses are saying that what most hurts our industry—even the small-scale side—is uncertainty. We have to be able to tell clients how much things cost, and planning is currently a how-long-is-a-piece-of-string question. In relation to microrenewables, I see no reason why local partnerships could not be a step in the right direction. However, fundamentally I think that that dilutes the problem. We need to be able to tell clients in Aberdeen and Dumfries exactly how much our services will cost. A centralised approach, certainly to small-scale generation and renewables technologies, could help in that regard.

I think that in a previous meeting Mr Brodie said that planning authorities are becoming gummed up. We have come across the problem. Planners are saying, "Please don't tell us that you are putting in heat pumps, because frankly we don't want to know." We are in a ridiculous situation, in which some clients might be stepping over the line and installing technologies, but the planning departments have specifically said that such developments are of little importance and are causing problems in the system, because the same people have to consider the heat pump as have to consider the 2MW turbine. We have to address the problem.

Stuart McMillan: That is a key issue. We know that folk in planning departments are under the cosh, given the demand from the energy sector and elsewhere. Their time is extremely tight. If we can make the process that bit smoother and easier—irrespective of whether an application's outcome is positive or negative—there must be more joined-up working. There are 32 local authorities and the national parks have planning authority status.

During the past two or three years, there has been a debate in the Parliament about how there can be more joined-up working in the public sector. The issue was very much to the fore in the Christie commission report. Are there ways of streamlining the planning process, short of centralisation? What recommendations can the panel make?

Graham Brown: In relation to some of the consultees, such as Scottish Natural Heritage, there needs to be consistency. For example, whether a one-year set of bird surveys or two-year or three-year bird surveys are required is often down to an officer. We are supposed to achieve the Scottish Government's overall objectives, but in such circumstances an officer can put in a delay in the process of up to two years. We suggest that

if two-year bird surveys are justified, there should be the ability to put in the application and let the second year run concurrently, given that it takes about a year for the application to go through the process. That would streamline the overall application and planning process, and it would be simple to achieve.

10:45

Steve Salt: I think that we have a better story with the statutory agencies than perhaps the committee is hearing in other evidence. During the past few years, SNH has come into line—or has been aligned or has aligned itself—with the Scottish Government's targets and policies.

If surveys are necessary, we have to do them. I acknowledge Graham Brown's point and certainly think it important if we can overlap in particular years. In certain parts of the SNH hierarchy, there are what might be called rogue officers who react too much to local concerns or to those who do not want projects to proceed but SNH, the Scottish Environment Protection Agency and—I think—Historic Scotland are now aligned with the Scottish Government's approach.

Stuart McMillan asked how things might be improved. As someone who is in Scotland's onshore wind energy business and whose company is investing in many projects and indeed has five projects in the planning system, I can appreciate the pressures on MSPs, councillors and other officers from the community. After all, we are in a mature market; you only have to drive around Scotland and see the number of wind farms in operation. The drive to achieve the onshore wind targets will lead to a lot of tension between competing views, we need to give serious consideration to community participation and engagement instead of simply paying lip service to all that. We have exhibitions, open days and so on, but there must be a better way of engaging the public and if we are to achieve the targets, particularly the target of generating 500MW from community renewables, we need to find solutions.

In that respect, the committee might like to think about giving material weight to the views of communities who go into partnership with commercial wind farm developers, who try to develop and have a share in projects and who try to utilise them for their own good and to do the things that they want to do in their community over the next 25 years. West Coast Energy initiated an approach of including community turbines in its projects and engaging the community in that way. I am not sure whether the planning process gives anything like that material weight, but under the approach that we have adopted communities will have a legal 10 per cent share of ownership in all our projects in Scotland. I believe that that is helping us to deliver the targets, because we are finding that when we get communities legally involved there are far fewer objections; indeed, there is immeasurable support for our projects. I certainly think that such moves should be given material weight in the planning process.

Chic Brodie (South Scotland) (SNP): Returning to Mr Glackin's point and the gumming up of the planning system in South Ayrshire, I know of a remarkable zero-energy-cost home that is supported by Japanese universities and which simply cannot get past the planning department. There is certainly an issue to be dealt with. I do not agree with centralisation and although I have listened to Mr Salt's comments about community involvement, I have to say that, once communities get the money, they sometimes find it a bit difficult to reach total agreement on how it should be spent. Nevertheless, I am all in favour of community investment.

Can I perhaps move away from planning, convener?

The Convener: I have one more question on planning that I would like to be dealt with, Mr Brodie, and then I will bring you in.

Mike MacKenzie (Highlands and Islands) (SNP): If I were a wind farm developer, I would be looking for three things before I even thought about developing a project: wind resource; the possibility of a grid connection of the required size or capacity; and planning consents.

It strikes me that there are a lot of areas with wind resource where planning consents may be quite easy to obtain because those areas are out of sight and out of mind. However, the barrier, as it were, is the lack of possible grid connection. It seems to me that that sometimes forces developers into much more sensitive locations in which planning consents are difficult to achieve. Do you agree that the issue of grid connectivity sometimes places developers in that position?

Graham Brown: I will try to answer that. We must deal with the fundamental issues of grid capacity, how capacity is arrived at and the associated costs. For example, if a developer comes forward with a project for which they want to establish a grid connection, they are required to put a significant amount of money up front. At a certain point, the fees that are required for capacity start to escalate significantly, and the developer could lose that connection if they did not pay that money. Equally, the developer could lose that money if the project was not given planning consent. That seems to us to be a huge obstacle, which we want removed.

We could start to tackle that by requiring the initial fee to be of sufficient size to prevent crazy

projects from coming forward and by ensuring that the money paid would be returned to the developer if their project did not get planning consent. Currently, the developer loses that money if there is no consent, which we regard as a key obstacle to accessing the grid.

In addition, if a project is the first in an area to get consent, it needs to establish the grid connection for the area, which means that that project pays the bulk of the costs for the connection—they are not spread over a wider area. Such costs could make some consented projects completely unviable.

Mike MacKenzie: If you will forgive me, that is not quite the point that I was getting at. The point that I am trying to make is that the current grid was designed well before the possibility of renewable generation was considered, so it tends to be at its strongest close to population centres. It seems to me that the possibility of getting a decent connection to the grid is higher in those areas, so developers are currently almost forced into advancing projects in areas that have planning sensitivities. I suggest that the real constraint is not so much the planning system but the lack of grid connectivity in some of the more remote areas that are less sensitive in planning terms.

Graham Brown: Grid capacity is a huge issue, because insufficient capacity is available. Whether it is close to urban populations or out in the country, the grid needs to be significantly upgraded. There must be investment in the grid to enable the renewables objectives to be achieved. I agree that the grid is an issue, but the fundamental point is that there is insufficient grid capacity—full stop.

Steve Salt: I agree with Mike MacKenzie that the grid situation often means that we cannot go to particular areas where we would like to develop, so it is a real barrier for us. We consider the wind resource in an area, then we consider the grid; if we have a connection, we then try to work out how we can achieve consent. However, there are enough projects out there, particularly onshore wind projects, to deliver the targets. A lot are being scoped or are in the planning system at the moment. The industry has done that work and has worked out how it will achieve the connections to the grid. Not all the projects will succeed, given the various planning issues that are associated with them, but there are plenty out there. We just need an opportunity to present the proposals and ensure that proper planning weight is given to the various issues. The grid is certainly an issue, but I think that we will deal with it because a lot of projects are already in the system.

Jason Ormiston: I have a quick point, convener.

The Convener: Briefly, if you will.

Jason Ormiston: It might be worth having a look at SNH's annual review of onshore wind development, because it cross-references locations with areas that are protected or have designations. That might give a sense of the level of interest that developers are showing in more sensitive areas. In the past, developers have certainly shown common sense and have tried to avoid those zones. However, if the evidence shows that there is increasing pressure on those areas, we should ask whether that is because there is grid availability there.

The Convener: We return to Chic Brodie.

Chic Brodie: I have two questions on planning, one of which is for Mr Vattenfall—[*Laughter*.] Sorry. I mean Mr Ormiston. My other question is for Mr Quinn, and I will ask it first.

The Crown Estate has what is effectively a monopoly over the 12-mile limit around the coast of Scotland. What benefits will accrue to the communities that are affected by offshore wind developments?

Ronnie Quinn: We can identify three main elements of benefit. The first element is the contribution that offshore projects will make to renewable energy targets, carbon reduction and the generation of renewable energy per se, so it is hoped that communities would benefit in that regard.

The second element is the not-inconsiderable anticipated benefit for local employment. Once the projects are up and running, a significant effort will be required going forward in relation to their operation and maintenance, which will have to be locally based and which will employ local people.

The third element is the revenues that will be received from the Crown Estate through rental income. Half the gross figure will go back to the coastal communities fund for distribution by the Big Lottery.

