



The Scottish Parliament
Pàrlamaid na h-Alba

Official Report

ECONOMY, ENERGY AND TOURISM COMMITTEE

Wednesday 27 February 2013

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ECONOMY, ENERGY AND TOURISM COMMITTEE
7th Meeting 2013, Session 4

CONVENER

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

DEPUTY CONVENER

Dennis Robertson (Aberdeenshire West) (SNP)

COMMITTEE MEMBERS

*Marco Biagi (Edinburgh Central) (SNP)

*Chic Brodie (South Scotland) (SNP)

*Rhoda Grant (Highlands and Islands) (Lab)

*Alison Johnstone (Lothian) (Green)

*Mike MacKenzie (Highlands and Islands) (SNP)

*Margaret McDougall (West Scotland) (Lab)

David Torrance (Kirkcaldy) (SNP)

*attended

THE FOLLOWING ALSO PARTICIPATED:

Calum Davidson (Highlands and Islands Enterprise)

Fergus Ewing (Scottish Government)

Fergus Ewing (Minister for Energy, Enterprise and Tourism)

Ken Macintosh (Eastwood) (Lab)

Joan McAlpine (South Scotland) (SNP) (Committee substitute)

Andy McDonald (Scottish Enterprise)

Rob McDonald (SSE)

Mike McElhinney (Scottish Government)

Rupert Steele (Scottish Power)

Professor Joseph Stiglitz

John Swinney (Cabinet Secretary for Finance, Employment and Sustainable Growth)

Katherine White (Scottish Government)

Dr Mark Williams (Scottish Water)

CLERK TO THE COMMITTEE

Jane Williams

LOCATION

Committee Room 1

Scottish Parliament

Economy, Energy and Tourism Committee

Wednesday 27 February 2013

[The Convener *opened the meeting at 09:15*]

Underemployment Inquiry

The Convener (Murdo Fraser): Good morning, ladies and gentlemen, and welcome to the seventh meeting in 2013 of the Economy, Energy and Tourism Committee. I remind everyone to turn off their mobile phones and other electronic devices. We have apologies this morning from Dennis Robertson. I welcome Joan McAlpine as his substitute. There are also apologies from David Torrance, who is running late and hopes to join us shortly.

We have a very busy agenda this morning. Item 1 is the continuation of our inquiry into underemployment in Scotland. I welcome John Swinney, the Cabinet Secretary for Finance, Employment and Sustainable Growth, who is joined by Julie Bilotti from the employability policy team at the Scottish Government, and Graeme Roy, deputy director of the office of the chief economic adviser.

The Cabinet Secretary for Finance, Employment and Sustainable Growth (John Swinney): I welcome the opportunity to attend the committee to discuss its inquiry into underemployment. In evidence, the committee has heard the reasons for and the impact of underemployment. The committee will be aware that the situation is not unique to Scotland or the United Kingdom.

The issue of underemployment was highlighted in the Government's economic strategy, which was published in 2011, and recognised as a factor that we had to wrestle with as part of our approach to delivering economic recovery. Opinions vary about the cause and circumstances surrounding underemployment, and a wide range of viewpoints have been submitted to the committee as part of the written evidence.

What all the submissions tend to agree on is that levels of underemployment, as with levels of unemployment, have risen as a result of the economic downturn and are likely to remain at higher levels than we would like until the economy is back into a period of growth. I accept that central analysis. Strong, sustained economic growth is and must continue to be the Government's number 1 priority.

The Government's economic strategy has allowed us to mobilise resources to support recovery and prioritise our efforts to support the Scottish economy during the toughest times of the recession. We have focused our efforts on boosting public sector capital investment; taking direct action to tackle unemployment, particularly among our young people; and boosting economic confidence by encouraging private sector investment and providing security to Scottish households and businesses.

The latest data shows that the Scottish economy has returned to growth, with output increasing by 0.6 per cent in the third quarter of 2012. Unemployment has continued to fall in Scotland over the period October to December, with a significant fall in youth unemployment. Combined with the encouraging news on growth in export sales, those figures demonstrate that progress is being made in delivering economic recovery. Essentially, that creates the conditions in which the Government will act to tackle underemployment by delivering higher levels of economic activity and growth in the Scottish economy.

Despite the welcome progress that has been made, the Government remains clear, as we set out in the Budget (Scotland) (No 2) Bill, that more needs to be done to accelerate economic recovery by creating employment and supporting Scottish business. We retain our strong focus on capital investment to assist that recovery. Over the spending review period, we will support investment of more than £10 billion in capital investment in the economy.

Crucially, through reforming post-compulsory education, we will ensure that the current and future needs of employers and the economy are central to the delivery of all our education services.

The Government's economic strategy and our national performance framework—which, among other issues, will be the subject of the committee's discussions with Professor Stiglitz today—recognise that we cannot have growth without equity. As such, a key priority of the Scottish Government must continue to be tackling inequalities throughout Scotland.

For example, we have noted the impact of the downturn on young people and have taken rapid and unequivocal action to help more of them into employment. That includes young people with additional support needs, and we are ensuring that all our interventions to support individuals back into employment are person centred. That work is vital, and it extends from young people to a wider cross-section of the country to ensure that the entire labour force is able to fulfil its contribution and potential in the economy.