Chic Brodie: Can you give us an indication of what that might mean in revenue terms for, say, the next three years?

Ronnie Quinn: The only operational offshore wind farm just now is Robin Rigg. From memory, the revenue from that is in six figures. Perhaps I could give you the exact figure later.

Chic Brodie: Your investment in renewables over the past two years has been quite dramatic.

Ronnie Quinn: Yes. Investment in the enabling actions has been quite significant, but the Crown Estate will not receive income from that for some time yet. However, once the development projects have been built, there will be benefits through

renewable energy, jobs and the coastal communities fund.

Chic Brodie: Okay. I will now ask Mr Vattenfall a question.

A few weeks ago we had some excitement here regarding the European offshore wind deployment centre. What would be the impact on offshore wind research and development if that project did not go ahead?

11:00

Jason Ormiston: We see the European offshore wind deployment centre, which we are developing in partnership with Technip and the Aberdeen Renewable Energy Group, as a strategic project for the roll-out of offshore wind across Europe. I say "strategic" because it will allow the deployment of first run of production wind turbines, which will be able to demonstrate their capabilities to the sector; if successful, they will enter the market and, we hope, increase competition in turbine supply, which in itself will help to reduce costs. Indeed, Mr McCallum has already spoken eloquently of the need for demonstrator sites and cost reduction in the sector. Similarly, research and development will also drive down costs.

A recent UK Government report that tried to quantify the impact of demonstrator sites for offshore wind—aside from our site, there is one in the north-east of England and others might well be established in the future—concluded that there was an urgent need for them and that, if deployed, they could result in £7 billion in gross value added to the UK economy and have a cumulative cost reduction impact of £45 billion for the whole offshore wind sector in UK waters by 2050. The sites will provide significant benefits.

Chic Brodie: So they are critical to our achieving the offshore wind element of our 2020 targets.

Jason Ormiston: They are critical to reducing costs and improving the reliability of offshore wind. After all, most commentators agree that the strategic imperative is to reduce cost, improve reliability and ensure that safety measures are top class. The sites will be an important factor in the delivery of the 2020 targets and Scotland's offshore wind potential. Dare I say it, but the north-east of Scotland and Scotland itself might even be placed as a world leader in the development of offshore wind technology.

John Park (Mid Scotland and Fife) (Lab): I want to explore Mr Quinn's comments about potential employment opportunities, particularly in offshore wind. One of the many issues that we have discussed previously—in fact, it has also come up today—is the importance of people in the system, which has been referred to in the context of challenges in getting planning consent. Previous evidence has focused directly on the movement of labour from oil and gas and other traditional forms of energy production to renewables. As far as offshore wind is concerned, I realise that there will be a lot of construction work to begin with, but what will the employment to provide full-life support to those structures look like? Do Scotland's current employment levels suggest that we have the capacity, or are on track to have the capacity, to provide effective support to those developments?

Ronnie Quinn: It would be nice if people transferred from oil and gas to renewables, but we need to remember that the oil and gas sector is still alive and kicking out there and that—let us be honest—it pays very well. The fact is that there is no huge flood of people transferring from oil and gas into renewables, and we cannot expect a huge influx in that respect.

As for on-going operations and maintenance, you are right to say that the construction phase will involve a significant number of jobs. However, such employment will be for a fairly specific and time-limited period. Thereafter, it is hoped that we will have a very lengthy period of operations and maintenance.

It is difficult to make direct comparisons, because the big offshore wind sites that we are looking at are of a different size and scale. All we can do is point to existing sites and projects. The figures that I have had for one particular 360MW wind farm site off the west coast of England suggest that about 76 people are employed locally on the site merely for operations and maintenance—they do not include traders, electricity regulation people and so on.

When we scale that up—and an element is scalable because the turbines require downtime for operations and maintenance—to projects that are 800MW or 1GW, significantly more people will be involved. I cannot say what number of people are required for a 1GW site, because there is no such site. However, we anticipate that it will be significantly more than 76, which is about the norm for a 350MW or 360MW site.

Jason Ormiston: People often talk about transfer of skills and business from the oil and gas sector to renewables, but it is perhaps better to talk about the diversification of oil and gas businesses into renewables. A good example of that in John Park's region is Burntisland Fabrications, which has fabricated steel jackets for the oil and gas sector and has now moved successfully into delivery of jackets for offshore wind. We gave Burntisland Fabrications the contract for 31 steel jackets for our Ormonde

offshore wind farm off Barrow-in-Furness. For the six to nine-month period in which those jackets were fabricated, the contract kept 370 skilled people in work, and the business has continued on from there.

We should talk about diversification rather than transfer. There is a risk that the oil and gas sector might see a threat in the use of the word "transfer". We look to companies like the Wood Group—which has already done it—to diversify into the renewables sector.

Gavin McCallum: We need to think more broadly than just about operations and maintenance. That work is on the doorstep, so it should be won by Scottish companies and it needs to be delivered locally. However, ultimately, there is a much bigger opportunity to physically make things such as gearboxes, generators and jacket structures in Scotland to serve a global market. Cracking two or three of those opportunities will create home-grown Scottish businesses that can learn the skills in the markets here and then take the products round the world. With things such as gearboxes and generators, we need to learn about the skills and businesses not from the oil and gas industry, but from the automotive and aerospace industries and similar industries. The renewables industry is a completely different business. It involves volume production of high-quality, largely mechanical devices.

Deployment involves offshore marine expertise, and building the turbines requires manufacturing and engineering skills that come from other sectors. I encourage everyone to think about how we can support that part of the sector. Ultimately, if we do well, that will create more wealth than we would get simply from operations and maintenance.

Ronnie Quinn: It has just occurred to me that I did not address the part of John Park's question about the capacity in Scotland to fill those jobs. Fundamentally, the Scottish education system is well set up, with world-leading colleges and universities. Personally, I would like more work to encourage youngsters to go into the STEM—science, technology, engineering and mathematics—subjects. It is one thing to have the facility and the readiness, but we need to encourage youngsters to go down that route. More work needs to be done to try to enthuse youngsters, as well as people who are reskilling, to think about the sector.

John Park: I always feel a bit guilty when someone makes that point, because I used to be an electrician and I ended up in the Parliament. Maybe I could have put my skills to better use.

We all accept that offshore wind will not play as big a part as onshore wind and other renewables in meeting the current targets—those are the priority.

The importance of diversification also seems to be generally accepted. In my experience, diversification requires some form of market intervention to make it happen. We are considering skills policy and the landscape that is before us. We want to make suggestions to the Scottish Government that will help it to develop policies that will help us to meet the targets.

When it comes to people, human resources and skills development, is enough being done to encourage diversification? Can you suggest other measures that we can consider in our report?

Graham Brown: The issue has already been mentioned, but because there is no indigenous production of items such as wind turbines, we have a memorandum of understanding with Wind Towers Ltd, whereby we try to ensure that it gets that work and creates those jobs and we help it to provide training and so on. A key point is to encourage some of those industries to start to manufacture in Scotland. That, in turn, will create a much better platform for the development of more training and more long-term jobs. That is the overarching legacy that must be targeted.

Stuart McMillan: I have a supplementary question for Mr McCallum on the supply chain. Based on your direct experience in the industry, do you think that public agencies are doing enough to promote the supply chain opportunities and to support the companies that are involved?

Gavin McCallum: One of the big challenges is that of attracting foreign investment. A limited number of indigenous companies have products and services that can be sold to offshore wind or other offshore renewables. Those companies should be encouraged, but the bigger challenge and opportunity now is that of bringing in foreign players.

By way of example, I refer to the experience of bringing Samsung to Scotland. I think that Scotland inc did a tremendous job: industry and Government worked in a joined-up way to sell Samsung the benefit of investing in Scotland, identify a test site in Methil and support the company to invest in Scotland. Such a joined-up approach is exactly the one that Scotland needs to take.

However, having got Samsung in Scotland, we need to recognise that it is investing on the understanding that test facilities are available so that it can continually test its turbines and that a pool of skilled labour is available to work in its assembly facilities—facilities in which it has said publicly it will invest about £100 million, which will create up to 500 jobs in Fife once its turbine gets to commercialisation. We cannot wait for Samsung

to build its turbine. We—that is, Government and industry—must work with Samsung and be a step ahead of it. We must put in place the infrastructure, including ports, roads, cranes, test facilities and training, so that it continues to see the benefits of investing in Scotland and we can attract other companies.

It is great to land such big customers, but a lot of work must still be done to invest in more facilities and to provide skills and training so that we keep them in Scotland. Many such companies are looking at where to set up R and D centres. Such facilities would have tremendous spillover benefits for Scotland. We should be looking to attract as wide a scope of activities as we can to Scotland.

Ronnie Quinn: There is no need for any of the companies that are coming into the supply chain to wait on anything being developed in Scotland. There are opportunities now to get involved in the round 1 and round 2 sites in England and Wales. This is a big market, and developments are happening already. There are opportunities for companies to steal a march so that they can get involved in the Scottish market when it kicks off in a serious way on the construction side. Scottish companies should be grabbing with both hands opportunities that are already out there on the construction side and on the development side.

Chic Brodie: I will follow up on skills. As somebody who has worked in manufacturing for a long time, Mr McCallum's comments are music to my ears. Skills are important, but can you comment on the development of the physical infrastructure to support the developments that we have discussed? The Government has invested more than £70 million in the infrastructure plan. Can you comment on developing the physical infrastructure in Scotland, such as ports and roads, which Mr Quinn mentioned?

11:15

Gavin McCallum: There is an opportunity to set up hubs—in other words, areas where industry can come together. Although these things can be put together in different ports, it is by and large best to bring them together in one port facility so that they can be placed on a ship and sent out to site.

Other strong models include Bremerhaven in the north of Germany, where everything comes together in one port facility. There has been a lot of collaboration with the German Government to put in place the right infrastructure to support investment in facilities for manufacturing, assembly, testing, port handling, ships and so forth. The £70 million that you mentioned is a great start and sends a very strong signal to people who might want to invest in Scotland, but I think that, given the scale of investment that will ultimately be required, any success in this respect will be good for one or two ports. As a result, we need to pick one or two places and put a lot of investment into them to ensure that they become leading centres. Having five or six ports up and down the east coast of Scotland doing bits and pieces might seem good initially but, ultimately, that kind of approach will not be as strong. If we want to lower the cost of energy and create a more sustainable market in Scotland's supply chain, we need more critical mass; indeed, such a move will help to channel investment more effectively.

The Convener: I am conscious of the time and the fact that we still need to cover a couple more areas.

Rhoda Grant (Highlands and Islands) (Lab): I will ask about finance, market drivers and the issue of barriers that has already been touched on. Evidence that we heard last week suggested that what was happening with the euro, in Greece and so on was affecting the availability of finance, because banks that might have provided finance for renewables projects have been exposed to Greek debt and are perhaps not so willing to invest. Is that an issue or is finance available elsewhere?

Graham Brown: Finance is available if the technology is well established, but the situation becomes much more severe and serious if certain technological issues still need to be resolved and the technologies themselves have not been fully commercialised. Certain aspects of offshore wind fall into that area.

Ronnie Quinn: I note that there have been a couple of references this morning to offshore wind not contributing or not being developable. Offshore wind is here now; it is playing and will play a significant part in meeting the 2020 targets; and finance is available for offshore wind projects. In fairness, though, I should say that the market is not as liquid as we would like and that it must become more so. Nevertheless, it is slightly misleading to suggest that no finance is available.

As I said earlier, we have to provide more certainty and more information to large investors about energy costs. That is being achieved; next week, for example, we will publish a report saying that the levelised cost of energy can and will come down to £100 per megawatt hour by 2020. Those are the kinds of things that investors need to hear.

As for your comment about the euro, it would be naive to believe that what is happening with the euro will have no impact on the markets, but we need to bear it in mind that the market for finance is global.

Rhoda Grant: What about other market factors, such as shale gas in the US? How will they impact on development?

Jason Ormiston: Those are major strategic questions for the whole energy sector to consider, not only in the UK, but across Europe and the world. There are questions about the impact of the decline in resources of what we might consider to be conventional oil and gas energy and how useful to the market the supplies of shale gas will be.

Vattenfall does not see the introduction of potential new energy sources such as shale gas as disruptive to our plans. We generate from six energy sources: gas, coal, nuclear, biomass, hydro and wind. We talk about the need for a broad energy mix, albeit with reducing levels of carbon intensity and a shift towards renewables. Perhaps we need to be cautious about our predictions on the impact of the introduction of shale gas in European and UK markets. I do not have a hotline to our chief executive in Stockholm, but I do not get the sense that there are any significant concerns or that there is any excitement about shale gas and other sources of energy coming through.

Gavin McCallum: At the end of the day, offshore wind generation needs to get to the point at which it can compete with conventional generation without subsidies. If lots of shale gas is coming to the market, that can potentially lower the cost of the electricity that can be generated from gas and widen the gap for offshore wind. If that gas is available, that will put more pressure on the offshore wind industry to demonstrate that it can go further in reducing the cost of energy from offshore wind.

The good news is that there has been a continual, gradual and steady decline in the costs of generating onshore wind electricity. The offshore industry is right at the start of that curve, and I do not think that anyone thinks that it is close to achieving the ultimate point. It is expected that, once more technologies are proven and more infrastructure is in place, costs will come down dramatically and parity with conventional generation will still be achieved.

The Convener: There is one area that we have still to cover.

Rhoda Grant: May I ask Mr Glackin, and possibly Mr Salt, about communities and finance?

The Convener: Yes, you may.

Rhoda Grant: Evidence was given last week about communities being much less able to access finance. Are there any solutions to that in what you have talked about? Communities do not have the income, so if a project did not proceed to development, the community would have had a substantial outlay and no way of recouping it—that would probably have been the only development. Does your work offer any solutions to that problem?

Steve Salt: One way forward is for communities to work in partnership with commercial wind farm developers. The community sector in Scotland has certainly made great inroads in wanting to achieve renewable energy developments, not necessarily just to meet climate change commitments, but to achieve energy efficiency and use the income from the generation to do lots of things in the community. The community sector is very important to making progress with the targets.

West Coast Energy is passionate about working with communities to develop partnerships. In a number of our projects we have entered into community engagement and then partnerships in which the communities will either have a community turbine or a 10 per cent share of the profits from the wind farm. The benefit of that is that there is no risk to the community. We take all the risk with the projects: we secure the finance and develop and operate the turbines on behalf of the community. We are starting to find that certain communities want to do their own projects and they then have the finance or income stream to do that.

Partnerships between wind farm developers and local communities on commercial-scale projects give those communities a share of the project and help us to get support for projects in local areas—as I said, that should be material. Having such a share enables communities to think about how they can use that finance, which they might otherwise lack, to develop their own projects. That is certainly a way forward.

Jamie Glackin: I will build on what Mr Salt said. The community model will be important but, for microgeneration, I suggest that a co-operative model will produce big wins in the future.

At a previous meeting, the Middelgrunden development outside Copenhagen came up. How on earth was that paid for? It was quite simple—shares were sold for 50 per cent of the turbines. There are 8,000 people in Copenhagen who hold shares in that development. If we decided to put up 20 wind turbines in the Forth, there would be an outcry. In my opinion, that is only because people just cannot get involved in such developments. Connecting energy with the people who use it is something that we must do more of.

The level of support that some wind developers put into communities is absolutely derisory—I am sure that no such developers are represented here. We need to grasp the nettle and ask what more we can do for the people who use the energy and who live in the areas surrounding such

developments. That is the question that we need to grapple with.

The Convener: Mr Ormiston, are you about to defend your derisory payments?

Jason Ormiston: Vattenfall has a well-developed community engagement policy, which includes generous community benefit packages.

A range of financial models are available to communities for benefiting from the development of onshore wind. It seems that straight community benefit payments are seen as the least respectable form of benefit in the pecking order. However, such funds are typically generous. They support communities to do what they need to do locally. Communities can gain access to those funds without incurring the risk that is associated with the development, which Ms Grant referenced in her question. It is important to understand that some communities see that as the most appropriate way to engage.

The Convener: I want to follow up on that. You say that community benefit payments are typically generous. As a rule of thumb, what percentage of the profit that one of your developments would generate would go to a community by way of a community benefit payment?

Jason Ormiston: You are asking for commercially confidential information—you are asking about the profitability of our wind farms.

The Convener: Mr Salt was clear. He said that, in his company's case, the figure would be 10 per cent.

Jason Ormiston: He was talking about a 10 per cent share of the wind farm, not necessarily a 10 per cent share of overall profitability.

The issue is that the investment that is made reflects the risks and rewards that are part of the arrangement. In many cases—certainly in cases involving Vattenfall—a reasonable percentage of profitability would go to the local community.

The Convener: You will not give us a figure.

Jason Ormiston: If I were to give percentages, you would be able to work out commercial terms, which would be unreasonable.

I probably made a mistake on the number that Mr Salt gave, for which I apologise.

Steve Salt: There is not a common way of developing a community benefit package. An issue that we need to debate, even if we do not have time to do so today, is how communities engage with renewable technologies and how we win hearts and minds. I am sure that the hearts of a majority of people have been won by what the Government and the industry are trying to do, but that the minds of many people still need to be won. We think that community engagement and partnership are extremely important.

11:30

Graham Brown: When we ask questions of communities and start to find out what they really want, a key area that comes out time and again is jobs and training. We must do a lot more work on deciding where to put the community benefit. Jobs and training must be a more serious part of that discussion.