We have recognised that there are difficulties with some of the equality data that is available to support us in tackling inequality. In June, we launched the equality evidence finder. In December, we launched the equality evidence strategy, which will examine how particular evidence gaps can be filled. Any observations from the committee in that respect would be helpful.

It can be argued that, in difficult times, underemployment is better than higher levels of unemployment. However, there is no doubt that people on low earnings levels will nevertheless be suffering financial difficulties as a result, with some groups being harder hit than others. Strong and sustained economic growth is essential to lowering levels of underemployment, and the Government is doing everything in its powers to achieve that.

The Convener: I am sure that members will wish to pursue a number of areas in questions. We are tight for time, and I know that you need to be away to the Finance Committee by 10.30, cabinet secretary. I ask members to bear that in mind and to keep their questions short and focused, as ever. Answers in a similar vein would be welcome so that we can get through the topics in the time available.

I will pick up a point to which you referred, about the changing nature of the employment market and the issue of labour market trends. Much of the evidence that we have heard supports the view that there has been a rise in underemployment following the economic downturn. However, underemployment was a feature of the jobs market even before that. Is it the Scottish Government's view that high underemployment is now a permanent feature of the labour market? Is it here to stay?

John Swinney: No, it is not. One could take that view only if one believed that there was no prospect or possibility of delivering higher levels of economic growth in Scotland. I would summarise my view as being that there is an inextricable link between levels of economic activity in the economy in general and the level of underemployment.

There are two distinct aspects to underemployment, and they should be considered distinctly. The first is where people are unable to obtain the necessary period of employment—I am thinking of working hours and so on—to provide them with an acceptable level of remuneration as a consequence of their economic activity. The second is that there is a separate group of people who, frankly, are operating at below their capability.

Those two different and distinct elements can be resolved, in different ways, through an

improvement in economic activity. If the economy is more buoyant and there is more demand, people who are operating on restricted hours may well be able to operate over longer hours, and the level of underemployment can be tackled in that fashion. For people who are operating below their skill level, we have to attract and create employment opportunities that deliver the necessary skills capabilities and skills utilisation.

Those are both features of economic growth, but they have to be delivered in distinct ways. We therefore highlighted the importance that we attach to underemployment and the need to tackle it within the Government's economic strategy.

Mike MacKenzie (Highlands and Islands) (SNP): The committee took evidence from Professor Bell, who, along with Professor Blanchflower, carried out a study in this area. Professor Bell seemed to be unsure whether underemployment was a reasonable response on the part of employers to reach a compromise and perhaps mitigate job losses. He seemed uncertain about whether such a response was good or bad, and he did not really commit himself either way. To what extent is that phenomenon beyond the powers or control of the Scottish Government?

John Swinney: My general view on the debate on which Professor Bell was commenting—and this commentary comes up quite frequently in economic assessments of the experience during the recession—is that people generally expected unemployment to have been higher in Scotland since 2008 than has been the case. I am certainly of that view. Given the gravity of the economic shock that we experienced, we could have expected unemployment to rise further than it did.

Unemployment is still too high, but I think that its level has been mitigated as a result of a series of good examples of employers and employees collaborating to find a way to sustain employment during difficult times. In some cases, the entire workforce has agreed to take holidays or undergo training during a certain period, so that production could be suspended without there being an impact on the company's on-going economic position. Such approaches have preserved employment and have required a certain amount of flexibility from staff and trade unions, in a collaborative agreement with employers.

I welcome that approach, because the alternative is that employers might have to take decisions to reduce the number of people whom they employ. A lot of arrangements of that type have to be navigated and negotiated with individual employers. That is a good thing, and I pay tribute to employers, trade unions and employees who have been able to come to mature agreement about how everything fits together.

You asked about the Scottish Government's powers, about which I have two observations. First, the spending envelope within which we operate in the public sector in Scotland requires a set of steps that we, as the Administration, have taken—I freely acknowledge them to be choices that we have made—that have resulted in the reduction in levels of public sector employment. We made a choice about having to reduce the size of the public sector workforce to live within the resources that are available to us. Of course, people can say that we should not have done that, but if they say that they must explain how we could have sustained a high level of public sector employment within the resources available.

The second point is about how the Government can contribute to the improvement and expansion of economic activity in the Scottish economy. I contend that the Government has maximised the utilisation of the powers under our control, to ensure that we had the most effective economic interventions to stimulate and support the economy. One of the reasons why unemployment was much lower in 2008-09 than we might have expected it to be is that we brought forward several hundred million pounds of capital expenditure, which sustained employment in the construction sector and enabled public sector demand to replace private sector demand, which had evaporated. There are things that we can do, but of course if we had a wider range of economic powers the Government would be able to do more.

Rhoda Grant (Highlands and Islands) (Lab):

At the outset of this inquiry, I would have agreed that underemployment was preferable to unemployment. I am not so sure about that now, given some of the evidence that we received about people who are trapped in jobs that do not pay them the equivalent of what they would receive if they were on benefits, but who cannot leave their jobs because they would be penalised. Such people are stuck in a really bad position and face poverty on an unbelievable scale.

What is the Government doing specifically to tackle underemployment? The Government has contracts and gives funding to organisations. Is there any scope for it to use its powers to discourage underemployment?