The Convener: Thank you. We are well behind time, but we have the subject of renewable heat to cover before we move on to the next panel.

Patrick Harvie (Glasgow) (Green): Good morning. We have explored fully the opportunities from wind and the need for a renewable electricity supply. I am glad that the issues of ownership also came up at the end. However, the other half of our energy consumption is heat. I want to put some questions first to Mr Ormiston about Vattenfall's written evidence, although Jamie Glackin might also want to respond. The Vattenfall written evidence states:

"Vattenfall produces and distributes more heat than any other business in Europe."

You list many countries in which that takes place, but conspicuously absent from that list are the UK and Scotland. You also say that you have no intention to invest in heat in the UK. I will ask first about the historical reasons for that. Is it about a lack of planning incentives or about demands on developers to build the infrastructure that is required? Is it about the lack of a heat market? Is it just about the momentum that needs to build up around a new issue?

With regard to how the district heating networks operate in European countries, your written evidence states:

"Vattenfall operates many of these networks, often in partnership with municipalities."

It would be helpful if you could say something about how the up-front costs are met. Is that about public sector investment? If so, does the public sector continue to have a role in development or operation? What opportunities would you see if local government in Scotland began to get involved in the issue through partnerships, either with the private sector or with community organisations? Perhaps there could be opportunities in not only heat but other renewables. If so, would Vattenfall change its position on having no intention to invest in renewable heat in this country?

Jason Ormiston: Thanks, Mr Harvie.

Patrick Harvie: I am sorry; that was a very long question.

Jason Ormiston: My shorthand did not keep up with the number of questions that were posed there, but I will try to summarise our position.

The first thing that needs to be understood about the development of district heating networks is that you need to have an awful lot of patience. It has taken Vattenfall and the companies and municipalities that it works with across Europe 60 years to get to the current position. The drivers behind that over the 60-year period were post-war reconstruction, oil-price shocks in the 70s, deliberate policies to develop district heating networks with new housing developments and not allowing conventional electricity power stations to generate energy without siphoning off part or all of the heat for district heating networks.

Key to the delivery of those networks and the heat has been the relationship with municipalities. The relationships are based on commercial terms and are long-standing, but they are reviewed. Vattenfall, as a state-owned company in Sweden, has been seen as one of the obvious companies or organisations to invest in and manage some of the networks.

On the up-front costs, the investments are typically made by the public sector. I would need to check with colleague specialists in the rest of Europe on the processes whereby the finance is raised, but it is largely backed by some form of public support.

Why is Vattenfall not investing in district heating networks in the UK? We are investing in the UK because we see it as a strong growth market for wind power and renewable electricity in particular. We do not see the UK as a strong growth market for district heating networks. A number of factors need to be in place—I have talked about them—before a company such as Vattenfall would seriously consider such investment. Having a relationship with a municipality is important. We have been in the UK for two or three years, with a focus on wind power. We have not forged the relationships that would be necessary to give us the confidence to invest in city-wide networks.

The proximity of the heat source to a city is an issue. If cities or other parts of the urban environment in Scotland or the UK do not want power stations to be close by, it is difficult to justify investment in a district heating network, because the distance between the power station—the source of heat—and consumers could be significant.

Patrick Harvie: Does Vattenfall's work in other northern European countries relate mostly to combined heat and power or does it involve a wider range of renewable heat?

Jason Ormiston: Most, if not all, of our plants for district heating networks are CHP plants. Some of them are old and use conventional fuels. We are increasingly investing to transform them to use more sustainable fuel sources.

Patrick Harvie: I ask Mr Glackin to respond and to widen the discussion. Heat networks and CHP could have a role, but you have touched on other forms of renewable heat.

Jamie Glackin: CHP undoubtedly has a role to play, but I will back up a point that Jason Ormiston made. There is a cultural approach against district heating. There was a historical problem but, even now, local authorities and housing associations are reluctant to go down that road. The experience of some that have attempted district heating has not been good for tenants or for running costs. I know of one or two installations that have major failures in the system. It is hard to recover from getting the system wrong initially.

I will move on from CHP and perhaps biomass CHP to heat pumps, which is a fairly easy one. In installations in commercial applications, commercial-class ground-source heat pumps are providing heat to communities that surround them. There is scope for that, but the prospects for district heating schemes are not good, particularly as we were ripping them out until only relatively recently.

Patrick Harvie: Many of our cities have lots of high-density low-rise accommodation, such as tenements, which should by their nature lend themselves to the collective uptake of renewable heat, whether through heat pumps in back courts or micro-CHP for tenement buildings. How can we remove the barriers to the uptake of those technologies, which we need if we are to reach the renewable heat target?

Jamie Glackin: Capital cost must be the prime consideration. Heat pumps are too expensive. We have looked at various ways of getting round the problem. The Department of Energy and Climate Change has talked about the renewable heat incentive for the best part of four years, but we are still no further forward on the domestic side of things. That is moving on from the commercial aspect, but that takes us into the debate about the point at which a CHP scheme ceases to be domestic and becomes commercial. Legalities are involved in that.

Addressing the cost of systems must be the first priority. If we can get the cost of heat pump, solar PV and solar thermal systems down, uptake will be higher, even in a district-wide scheme. We have looked at various mechanisms, such as feed-in tariffs and the RHI, but the fundamental point is that we need more competition in the market. The heat-pump market is dominated by two or three of

the major air-conditioning players. More entrants into that market could make a big difference.

The Convener: Three members want to ask supplementary questions. I ask them to be fairly brief, if possible.

Angus MacDonald: The comments about district heating systems are disappointing. In Grangemouth, which is in my constituency of Falkirk East, we have been promised district heating for about 62 years, and it still has not materialised. We live in hope.

John Park: I hope that that was in your leaflet.

Angus MacDonald: It was not.

Mr Ormiston mentioned conventional power stations. A Scottish Government study from last November highlighted issues with recovering heat from existing thermal electricity plants such as Longannet, Cockenzie, Hunterston and Peterhead and found that retrofitting schemes to local schools, swimming pools, hospitals and new development sites would not, as we have already discussed, be financially viable. What are the investment barriers to district heating schemes, particularly in view of the fact that local authorities' capital budgets are limited at the moment? Could the Green Investment Bank be used to improve the funding situation for such schemes?

Jason Ormiston: I am not an expert in this area and am happy for colleagues in the wider Vattenfall business to advise the committee. That said, I think that the investment that would be required in district heating schemes on the kind of scale implied in your question would be significant and would need to be supported by policies to mitigate any associated risks. Local authorities would need to have the appetite as well.

It might be best to have an organic evolutionary approach in which pockets of urban areas get some form of district heating network and things grow from there. For example, Glasgow City Council's sustainable city policy has identified one or two areas where such networks might be introduced. If, when they are put in place, the rest of the city thinks that such investment is really great, why would that not encourage further investment elsewhere in the city and beyond? However, my sense is that there are too few examples in Scotland to give the kind of confidence required to develop the infrastructure that you are talking about.

Jamie Glackin: Such schemes would be very difficult to put in place in Scotland's big urban areas and I am just not sure how much further down the line we can go in that respect. However, why not make them a condition of new private sector or social housing developments? That seems fairly straightforward to me. Every single time, all we do is look at fitting gas boilers.

I should also point out that when you try to input some of these microrenewable technologies into the standard assessment procedure calculations you get a worse result than you would with a conventional heating system. Scotland is able to legislate on energy performance certification, and that issue really needs to be addressed. After all, when the green deal is introduced in October, we will have a complete dislocation of strategy. On the one hand, the Scottish Government hopes to meet its targets; on the other, it is being held back by the very mechanism that was designed to improve the situation.

The Convener: Thank you. As Mr MacDonald completely failed to follow my suggestion for brief questions, I will see whether I have any more luck with Mr MacKenzie.

Mike MacKenzie: I very much doubt it, convener, but I will do my best.

The Convener: Sadly, I very much doubt it as well.

Mike MacKenzie: Given the circumstances, I will restrict my question to Jamie Glackin. I am interested in exploring how heat pumps can contribute not only to meeting the obligation on rural parts of Scotland to meet the renewable heat target but to tackling heat poverty. I have to say that I am concerned about the lack of microgeneration certification scheme-approved installers in the Highlands and Islands; indeed, I have been able to find less than a handful in the whole region. Do you agree that the prevarication over the renewable heat incentive and the very rapid reduction in the feed-in tariff for solar PV might be to blame for that situation?

Jamie Glackin: It has certainly not helped. Prospective new entrants to the small-scale renewables market now look carefully before they enter it, purely because there is not the same certainty in the market that there was even at this time last year. I agree that that is a problem. We should think about where the installers came from. With heat pumps, the installers tend previously to have been central heating companies. Some companies have successfully made the change to microrenewables and others have been less successful.

11:45

There are various barriers. A small central heating installer has to put people through the Oil Firing Technical Association—OFTEC—qualifications, and then the Gas Safe Register qualifications and now the MCS qualifications. Those are significant costs to any small business.

A business might or might not get that money back, so I can understand why there are so few of them. Even with larger-scale projects throughout the country for social housing concerns, two or three companies, or four at the most, tend to dominate the market.

Mike MacKenzie: You have mentioned that some district heating schemes have been unsuccessful but, without really looking, I have come across a lot of early adopters of heat pumps who have been disappointed with their performance and have ended up removing them and returning to more conventional systems. Can you explain that?

Jamie Glackin: When the industry started a few years back, it was a bit of a wild west. Some businesses claimed more for their units than they could achieve. The unit of one manufacturer would be best described as a heat recovery unit, not strictly a heat pump. I have heard of housing associations removing those units purely because the people in the property had to produce heat for the unit to work effectively. An old person in the house on their own and getting meals on wheels does not produce a lot of heat, so they ended up paying a fortune for their heating.

That kind of incident is fairly rare, but as I said in relation to district heating, it does not take much to spoil the party. There certainly is that opinion about heat pumps—I have heard heads of architect departments in local authorities laying into the performance of heat pumps with very little justification. That is based more on anecdotal than hard evidence. We have plenty of documentation that suggests a 20 per cent reduction in electricity use from a heat pump, which is pretty good, and the figure will go as high as 50 per cent in some cases. I argue that, across the board, the figures are pretty decent.

Mike MacKenzie: I am glad that you mentioned a figure of 20 per cent or thereabouts, because you will be aware that some manufacturers claim anything from 200 to 500 per cent efficiency. Perhaps that is inaccurate.

I have a final brief question. One thing that concerns me about heat pumps is that, if I were to buy a new gas condensing boiler, it would cost about £700 to buy the boiler, plus a day's time for a plumber, although we all know that plumbers' charges are modest. The corresponding figure for a heat pump will run to several thousand pounds. I am concerned that, just like a car, the heat pump that I buy new today will be scrap in 10 years. You might be aware that the Sullivan report a few years ago suggested that these things will never pay for themselves.

The Convener: That is not a brief question. We get the point.

Jamie Glackin: I am not sure that I agree with Mr MacKenzie. Certainly, if the RHI ever kicks in, a heat pump will pay for itself. Even if the RHI does not kick in, it will pay for itself through the reduction in energy use. The figure is about 20 per cent, but the problem with heat pumps—although it is not a problem per se—is that they are controllable. So for people who had electric storage heating that could not be controlled during the day, when they get a heat pump and are sitting in the house all day, their energy consumption often goes up purely because they can use the heat as and when they need it. We are meeting two aims: the Scottish housing quality standard as well as the low-carbon objectives.

The Convener: We come to the very last question, which is from Stuart McMillan and which I am sure will be a model of brevity.

Stuart McMillan: My question is also for Mr Glackin. He mentioned fuel poverty in his opening comments. What can microrenewables bring to the table to help reach the targets that the Government has set and to help to eradicate fuel poverty?

I also have a final question for anyone on the panel. Do you agree or disagree with Maitland Mackie's comments last week that small wind turbines are a waste of time and money?

Jamie Glackin: I can answer that last point quickly—no. Micro wind turbines are certainly a terrific idea. I firmly believe that the people who use the energy should try to generate it if possible. That is what we use micro wind turbines for.

On fuel poverty, we have had projected gas and electricity price rises for the past 10 years. Looking at the curve, it seems that prices ain't going to come down. Everyone in this room is fairly okay with that. The problem is that, by the time that we get to about 2026, prices will be completely unaffordable. We are talking about not just electricity, but gas. Unless we mitigate energy usage and generation through supplementary technologies, we will have a big problem. To me, there is no other way of doing that than by reducing electrical consumption and generating power for free when possible. Obviously, that requires initial investment, and it is up to you guys to decide where that comes from.

Jason Ormiston: Location is absolutely everything for small-scale wind. A small-scale wind turbine that is installed in the right place can have a significant beneficial impact on the household or building that is using it.

On fuel poverty, 20 per cent of Scottish households are not on the gas grid and sometimes rely on expensive forms of energy. Transferring those households, which are sometimes the hard-

to-reach ones, to microgeneration can have a significant impact on fuel poverty.

Steve Salt: Small turbines add to the proliferation and complicate the planning process. There will be challenges in certain parts of the countryside with smaller turbines. Sometimes, only the landowners benefit. Why not have a larger turbine on a commercial wind farm? The whole community can benefit from that and more targets will be met.

The Convener: We had better call it a day. I thank our panel very much. The discussion has been extremely helpful and we have covered a lot of ground.

11:52

Meeting suspended.

12:00

On resuming—

The Convener: I reconvene the meeting with our second panel of witnesses, to whom I apologise for our late running. Jim Smith is managing director of SSE Renewables and Andrew Jamieson is policy and innovation director at ScottishPower Renewables. Would either of you like to make any introductory comments before we move to questions?

Jim Smith (SSE Renewables): Yes, although I point out that we have also made a written submission.

I guess that the committee will already be familiar with SSE, so I will focus on our renewables business. We are the largest renewables generator in the UK and Ireland. In the past year alone, we have invested more than £900 million in renewables, a significant proportion of which has been spent in Scotland. Because we recognise the importance of the supply chain, particularly for offshore wind, we have invested in Burntisland Fabrications Ltd and Wind Towers Ltd in Campbeltown. Moreover, coming back to the transfer of skills from the oil and gas sector, I point out that we have formed alliances with Subsea 7 from Aberdeen and Technip in developing our offshore wind farms.

I think that most people who give evidence will agree that the target that the committee is examining is achievable. The operation and, indeed, construction of wind farms in Scotland combined with the hydro legacy from our company and Scottish Power have probably brought us very close to 50 per cent already; indeed, given the developments that have received consent and those that are still in the planning system, we are well on the way to achieving the target.

Andrew Jamieson (ScottishPower Renewables): As you say, convener, I am the policy and innovation director at ScottishPower Renewables, which has 23 operational wind farms across the UK, predominantly in Scotland. We have more than 200 members of staff and I note that our offshore wind headquarters, which have a global outlook, are in Glasgow. We own Whitelee wind farm, which is Europe's largest and which is currently being extended to take its capacity up to just shy of 540MW, and I hope to discuss with the committee our ambitious plans for the marine sector, both wave and tidal.

I firmly believe that the 100 per cent renewables targets is achievable. Although there are barriers, Scotland has tremendous opportunities to capture the employment and economic prospects presented by this policy, and I want to look positively at our ability to achieve the target in the next few years.

The Convener: Thank you very much. In the previous evidence session, which I think you will have heard, our witnesses highlighted the issue of community benefit. The committee has heard a lot of evidence that many communities have been resistant to renewables developments in their vicinity, often because they do not feel that they are benefiting directly from them. You will have heard earlier comments about the payment of community benefit and West Coast Energy's arrangement to provide communities with a 10 per cent share of the income from its turbines. What is the policy of SSE and Scottish Power in that respect? How do your community benefit payments relate to the profits that you make from particular developments?

Jim Smith: I hope that our policy is quite clear. We make two separate forms of payment: first, we pay the local community £2,500 per megawatt for projects that it wants to invest in; and, secondly, we pay a further £2,500 per megawatt to the wider area in which the community is based, to be targeted at much wider opportunities, particularly training and development.

I am sorry, convener—can you remind me what the second part of your question was?

The Convener: It was about how those payments relate to the amount of money that you make out of developments.

Jim Smith: The profitability of wind farms varies dramatically, depending on the capital costs and the wind, but the payments are a substantial amount of money. A large, 100MW wind farm means a £0.5 million per annum payment into those two funds, which is a significant proportion of the wind farm's profits.

The Convener: Did you say "a significant proportion"?

Jim Smith: Yes.

The Convener: Is that 1, 10 or 50 per cent?

Jim Smith: I do not want to be specific, as the figures for wind farms vary. We should be careful. As we are well aware, with the renewables obligation certificates, it is necessary to make wind farms economically viable. Simply increasing the community benefit further only results in pressure to increase the number of ROCs, and that ultimately puts up the cost to the consumer. We need to be very careful about simply continuing to increase the community benefit.

The Convener: The point is not necessarily about wanting to increase the community benefit; it is more about us trying to get an understanding of what proportion of the money you make you pay to the community.

Jim Smith: It is certainly more than 1 per cent.

The Convener: West Coast Energy was clear that it will, in effect, grant the community 10 per cent of its development. I am trying to get a feel for whether that figure is in the ball park for SSE Renewables or ScottishPower Renewables.

Jim Smith: It is well reported that the onshore wind farms have single-digit post-tax returns.

The Convener: I am sorry, but would you say that again, please?