09:30

John Swinney: As I said, the Government recognises the importance of the issue of underemployment and therefore seeks to tackle it by ensuring that we create the conditions that maximise the employment opportunities in the economy and the opportunities for people to obtain fulfilled employment as a consequence of that activity. Of course, the interaction between the level of remuneration that individuals can obtain

and the benefits system is crucial. I acknowledge that our approach to employment practices and our approach to benefits handling are in essence driven by the same considerations. That is why I think that it would be beneficial for the country if this Parliament had control over all those areas. That would allow us to manage the issues and considerations that emerge from the interaction between employment and benefits, which is a fundamental relationship in the economy.

Obviously, in the judgments that have to be made about the preservation of employment, consideration must be given to whether individuals are receiving a credible level of financial support that enables them to have an acceptable standard of living. It is certainly an undesirable approach if employers put individuals into a situation in which, if they remain in employment, they would be worse off than they would be on benefits. My view on the interaction of benefits with employment is that work must always pay. There must always be a reason why somebody should stay in employment.

Rhoda Grant: I will interrupt you there. I understand what you are saying and I agree with you. However, given that the Government does not have those powers but has powers over the contracts that it issues and the people whom it employs, can it not use that mechanism to outlaw things such as zero-hours contracts and taking on people as if they were self-employed?

John Swinney: The Government does not utilise zero-hours contracts.

Rhoda Grant: But what about its contractors? Is that written into contracts?

John Swinney: I cannot give a definitive answer on whether that is a factor in all written contracts, but we expect contractors to meet acceptable standards in the quality and nature of remuneration that individuals receive, and require them to meet standards that we consider to be acceptable in the management and treatment of employees. I return to my central point, which is that it is undesirable to ask employees to work under employment arrangements that are not more beneficial than being on benefits. We must always ensure that work pays.

Rhoda Grant: What specifically can you do with contracting that makes that happen?

John Swinney: We require contractors to meet particular standards of employment practice.

Rhoda Grant: Do those standards say that there should be no zero-hours contracts?

John Swinney: I have already said that I cannot give a definitive answer on whether that is the case in every contract. I will endeavour to provide the committee with a definitive answer on that. However, the Government expects

contractors to meet high standards of employment practice in all that they do.

Rhoda Grant: I understand that, but your idea of high standards might be different from mine—the issue is subjective. Are there specific conditions that have to be met?

John Swinney: Contractual terms exist in all those contracts and govern all sorts of different aspects. We have been through some of that territory in Parliament on many occasions with regard to the community benefit aspects of contracts and the requirement for contracts to involve the employment of a certain number of young people or apprentices, or to include particular training programmes. Contracts cover a wide variety of different considerations to ensure that the character of the approach to the employment of individuals is reflected in the contractual relationship.

Rhoda Grant: I understand that you probably do not have clauses and the like to hand today, but is it possible for you to give us a flavour of the sort of clauses that exist in those contracts?

John Swinney: I suspect that I might be sending the committee an articulated lorry full of contractual information—

Rhoda Grant: I am talking about clauses that relate specifically to underemployment.

John Swinney: It is perhaps better to look at it in this way: if the committee can provide us with evidence that zero-hours contracts are being implemented by contractors who are acting on the Government's behalf, we will provide a response. That might be the best way in which to proceed with that particular question.

Rhoda Grant: I disagree—the Government should impose that condition on contractors.

John Swinney: I will endeavour to find what information I can for the committee.

Rhoda Grant: Thank you.

The Convener: Alison Johnstone wants to come in on that point.

Alison Johnstone (Lothian) (Green): Paper 1 for today's meeting advises us that

"The recently published Workplace Employment Relations Survey shows that"

there is an increase in the use of

"zero hours contracts",

and highlights that there are

"surprisingly high numbers of such contracts being used by organisations in receipt of public funding."

I am astonished to learn that

"a recent survey at Edinburgh University found 27% of staff are on such contracts".

Indeed, almost 50 per cent of staff in one particular department are on such contracts.

It is obvious that zero-hours contracts have a huge impact on the ability of individuals to balance budgets, take on mortgages and simply meet normal everyday living costs. I want to understand more clearly the Scottish Government's view on the use of such contracts in the public sector. Would you like to see their use decrease—and decrease rapidly? Could we perhaps tie into the public procurement process a commitment that such contracts are not used when organisations are in receipt of funding?

John Swinney: As I have said, the Government does not use zero-hours contracts in contracting with its staff, which is a pretty clear signal that the Government does not approve of such contracts.

We would have to consider whether there is scope and legislative competence to extend the requirement that zero-hours contracts cannot be used in procurement contracts. I will be happy to consider that with the committee when our procurement reform bill comes to Parliament in due course, which will enable us to explore some of those questions.

The Government certainly does not use or support the use of such contracts as a practice, and we are exploring other opportunities that exist to apply that approach to public sector contracts.

Alison Johnstone: That would be helpful.

I have another question in a similar vein. Yesterday, as part of our underemployment inquiry, we visited Amazon in Dunfermline, which receives a generous subsidy through the regional selective assistance programme and the Scottish property support scheme. We are aware that there are issues surrounding Amazon's payment of tax. Is there any scope for Scottish Enterprise to tie the award of such funding to criteria that state, for example, that the company must abide by taxation rules?

The Convener: That is slightly off the topic of underemployment.

Alison Johnstone: If we do not optimise the taxation that we collect, that impacts on the provision of public services, employment and demand, so there is a very strong link.

The Convener: That is a rather tortuous connection, but if Mr Swinney would like to answer that question, I will let him do so.

John Swinney: I am happy to do so. Ultimately, it comes down to a judgment. Alison Johnstone will not need me to rehearse that the issues surrounding the level of tax paid by Amazon are

not ones over which we have legislative responsibility.

It comes down to a choice. Either we are prepared to take steps to try to attract employment and economic activity into Scotland from companies such as Amazon, which clearly and indisputably have an economic impact, or we are not. I am confident that when the committee visited Amazon yesterday, there will have been people employed there.

The Convener: There were quite a few.

John Swinney: There were quite a lot—exactly. It is a judgment about whether we want to attract that or not, given the challenge that we have on unemployment and the fact that there is clearly an economic opportunity that Amazon has responded to. I am sure that there are people in this room who use Amazon's services. Either we attract that opportunity or we do not.

Clearly, we put conditions on the level of grant support that would be given. I have previously answered the convener's questions on that in the parliamentary chamber. Grant support is not paid without conditions being fulfilled and that is all monitored. However, I could not enforce the linking of that with the taxation arrangements.

There is a judgment to be applied as to whether attracting such opportunities is a desirable and beneficial input into the Scottish economy. The Government has taken the view that it creates economic impact, and I am sure that that is welcomed by the people who are employed by Amazon.

Chic Brodie (South Scotland) (SNP): I refer to evidence that we heard from the Department for Work and Pensions, which was less than knowledgeable about what was going on. I know that the Government has done a lot of work to try to stimulate employment, but there seems to be a disconnect with Jobcentre Plus and the work programme that has been highlighted again. Has there ever been any discussion between the Scottish Government and the Westminster Government about the Scottish Government having responsibility in some form for Jobcentre Plus?

John Swinney: Yes, there has. I had discussions with Chris Grayling when he was Minister for Employment. I cannot recall off the top of my head whether I have personally had discussions with Iain Duncan Smith on the subject, but I know that other ministers have.

The United Kingdom Government has made clear its position that it will not devolve responsibility for Jobcentre Plus to the Scottish Government. However, the UK Government has also made clear to us that it wants to operate

collaboratively on the delivery of services in the area of what may be called the employment journey. We are involved in parts of that, as are local authorities, the DWP and Jobcentre Plus.

One of the issues that have concerned me is the degree to which all the interventions are properly and effectively integrated and compatible and do not duplicate other provision or resources that are available. I am also concerned that provision delivers maximum value for money given that different elements are provided by different organisations. In an attempt to streamline that, we have established the Scottish employability forum, which involves the UK Government, the Scottish Government and local government. It also has private sector and third sector members.

The purpose of the forum, which I, the Secretary of State for Scotland and the relevant spokesperson from the Convention of Scottish Local Authorities, Councillor Harry McGuigan, also attend, is to deliver a more streamlined service to ensure that members of the public who need employability support do not get passed from pillar to post. Does that kind of service exist today? I do not think so, and it will be a job of work to streamline things across the different bodies to ensure that individuals get the person-centred support that they require for their journey into employment and training.

09:45

I want to ensure that the information that is considered by the forum addresses that issue. We had our first session just a few weeks ago and we have asked a group led by Professor Alan McGregor, a long-standing training and employment specialist who I think will be familiar to many committee members, to explore and challenge any lack of cohesion in the provision of services and provide that information to the forum to ensure that we resolve such matters in the interest of members of the public.

Chic Brodie: Given that you have answered my second question, cabinet secretary, I will go on to question 2(a).

Another issue that we have discussed in relation to connections is graduate employment. In view of the suggestion in the very succinct and cohesive economic strategy, which straddles five or six main sectors, that 60,000 additional employees will be needed in the energy sector, are we doing enough in the school environment to encourage students to pursue courses that line up with that strategy?

John Swinney: We simply must ensure that that is the case not just for the school sector but for the higher and further education sectors. For far too long now, there has been a disconnect

between the aspirations of the business community with regard to where growth will come in the economy and our education community's planning assumptions about where the emphasis should lie. The fact that, with the upsurge in activity in the oil and gas and renewables sectors, there are now significant skills shortages in engineering and it is taking time to fill those gaps indicates that the approach has not worked effectively for a considerable time. The post-16 reforms, the introduction of curriculum for excellence and the modernisation of the careers service are all about ensuring that the appropriate support is in place to enable young people to be prepared for the world of work. Indeed, our thinking on our strategy in this area is dominated by the need for the education service to be clearly aligned with enabling young people to be ready for the world of work.

Chic Brodie: I know that a lot is going on to encourage young people into work. That fills the front end of the pipeline. However—and I hope that this does not sound like ageism, although I suppose that I can speak with some authority on that matter—I wonder whether at the back end we should be encouraging, say, early retirement to take people out of the pipeline and allow them to do other constructive work in society, to train or retrain or to pass on their experience to get younger people into work. I know that such a move will depend on pensions and so on, but we seem to be—for understandable reasons—focusing on how we feed the pipeline.

John Swinney: It would be very difficult for Government to get involved in such an area, except in its own workforce, where we wrestle with the balance of expertise, experience and capability to fulfil all the necessary requirements. Extending our role in that respect into private sector organisations and insisting on the kind of framework that you suggest would be very difficult for us.