Jim Smith: The investment return on an onshore wind farm is a single-digit number. It is less than 10 per cent of the original investment.

The Convener: So that is your return on investment.

Jim Smith: That is the project return.

Chic Brodie: Not the community return.

Jim Smith: No. The cost of borrowing must be taken off that.

The Convener: Yes. I understand that, but I am not sure that that is relevant to my question.

Jim Smith: What I am saying is that the investor makes only a few per cent profit on the investment, and £0.5 million is a significant community benefit for a 100MW wind farm.

The Convener: Okay.

Andrew Jamieson: Our policy is to pay £2,000 per megawatt installed. In 2011, that came to more than £1 million cumulatively across all our projects. With our increasing capacity through 2012, we expect our community payments to be closer to £2 million cumulatively by the end of 2012.

To answer the convener's question directly, the profitability of the entire project is a low percentage. However, I agree with Mr Smith that there is no one solution. Different projects need to be looked at in light of their own circumstances and, if the numbers are to change, that will obviously affect the wind farm's profitability, which will affect the profitability of the industry when it comes round to speaking to the Government on how we would seek to finance projects. That takes us into the current discussions on banding with the UK Government.

Chic Brodie: We have talked about communities, but I would like to expand the discussion way beyond communities and Scotland, if I may. The witnesses represent two very large organisations, which clearly have much longer strategic plans than some of the smaller organisations. What efforts are you currently making or what plans do you have for the internationalisation of skills and manufacturing in Scotland? Who else are you talking to?

Jim Smith: Perhaps we can touch on our offshore wind developments specifically. As I have said, we have formed two separate alliances. We have formed an alliance with Siemens Wind Power, Subsea 7 and BiFab to look at jointly designing and, ultimately, constructing offshore wind farms. That alliance is working specifically on the Beatrice offshore wind farm, for which the planning application for 1,000MW was submitted earlier this year.

We have a separate alliance with Mitsubishi Heavy Industries and Technip. It is fair to say that they are further behind the curve in that Mitsubishi is developing its offshore wind turbine. We selected Siemens for one alliance and Mitsubishi for the other specifically because they have both stated their intention to manufacture in the UK.

Chic Brodie: I asked about that because we have had previous conversations about the connector with Norway and Iceland. Apart from exporting skills, how much of that has been built into your plans? We have talked about exporting to England, which I hope will happen by 2020, if not before. How do you perceive your involvement in the wider context?

Jim Smith: In terms of the interconnection of electricity networks?

Chic Brodie: Yes.

Jim Smith: Specifically, we are involved as a partner in a potential interconnector to Norway. We have no direct involvement in any other interconnector projects. However, inevitably, as Scotland and the UK as a whole have greater wind penetration, there will be greater connection with mainland Europe.

Andrew Jamieson: ScottishPower Renewables is at different stages of discussions about how we

are going to increase the jobs potential for renewables per se. The offshore sector in particular presents huge opportunities for Scotland to grab. It has been well documented that a number of manufacturers have already expressed an interest in coming to Scotland. Scotland plc has to be congratulated on that.

We cannot rest on our laurels, though, because we are not fully there yet. We must avoid the mistakes that we made with onshore wind, for which we did not have the manufacturing and the supply chain. The Scandinavians took on onshore wind, developed it and made it a global industry.

We now have a tremendous opportunity with offshore wind. It has been well documented how many jobs there are in renewables today. ScottishPower Renewables presented a report on that just two or three weeks ago. However, offshore wind lacks the visibility that I would like. We have a huge opportunity now to say to communities and to the public at large, "This is the potential; this is the economic value added that this industry is bringing and will continue to bring to Scotland."

John Wilson: My question is on renewables but not on wind, either offshore or onshore; it is on hydro power. We have heard in the past that Scotland has great potential for hydro power, particularly off-grid hydro power. What developments are your companies making to capitalise on that technology and use it to provide energy in Scotland? I know that SSE has some major works in process, but it would be useful to find out whether you regard hydro power as a potential resource in the drive for renewable energy.

I should declare for the record that the company of one of the two panel members provides my energy supplies at the moment.

The Convener: I do not think that it is necessary to declare that. Thank you, anyway.

John Wilson: It is just for the sake of openness and transparency, convener.

Jim Smith: We have deliberately not focused on very small-scale hydro. We decided that it was not the best or most efficient use of our resources. That said, through an investment fund we have invested in a small renewable energy company that is trying to develop small-scale hydro. We have been and are actively looking at schemes at the level of 3, 4 and 5MW and higher, but probably not much higher than 10MW. We have a couple of schemes in which we could invest in the next 12 months. However, I am sure that the committee will not be surprised to hear me say that if the ROC banding goes through as is proposed, with 0.5 for hydro, those investments will certainly not happen. We see a market for perhaps a handful of schemes of that size, but probably not much more than that.

Separately, we have a planning application in for a large-scale pumped storage scheme, which is much more to do with supporting the system because of the intermittency of wind.

Andrew Jamieson: With the introduction of the renewables obligation back in 2002, Scottish Power chose to focus on technologies that would give the quickest means of meeting our obligation. The target then was 1,000MW by 2010. We regarded onshore wind as the best opportunity to deliver the target.

We have not focused on hydro for many decades. Mr Smith pointed out a number of problems that explain why we have not done so. I agree with him about the current banding review that proposes 0.5 ROCs—if it goes through, it would not incentivise us to do any hydro projects.

12:15

John Wilson: Mr Smith identified the intermittency issue, which some witnesses argue is a major failing of wind power. I am interested in the use of some form of hydro to offset that. In terms of investment in small-scale hydro, you gave examples of 3, 5 and 10MW hydro turbines being installed. How does that compare with the investment in wind turbines?

Jim Smith: In terms of the capital cost per megawatt?

John Wilson: Yes.

Jim Smith: Hydro can be quite variable depending on the site conditions—those smaller schemes tend to be run-of-river schemes, so they do not need large dams. However, they would be comparable to a wind farm in capital expenditure costs and they would probably have similar load factors as well. Our existing legacy hydro portfolio of just over 1,000MW, most of it built in the 1950s and early 1960s, has an actual capacity factor that is similar to that of wind farms—it is in the low 30s.

The Convener: Mr Smith, you will be interested to hear that some committee members went to visit some small hydro schemes in Glen Lyon that were developed by Green Highland Renewables, with which SSE has a connection.

Jim Smith: Yes, that is the small company that I mentioned we have invested in through our investment fund.

Stuart McMillan: Mr Jamieson, you spoke about the history of the onshore sector and the lost opportunity in terms of jobs. In going forward with the offshore sector, what activities has your organisation undertaken to get the message home to potential suppliers that they should get involved

in the sector—given the hope and the opportunities over the next 10, 15, 20 or 30 years?

Andrew Jamieson: At a company level, we are doing an awful lot behind the scenes, speaking to the major, tier 1 contributors.

At a personal level, I have other duties apart from my day job with Scottish Power. I am chairman of RenewableUK, the trade association. In that capacity, I co-chair the offshore wind industry group with the Scottish Government, as I did when I was chairman of Scottish Renewables, the trade association in Scotland. The group looks strategically at the barriers to bringing offshore wind to Scotland. That led to another initiative that I also co-chaired—with Scottish Enterprise—looking at the national renewables infrastructure plan, which identified that, if Scotland wanted to have such ambitions, we had to improve our infrastructure around ports and harbours. One of the witnesses on the first panel talked about setting up hubs to do that.

At a company level, we have been heavily involved in looking at those issues in a strategic way and in a one-to-one way with companies to lay out what the future could be and to identify and address the barriers that would otherwise prevent the supply chain from investing in Scotland.

Stuart McMillan: Across the country, there are areas where there was a large amount of industrial activity in the past but there is perhaps not so much now. Those areas will be looking for opportunities, but they might not see renewables as being for them if there are no turbines going up offshore and no steel jackets for wind turbines being manufactured in their area. How do we get the message across to smaller businesses that may well have a future in renewables but which at present do not know that?

Andrew Jamieson: That is an industry-level question. ScottishPower Renewables has a role to play within that larger industry. We should not forget the distinct advantage that Scotland plc has in having the enterprise agencies, Scottish Enterprise and Highlands and Islands Enterprise. The UK does not have the same type of agency any more. They are a tremendous feature for Scotland to capitalise on, to make Scotland more attractive to inward investment than might otherwise be achieved.

At UK level we are participating and trying to attract supply chain, but Scotland has a greater opportunity to do that. It involves input from all stakeholders. It needs the enterprise agencies, it needs leadership from the Government, and it needs companies such as mine to participate and sell the virtues of what the industry is all about. We have been very successful in attracting major turbine manufacturers to come to Scotland. Added to that are the successes that Scotland has with things such as the University of Strathclyde's technology innovation centre and its catapult centre, which was set up by the Technology Strategy Board. If we have successes in securing test and development sites around Scotland, we will see a hub coming together, which will show why Scotland is an attractive place to invest in. It will self-advertise, but it will have links to industry—to companies such as mine and to the manufacturing sector—and major links to the education sector. If we can pull all those strands together, we will have a very strong case for Scotland.