As I said to the Equal Opportunities Committee, we must have a broader view about the contribution that individuals can make to our society than what they do during their working life. Some people conclude their working life when they are not much older than me—that is an awful thought—because they have joined a profession that enables them to do so. That should not be the end of the story. Those individuals can continue to contribute to society through a wide variety of mechanisms, of which volunteering is a good example. There are myriad other examples that can be pursued. That would be difficult territory for the Government to get into, though.

Marco Biagi (Edinburgh Central) (SNP): Worryingly, Chic Brodie has just asked questions about the two topics that I wanted to ask about.

The data that shows that there is a large group of people who want to work more hours also shows that there is a large group—until recently, a larger group—of people who want to work slightly fewer hours. This is so-called overemployment, which is primarily older people who would be quite happy to work a little bit less—

Chic Brodie: Careful!

Marco Biagi: I was not looking at Chic Brodie for any particular reason there.

Bearing in mind everything that you have said, do you think that we have an issue in this country with the availability of quality part-time employment and the esteem in which part-time employment is held? Is that a general cultural issue in the economy?

John Swinney: I have considerable sympathy with the last part of Marco Biagi's question. There is a view that somehow part-time employment is not that desirable. Part-time employment will suit some people in our society down to the ground and meet their circumstances perfectly.

It is interesting that one of the things that have enabled us to maintain a lower level of unemployment than might have been expected during the recession has been the growth in labour market flexibility. Employers are finding that they can come to arrangements with valued and good members of staff who might have worked fulltime at some stage but for whom working parttime suits their lifestyle and fits more effectively with the choices that they have made about their life. Employers are able to make a judgment and say, "I'd rather keep a bit of this individual than lose them entirely."

The utilisation of labour market flexibility and part-time working arrangements is entirely desirable. However, I agree with Mr Biagi that there is an issue of the esteem in which part-time employment is held.

Marco Biagi: It was certainly one of the surprises of the inquiry for me that there were so many people who—presumably, based on the data—would like to step down to part-time employment but, for whatever reason, have not.

Chic Brodie asked about higher education providers. Although they are fundamentally responsive to demand, it has been put to me that the problem is that the demand that is leading their provision is student demand rather than business demand. They are essentially facing in the wrong direction in respect of their market. That is quite a bold proposition, but I would be interested in your views on it.

John Swinney: Part of the context of my answer to Mr Brodie is that our education system must be more aligned with equipping individuals

for employment than it has been in the past. I regularly meet representatives of the business community who express frustration at the fact that they cannot obtain the necessary skill level or experience from the output from our colleges, universities and, for that matter, schools.

What the Government has done about that has been to take forward a programme of reform to better align industrial and economic sectors with the approaches of our school, college and higher education communities.

The industry leadership groups in Scotland are indicative bodies of individual sectors. There are such groups across a whole range of sectors, facilitated by Scottish Enterprise. One of the points that I have made to the chairs of the industry leadership groups is about the extent to which we need industry to articulate more effectively its likely perspective on demand and skill requirements in the years to come. I am not going to sit here and be critical of the education service alone, as I do not think that business has been particularly good at articulating what its future demand will be. It is therefore difficult for the colleges and universities to work things out. It is all very chicken and egg, but if we can get them all lined up so that there is an open discussion about future developments and planning—the Government's economic strategy helps to enable that, with its focus on, for example, key sectoral areas of development such as the renewable energy, food and drink and creative industries sectors—that will give a clear signal to both the business community and the education community about where we see some of the action coming in the future in the Scottish economy. We can then fine-tune some of that work to ensure that the colleges and universities can respond positively to the demands of the business sector.

Margaret McDougall (West Scotland) (Lab): I am the last member to get in, and most of my questions have already been asked. However, I will manage to ask a few questions.

On the graduate situation, in June last year, the Scottish Government announced a pilot scheme to boost postgraduate employment. Can the cabinet secretary give us an update on that? How successful has it been? Will it be rolled out across the country? What data have been collected on it?

John Swinney: I do not have the data details in front of me, but I am very happy to provide them to the committee. The initiative that we have taken forward has been rolled out for some time, but an evaluation of it has not yet been produced. It is therefore a bit early to judge what its impact has been.

The issue fits into a general concern about the second aspect of underemployment—I referred to

this in my response to the convener's first question—which is individuals who are not operating at the level that their skill suggests they should be able to operate. It is clear that we have a number of challenges and issues that relate to people who have a higher level of skill than the type of employment that they undertake in our society requires. That is partly about the economic conditions with which we are wrestling and the fact that the economy is not growing as dynamically as we would like it to. The opportunities for expansion and development in the economy are therefore more limited than we would like them to be, and that will obviously have a particular effect on postgraduate and graduate employment.

Margaret McDougall: I will give an example. Earlier this week, I talked to a young man who has a degree in chemistry but who has not been able to find suitable work in four years. He has a job in a petrol station, but that is not acceptable.

John Swinney: That is the type of example that I am talking about. It is clear that there are individuals with capabilities that are in excess of the capabilities that are needed for the type of job that they undertake. The only substantive answer that I can give to Mrs McDougall is that the creation of a lot of the opportunities that would fulfil that young man's ambitions will come from wider economic growth.

I know the area that Mrs McDougall represents. The expansion of a major firm such as GlaxoSmithKline in the Irvine area is an example of where the Government can use its good offices to work with a company to respond to its aspirations for growth. We can support companies as partners in that process, and that may well open up opportunities in which the young man may be interested. I use that as an example to show that there are ways in which we can purposefully intervene to create new opportunities.

10:00

Margaret McDougall: Because that young man is now 26, he does not qualify for the modern apprenticeship scheme and other initiatives. I hope that something can be created for such people.

There is a rise in the use of zero-hours contracts across the board, but particularly among public sector employers. According to Women's Enterprise Scotland, twice as many women as men work in the public sector. Does the cabinet secretary consider that zero-hours contracts in the public sector are reinforcing the gender imbalance in the economy?

John Swinney: I return to my point that I do not find zero-hours contracts desirable. That is my starting point on the issue. I am not sure that I

could establish a clear relationship in considering whether those contracts reinforce the gender imbalance in the economy. However, the whole issue of occupational segregation is material to the Government's economic strategy. We are trying to change the nature of occupational segregation in the Scottish economy through a number of interventions.

For example, we are encouraging more women to become involved in the STEM—science, technology, engineering and mathematics—subjects in the school, college and employment sectors. The women's employment summit had a focus on the careerwise Scotland initiative, which is designed to tackle many of those matters. That is an important foundation of our approach to tackling occupational segregation, which we think is a major issue in the Scottish labour market.

Margaret McDougall: One issue that faces women who want to get into or stay in work is childcare. Some progress has been made on that, but what more can the Scottish Government do to support or subsidise childcare to get women back into work?

John Swinney: Later this year, the Government will, through legislative provision, expand the number of hours for which childcare will be available from 475 hours to 600 hours for all three and four-year-olds and looked-after two-year-olds. That provision will come into force in 2014-15. That is one example of where we are expanding provision to enable more individuals to enter the labour market. That also relates to Mr Biagi's point about part-time employment. The childcare issue is an example of the need to ensure that we have the right approach to labour market practices to create employment opportunities that individuals will be able to take. The balance that has to be struck with childcare responsibilities will affect the judgments of a wide cross-section of women who are re-entering the labour market.

Margaret McDougall: More women are certainly interested in becoming entrepreneurs. What can the Government do to encourage more women to do that, which is an option for them?

John Swinney: One point that emerged from the women's employment summit has been a focus on exactly that. Professor Sara Carter of the Hunter centre for entrepreneurship has been leading a series of discussions about women in enterprise and the formulation of greater activity to support that development. I attended the first of those sessions in Glasgow some months ago, and I intend to participate in further discussions. Indeed, at an event just last night, I discussed the issues with Professor Carter and a couple of the other participants in the process.

There is a gender segregation issue around the involvement of women in enterprise, just as there is in the labour market. There are some strong examples of women who have been able to emerge in the world of enterprise, and the Government wishes to support that.

Just last week I distributed some awards through the Government's EDGE—encouraging dynamic growth entrepreneurs—fund, which was set up to support new entrepreneurs. I was struck by the number of women who were involved and who received awards on that occasion.

We are seeing a strong level of participation by women in new enterprise creation through a number of different enterprise initiatives—principally the Entrepreneurial Spark initiative, which emerged in Glasgow, established its second premises in Dundonald in Ayrshire and has now established a facility at Edinburgh Napier University. The Government wishes to support and acknowledge that participation.

I expect that Professor Carter's work will produce further recommendations on the actions that the Government can take, and we await that material with interest.

Margaret McDougall: I have one more question, on the involvement of the voluntary sector and social enterprise. We are depending on the voluntary sector, and seeking to establish more social enterprise companies. What more can be done to encourage interaction between the unemployed and those organisations?

John Swinney: That is an important area in a couple of respects. First, I have made it clear that it is part of the Government's policy agenda—and my personal ambition—to encourage the growth of a greater social enterprise sector in Scotland. We are now seeing the fruits of the foundation work that we put in place during our first term in office to create the investment vehicles that enable people to commit to a social enterprise, which is welcome.

Secondly, it is important that we broaden the nature of the business base in Scotland so that we have privately owned companies, shareholder companies, mutual companies and co-operatives, and social enterprises into the bargain. The broader the business structures in our economy are, the healthier the economy will be.

The focus of our work on social enterprise takes a number of forms. Some of it involves supporting organisations to expand and take on greater responsibility in the delivery of public services, which is a key part of the public sector reform agenda. It also involves supporting the sustainability of social enterprises so that they are not dependent on grant funding and are essentially earning revenue.

There will be a close relationship between the social enterprise sector and the creation of employment opportunities for individuals with disadvantages. I saw a good example of that in my constituency just a couple of weeks ago. A social enterprise called Giraffe, which already has an excellent cafe in South Street in Perth, has just taken over—rather interestingly—the redundant public toilets at the bus station in Perth, which were unsightly and undesirable, and has created a fantastic cafe. It is creating employment opportunities for young people with vulnerabilities and challenges, and it is a pleasure to see such strong well-founded organisations being able to do that. For those young people, wider mainstream employment opportunities would be pretty much off-limits, but they are able to make an economic contribution through such enterprises. It is excellent to see those successful journeys, and I see such things happening in a variety of areas across the social enterprise sector in Scotland.