Stuart McMillan: How do you get the message across to local authorities, in particular those where there might currently be a disconnect, where they might see that there are opportunities but cannot fully capitalise on them.

Andrew Jamieson: We continue to engage with local authorities and show them the virtues of what these opportunities can provide.

Stuart McMillan: Are you doing that at the moment?

Andrew Jamieson: At a company level, yes we are. We are heavily involved in speaking to Argyll and Bute Council about what the Argyll array offshore wind project may bring. To be fair, Argyll and Bute Council is very proactive in this area and it has set out a strategic development plan so that industry can see what it is looking to achieve in renewables. We maintain strong dialogue with that authority. That is a good example of what can be done when industry and local authorities get together. There will always be more work to be done in those areas, without a doubt.

Stuart McMillan: I apologise to you, Mr Smith, for not having posed a question to you so far. There are 32 local authorities in the country and Andrew Jamieson gave one good example of working together. Have the doors of every 32 councils been knocked on? Have they been told what the opportunities are, what the potential for their areas is, and the X amount of jobs that could be created, generated or safeguarded in their areas? Have they been asked how they could be helped, and how they could help themselves? In the past, some councils may have just expected things to happen, without seeking out the opportunities.

Jim Smith: We have certainly tried to engage with a number of local authorities. We have possibly been a little bit slow, in some areas, to sell both ourselves and the opportunities. The best example is probably the Highland Council. We are a large employer in the Highlands—I do not think that the Highland Council realises just how big an

employer we are, and how much activity and how many opportunities we are willing to develop.

There are other examples. We have recently received consent for the Viking project, which is a joint venture with Shetland Islands Trust. That is probably the best example you could get of working together with the local community and the local authority. Looking forward to offshore wind, we have signed a memorandum of understanding with Forth Ports, Scottish Enterprise and Dundee City Council to develop Dundee port for our offshore wind developments in the Firth of Forth.

Along with Scottish Power and the other offshore developers, we have participated in a series of supply chain events that the Crown Estate has co-ordinated around the UK. The difficulty that we have as the ultimate owners and developers of the projects is that, certainly for about three of the offshore developments, it is just too early to engage with some of the smaller suppliers. We need to engage with the tier 1 suppliers—that is what we have been doing—and, ultimately, they will engage with the tier 2 suppliers. It is a bit of a chicken-and-egg situation. We need to set the foundations first before the benefits for the local suppliers come through.

I have seen that happen with a 50:50 JV partner in the 500MW Greater Gabbard offshore wind farm, which is coming to the end of its commissioning. The operational base for that wind farm is in Lowestoft, an area that has suffered over the years with high unemployment. We brought well over 100 permanent jobs to the harbour and we have seen a number of the local businesses ultimately supporting the operation. That support does happen—it just takes a bit of time.

Stuart McMillan: This is my final point. In areas of high unemployment, such as West Dunbartonshire and Inverclyde, where there has been a large industrial base in the past that is not there any more, there are folk who have a skill set that, with additional training, could certainly have a future in the renewables sector. However, as there is no turbine manufacturing in those areas—there are few turbines in the vicinity, whether onshore or offshore—the whole renewables sector seems to be somewhat distant.

I have never had the impression that there has been a tremendous amount of dialogue between the sector, local authorities and the chambers of commerce to get the message over about what opportunities there are. For example, if there are any small-scale manufacturers or engineering firms that can play a part in the supply chain, the parties need to start talking now, rather than waiting two or three years. I agree with Mr Jamieson—I do not want to lose the opportunity to create jobs in the west of Scotland.

Andrew Jamieson: I agree that that work has to keep going, and that has happened in the past. For example, Mr Smith talked about the roadshow that the Crown Estate has been running, which went right around Scotland, although it did not involve all local authorities.

Clearly, we have a role to play if we are to keep the momentum of renewables going and demonstrate the benefits of that to communities and businesses, but that is not simply down to Scottish Power and, I dare say, SSE. It is an entire industry-level question that needs co-ordination. Agencies such as the Crown Estate have been very helpful in that regard for offshore wind, and there are other agencies that can facilitate other things for onshore wind and other renewables types.

Stuart McMillan: Are the public agencies doing enough?

Andrew Jamieson: There is always scope for improvement. I have been in renewables since late 2004—I have worked in the electricity sector a lot longer than that—and, at that time, the development agencies were, I think that it is fair to say, entirely focused on oil and gas. It took them quite some time to come round to putting a lot more resource and effort into the renewables sector. In the past few years, I have seen a major turnaround and, to be fair to the agencies, they are recognising that challenge.

John Park: Both witnesses have mentioned the importance of supporting the supply chain. Mr Jamieson referred to the industry-level approach that needs to be taken. You are both part of huge organisations that would clearly play a role in developing an industry approach to anything in the sector. I am interested to hear your views on the human capital side of things. Not just in your organisations but in the supply chain of organisations that work with you, are there sufficient people with the required skills to enable us to meet the targets?

12:30

Andrew Jamieson: Challenges are involved in meeting the targets, but that is not to say that we do not have the wherewithal to overcome those challenges. At an industry level, we have a job to do in that regard. We have to get out there and ensure that the education establishments have the right priorities and that we are getting the right amount of training for technicians and others so that we can achieve the output of the thousands of megawatts that are required to close the gap on the targets.

An awful lot of work has been done at a policy and Government level. Skills Development Scotland has produced strategies on how to deal

with parts of the skills gap. As I said, there is always room for improvement in all that. We must have the right alignment between what happens at a policy level and what happens at an industry level.

On the skills sector, the simpler the strategy is and the more it embraces employers, the easier it is for industry to support it and join in with it. Sometimes, the territory becomes a little bit opaque because of the number of players that are involved, and who we should talk to if we want to increase the number of people who can fill a job type of a certain description becomes unclear.

That is not meant to be a criticism. We are all guilty sometimes of assuming that things are all going very well. We need to keep up the scrutiny and ensure that the policy is going through to the execution stages.

Jim Smith: My organisation directly employs about 600 people in renewables, whether in development, construction or operation. Eight years ago, we employed fewer than 100, and most of them were involved in conventional hydro technology. The industry has grown quickly and, with offshore power, it is likely to continue to do so.

I think that, in terms of people, we will meet our targets. In the early days of onshore wind, a lot of people who erected the machines were from the original equipment manufacturers in Europe, and they left afterwards. That has changed completely. Far more indigenous people are employed in that sector now, simply because of the sheer numbers that are involved. The permanent operational jobs, which are the important ones, tend to be all home-grown.

The oil and gas industry is always talked about in that regard. In the early 1970s, when North Sea oil took off, what expertise did Scotland have in oil and gas exploration? It had none. A lot of that work was driven by imported American employees but, eventually, that was translated into Scottish employment. The same thing is happening in renewables.

John Park: That is a good point.

Obviously, you know well what your companies have done on staff development and bringing people into the industry. Can you share anything with us about your analysis of where you see opportunities in the future for yourselves, the challenges that you will face and what that might mean for the decisions that you will make?

Have you given any direct consideration to ways—other than through the partnership arrangements with companies such as BiFab that Mr Smith talked about—in which large organisations such as yours can use your capacity to support the smaller companies in the supply chain to ensure that the skills pipeline flows in the way that you want it to?

Andrew Jamieson: For all our wind farm projects, we hold meet-the-developer days. We invite local suppliers to come and learn about the project that we propose to build in the area and to understand what role they might play in it.

In the past year to two years, we have changed tactics. Ahead of placing a tier 1 contract—for the turbines and major infrastructure—we bring in the potential contract winners, who are still competing to win the final contract. We find it useful for the local supply-chain players to hear directly from the tier 1s what type of people and skills they require and what the local suppliers would need to do if they were to tender for the subcontract work that is associated with that contract. That approach has been successful.

All our projects bring hundreds of jobs in construction. We have one wind farm down in Ayrshire that employed more than 280 people during the construction phase, about 30 of whom were from Spain, because the turbine providers were Spanish. They were the guys who advised everybody else on what to do to commission those turbines. That was only right—any manufacturer would choose to do that. There were opportunities for an awful lot more construction jobs for that wind farm, and posts for about 15 full-time operations and maintenance engineers go on into the future.

Although it is important to consider those full-time jobs in O and M, the construction of wind farms will take place every year to 2020 and beyond. We are talking about hundreds and thousands of jobs, and we really should grab on to that potential. We need to look at the skills and training that people will require. I do not care whether someone is cutting down trees, putting up fencing or driving a digger or a low-loader, they should have the right training and ability to participate in the projects, because the projects will be here for a long time.