Joan McAlpine (South Scotland) (SNP): Ordinarily, a rise in self-employment would be regarded as a good thing, but evidence to the committee has suggested that the phenomenon of underemployment is a characteristic of self-employment, too. I understand that the committee was not particularly satisfied with the DWP's evidence on notified vacancies for self-employed posts. What evidence does the Scottish Government have on self-employment and the balance between good and bad, if you like, in that sector?

John Swinney: I cannot quite find the number, so I will correct this later if I do not get it quite right, but my recollection is that the latest figures show that the number of registered businesses in Scotland increased by 9 per cent. I am pretty sure that that is correct, but I will correct that if I need to.

As Joan McAlpine will know, a vast proportion of the business network in Scotland is made up of self-employed individuals, so there must be a rise in their number. Actually, I now see that, as at March 2012, the total number of private enterprises in Scotland was 341,360, which was a rise of 9.9 per cent. The analysis of the figure will show that it includes a large number of self-employed individuals. Inevitably, some of that rise will be a product of the economic difficulties that we have had, the challenges on employment, and people wrestling with the implications of the recession.

We could look at that situation and say that it is all terribly bad news, although I happen to think that we should welcome more people getting into business and creating a platform on which to create a sustainable business and a sustainable living. We would have to explore whether all those

business ventures provide economic security and sustainability for individuals. As we all appreciate, establishing and developing a business takes time and a great deal of commitment.

I welcome the trend, as it demonstrates that, in these difficult times, people are turning to enterprise. We should embrace that. There are a number of good examples in the country, such as Entrepreneurial-Spark, which I have mentioned, in which there is a much greater focus on people setting up in business, creating new business ventures and, as a consequence, contributing towards improving the economic health of the country. On the whole, that is a welcome trend.

Joan McAlpine: Does the Scottish Government have sufficient analytical capacity to respond properly to such matters, or are you dependent on London departments feeding you the information, which is perhaps not of sufficiently high quality to allow you to respond in the way that you would like?

John Swinney: The statistics that I quoted are Scottish Government ones. The material that we obtain on the labour market is disaggregated at Scotland level. The statistical base is pretty good in allowing us to consider these questions. Obviously, as time goes on, we will find new questions and issues to explore, so we constantly challenge whether we have the statistical base that can give us all the answers that we require.

Joan McAlpine: Lastly, do you have any evidence from the statistics that employers might be moving people on to self-employed contracts?

10:15

John Swinney: I cannot point to any evidence on that from the statistics. The 9.9 per cent increase in the number of private enterprises in Scotland certainly suggests that more people are involved in or have created such enterprises, and I am sure that some of the implications of changes in employment practice will be fuelling some of those figures.

The Convener: I suspect that this might be the final question. We have touched only briefly so far on skills and training. From the evidence that we have heard, it seems that where people are underemployed—perhaps working fewer hours or part time when they would rather be working full time—they have an opportunity to increase their skills by accessing part-time courses. However, the number of part-time courses in colleges has been reduced as a consequence of budget cuts. Can more be done to encourage colleges to offer part-time courses to help to fill that gap?

John Swinney: The Government's approach has focused on shifting the emphasis towards

providing more full-time courses in the college sector, because all the evidence tells us that people must be able to access deeper skills training and experience to equip them for entering the labour market.

In response to the convener's question, I point out the importance of employer involvement. Employers have a responsibility to train and support the development of their staff. Some employers invest heavily in that process, but there are opportunities for that work to be strengthened.

The Government offers flexible training opportunities to support Scottish businesses with 100 or fewer employees to improve their skills-based productivity. About 50 per cent of the training costs—up to a maximum of £500 per employee training session—is available to individual companies, so the Government does its bit, but employers must do their bit too.

The Convener: I will take a brief supplementary on that point from Rhoda Grant.

Rhoda Grant: Margaret McDougall mentioned someone who had a chemistry degree and was working in a petrol station. In that example, and in some of the cases in the evidence that we received, it may be that the employer will not really buy in to the idea of keeping the employee's skills up to date, because doing so will not benefit the company. If the employee was employed at the level at which they should be, they would not be working in a petrol station.

It is those people who are underemployed—who are not using the skills that they have—who need to have their skills kept up to date so that they are work ready when jobs become available in an upturn. If they remain being unskilled, they will never reach their full potential and that training will be wasted. How do we get those people into the training and college courses that allow them to continue to work—albeit underemployed—in those jobs while keeping them work ready so that their skills can be fully utilised?

John Swinney: Rhoda Grant says that those individuals are unskilled, but Margaret McDougall's example involved an individual who had a chemistry degree. In my response to Margaret McDougall, I concentrated on the importance of ensuring that individuals are able to access the credible employment opportunities in the labour market that will arise—

Rhoda Grant: You have misunderstood my question.

John Swinney: Please just hold on for a second. Those opportunities will arise out of improving the economic opportunities that exist in the country. The focus of the Government's intervention is to support and encourage economic

opportunities, which will enable individuals who have already been trained and skilled by the education service to find meaningful employment opportunities.

Rhoda Grant: You have totally misunderstood my question. My question concerned exactly those people who have already been trained and skilled and who are working in a situation where they are not utilising their skills. We need to keep those skills up to date, but the employer will not do that because it will not benefit them.

How do we get colleges to provide the places that allow those people to keep their skills up to date while they are underemployed, so that when they have an opportunity they can take it? If they become unskilled over a period of time, they will not be able to use the skills that they had previously.