Jim Smith: The really big thing that we can do is to focus on delivering the projects. If we invest in and deliver the projects, the jobs will follow. There is little point in me going today to a small company that could contribute and suggesting that it should invest now for something that might happen in three or four years' time. That company cannot take the risk—it cannot afford to make an investment when there is no return for that length of time. The thing for us to do is to deliver large-scale projects, particularly offshore, and the jobs will follow.

Chic Brodie: I will follow up on the international situation vis-à-vis skills. We know that there is a

skills shortage and that poaching goes on between companies. There is the consequence of salary inflation and what have you. I understand that, about five weeks ago, a major electricity supplier in China, Henan Weite Wind Power, flew in under the radar to interview some serious people in our industry. How are we ensuring that we do not lose such people to what is clearly an increasingly global industry?

Andrew Jamieson: With any aspect of renewables, the issue comes back to who might be the most attractive people to work in the industry. It does not matter what role someone can play in a wind farm—if we can keep up the momentum on building projects year after year, we will create a very attractive market, which will allow people to plan for the future and will make them want to stay.

The roll-out of offshore wind at the UK level is doing very well. If there is a big dip in the next two or three years, round 3 will come through and the capacities for construction should start to build up again. The worst news that the supply chain could ever get is to see a big gap and to know that nobody has done anything to close it.

When we are asking companies to come to Scotland, we have got to give them a stable order book because, as other witnesses have said, capital is transportable in an international market, and it will go elsewhere if we do not remain competitive.

Jim Smith: I am not sure that I see a threat from China taking human capital from this country—if that happened, it would be on a very small scale. It is more likely that China might come here and invest in some of the projects.

Patrick Harvie: I will follow up on some of the issues that Stuart McMillan raised on engagement with local authorities, so I will drag you back a wee bit to that.

I have argued that local authorities need to be more proactive and that they should view their role as wider than simply acting as gatekeepers to the planning process. We heard in the previous evidence session about Vattenfall's engagement with municipalities in other countries, albeit in different historical contexts and in relation to different technologies.

Do you see opportunities for your businesses to have more of a business relationship with local authorities that might be seeking to develop renewables on publicly owned land or to become investors? They could add to the mix by using the borrowing powers that they have—which the Scottish Government does not have—and by borrowing to do something that will generate revenue, which could then be reinvested in other public purposes. They could also bring together groups from the private and community sectors to create a partnership that could change relationships and the public perception about who owns renewables and in whose interests they are being developed.

Would you view those opportunities as positive? As businesses, would you be willing to have or are you interested in having discussions with local authorities about setting up such partnerships in Scotland?

Jim Smith: Yes. We have agreed and recognised—although perhaps a little later than we should have—that there is benefit in having a much closer relationship with local authorities. People on both sides need to be mindful that there is a division of responsibilities between us as developers and local authorities as gatekeepers.

Patrick Harvie: When such an approach has been taken down south, a separate energy company might be set up that is wholly publicly owned or working in partnership, but it is not the same body as that of the councillors who sit on the planning committee.

Jim Smith: We have tried to address that issue. There has been more focus on it in our company—going beyond renewables—with Glasgow City Council in particular. As we run such a diverse business with a range of activities, we see business opportunities in developing a much closer relationship with city councils. It is true that we should be working with local authorities, and we are making a start. We need to be knocking on an open door, but I agree with you that such work would be beneficial.

Andrew Jamieson: I will take the committee back to Argyll and Bute. Some years ago, we signed a concordat with Argyll and Bute Council that set out an agreement to look strategically at the type of renewables that should be brought to that region. To cut a long story short, we have done some wind projects in that area, and we looked at doing tidal projects first and foremost in Argyll and Bute. We have consent for a 10MW project in the Sound of Islay that we are looking to build in the next few years.

If a local authority can think strategically and welcome business, and if it seeks to work with any business, I view that as an advantage. There is no set way forward for us in how we would want to work with a local authority. If we are looking at ownership of turbines or any other renewable asset for the next 20 or 30 years, we must bear it in mind that the types of models will change. I would warmly welcome local authorities being more pro-business, for us and for the supply chain.

Angus MacDonald: I am glad to hear that SSE and Scottish Power are open to working with local

authorities, given the current crazy situation in which we have a Dutch local authority investing in wind turbines on the east coast, and yet our own authorities are rather hesitant.

Chic Brodie mentioned North Connect, and we received information on that interconnector a few weeks ago. I believe that the timescale is that it will be completed and operational by 2020. What level of European Union support has been received for that project and for other proposed interconnectors? The Icelandic interconnector has been mentioned. I presume that you guys have no commercial interest in that, given that the power will go in one direction only—away from Iceland—whereas, with North Connect, it will go in both directions.

12:45

Jim Smith: This might sound like a bit of a cop-out: I am not aware that there is any EU subsidy, but your question relates to a separate part of the business, which is regulated, so I do not have full sight of everything that is going on, which means that I cannot really comment.

Andrew Jamieson: I am afraid that I am in the same position, as I work in the renewables side of the business and the issue is for the networks side of the business.

I have an additional point to make, purely from a renewables perspective. We are looking at renewable energy for a number of reasons. One reason is climate change, but we also want to provide security of supply by having the ability to generate electricity using our own resources, whether wind, tidal, wave or any other form of renewable energy. We need the grid to deliver that.

Interconnection to Europe should come, but I want it to be a priority for us to have enough grid capacity in the UK and Scotland to allow us to achieve our ambitions. Otherwise, as Mr MacDonald mentioned, there is a danger that we will end up just importing power from elsewhere, which will not add to security of supply. I would prefer to achieve our ambitions using our indigenous resources.

Mike MacKenzie: That answer was useful, because my question is about the necessary upgrading of the grid. I understand the UK Government's desire to keep costs reasonable from the point of view of consumers—after all, it is consumers who will pay for the upgrades. I was interested to read in one of the submissions that it is estimated that the necessary upgrades to the grid will cost consumers about 13p a year—I understand that that information comes from DECC. Should we not all just pay 26p and get on and do it?

Andrew Jamieson: You can answer that, Jim.

Jim Smith: Again, as I am not directly employed in the grid business, I cannot comment. If DECC says that the cost is 13p per person, I am sure that it is right.

A gentleman on the previous panel brought up the issue of developers having to make commitments to grid companies. He said that if consent is not obtained, in effect, that money will be lost. That is absolutely true—I do not disagree with what he said. He said that that was extremely unfair, but is it fair for the consumer to pay for grid companies' stranded investment? The Office of the Gas and Electricity Markets and DECC have taken the view that that is not fair, which is why the system is as it is. I will leave the committee to form its own opinion on what is right.

Andrew Jamieson: The grid is a sensitive issue. We need it to allow us to meet our ambitions on renewables, but the process has to be done properly.

I know that the committee took evidence from my network colleagues at a previous meeting. They have ambitious plans, which have been approved by the regulator, to improve the grid infrastructure networks to enable the projects that we are talking about, but we must pay heed to the planning processes that are required to allow those grid developments to become a reality. That will be a challenge, given the length of time that major grid infrastructure developments typically take. Scotland is not unique in that respect. That is one thing that I have my eye on in the context of our ambitions for renewable energy.

Mike MacKenzie: Is there not an argument that the starting gun on the necessary upgrades should have been fired a lot sooner?

Andrew Jamieson: I assume that the preparatory work, at least, is under way right now.

Mike MacKenzie: Sure, but it has been apparent for some time that we are heading in this direction and that the grid will need to be upgraded. Decisions to upgrade it have been in the pipeline for some time. Should we not have got there 10 years ago?

Andrew Jamieson: Grid reform has traditionally always moved at a certain pace. As developers, we would like it to happen more quickly, but there is clearly a regulatory aspect and Ofgem has a duty to minimise the cost to the consumer. The risk is that overhead lines or underground lines are built that are no longer required or that projects do not materialise, which brings the risk of stranded assets. We need to work hand in hand to look strategically at where projects are likely to be located, the prime reasons for locating them there and how we can build out the grid to facilitate their

development. With hindsight, the nation would have done something different 20 years ago.

Jim Smith: I was previously involved in the planning process for the Beauly to Denny line, including the public inquiry. Putting aside the cost, it would be very difficult to get a project such as the Beauly to Denny line through planning if it was based on the anticipation of something happening in the future rather than on something that was actually happening, as the needs case and the ability to answer on that through the planning process are essential. There would need to be a change not only in the way in which Ofgem regulates the new infrastructure but in planning law.

The Convener: Ofgem will give evidence at the committee's meeting next week, so we can pursue those issues with it.

Mike MacKenzie: Thank you.

The Convener: As there are no more questions, I thank the witnesses for their attendance and for their comprehensive answers to our questions.

Meeting closed at 12:52.

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