John Swinney: The Government provides for individual learning accounts, which enable individuals to take control of those issues for themselves by providing financial support to allow them to develop additional learning opportunities as they see fit. There are a wide range of Government provisions in place to ensure that people can maintain and develop their skills.

Rhoda Grant: Can you remind me what is available as part of an individual learning account?

John Swinney: It is a demand-led source of funding that provides up to £200 per year towards the cost of learning. The funding can be used for a wide range of courses to support individuals to improve their skills and to gain qualifications so that they are better placed to get into or stay in employment.

Rhoda Grant: Do you think that that is an adequate amount of money to keep a chemist skilled while they are working in a petrol station?

John Swinney: In 2011-12 the ILA spend was £10.267 million, and 54,000 people were receiving ILAs, so it is clear that there is a high level of uptake for the services that are provided.

Rhoda Grant: Do you think that it is adequate to provide the chemist with support?

John Swinney: I gently point out to Rhoda Grant that the individual will have already received financial support for higher education. I do not know the details of the example that Margaret McDougall cited—if the gentleman is 26, I am not sure which stage in the education system he would have reached when tuition fees were in place in Scotland. However, now that fees have been abolished, such a person will have had financial support to provide them with higher education.

The Government can provide such financial support, and it provides additional support through individual learning accounts. We can provide only a reasonable range of different opportunities to try to meet the circumstances of individuals, at the same time as trying to create and boost the scale of economic activity in the Scottish economy to meet the expectations and needs of individuals.

The Convener: In view of the time, we had better call a halt at that point. I thank Mr Swinney and his officials for coming along and helping us with our evidence. That was our final evidence session on underemployment. We will next move on to preparing our report, which I am sure the Scottish Government will be interested in seeing in due course.

10:23

Meeting suspended.

10:27

On resuming—

“Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027”

The Convener: Agenda item 2 is continuation of our evidence taking on the Scottish Government’s report “Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027—The Draft Second Report on Proposals and Policies”.

I welcome our panel of witnesses. Starting from my left, we have: Dr Mark Williams, who is environmental, regulation and climate change manager at Scottish Water; Rupert Steele, who is director of regulation at Scottish Power; Andy McDonald, who is director of renewable energy and low-carbon technology at Scottish Enterprise; Rob McDonald, who is managing director of regulation and strategy at SSE; and Calum Davidson, who is director of energy and low carbon at Highlands and Islands Enterprise. Welcome to you all and thank you for coming along.

Before we get into questions, would anyone like to say anything by way of a brief introduction?

Rob McDonald (SSE): We are happy just to go into questions.

The Convener: Let me start by asking about fuel poverty. As you know, the Scottish Government has a target of eliminating fuel poverty from Scotland in so far as is possible by 2016. Various proposals in RPP2 relate to how we might reduce carbon emissions while improving on fuel poverty.

In light of this morning’s announcement by Centrica of large profits from its gas supply, can the representatives from Scottish Power and SSE say how it helps the Government to meet its fuel poverty targets when energy companies are posting very high profits, which are paid for by their customers?

Rupert Steele (Scottish Power): Thank you for that starting question, but I do not think that it is for me to go into the detail of Centrica’s results. Clearly, no one from Scottish Gas is here. It is difficult for me to answer for Scottish Gas.

The Convener: I am not asking you to answer for Scottish Gas. I have not seen Scottish Power’s forthcoming results, but I imagine that it will be posting healthy profits.

10:30

Rupert Steele: The thought that I was going to try to elaborate was that profits exist primarily to remunerate investment and risk. Where companies are investing a lot of money, the accounting term for the return on that investment is “profit”. That is what accountants call return on investment.

It is feasible for companies to make huge investments in energy infrastructure only if there are commensurate profits that reflect the appropriate return on those investments. In the case of Scottish Power, roughly 42 per cent of Iberdrola’s global investment is now scheduled to come to the United Kingdom. In fact, we generate significantly less than 42 per cent of Iberdrola’s profits, so that reflects the importance of the United Kingdom as a location for investment. I do not think that we can do without profit, given the need to invest in energy infrastructure.

Rob McDonald: If we look at the path of gas and electricity prices at industry level over the past few years, it is undeniable that we have seen substantial increases. However, around two thirds of the increase in electricity prices has been driven by wholesale international gas prices. For me—to bring the debate back to RPP2, the climate targets and all those issues—that underlines the importance of investing in low-carbon technologies so that we get off the treadmill of being reliant on volatile international gas prices. From my perspective, that is the key point.

The Convener: I entirely understand that, but high energy costs are a major driver of fuel poverty, and an element of those high energy costs is the level of profit that energy companies make. Therefore, that must be a factor for consideration when we look at RPP2 and the outcomes.

Marco Biagi: We have heard that one important point in the RPP2 is about the money that must be found for energy efficiency measures to assist with the alleviation of fuel poverty as well as to achieve our carbon targets. Is Scotland in a good position to receive an adequate share of the current UK-wide funding streams through things such as the green deal and the energy company obligation?

More specifically, the Scottish Power submission states that we are in a good position, because we have the national retrofit programme whereas similar funding has been withdrawn in England. I would be grateful if Scottish Power would elaborate on that.

Rob McDonald: I will answer the first part of the question, so that Rupert Steele can have some thinking time and then step in to answer the second part.

You asked how Scotland is placed.

Marco Biagi: Can we be confident of taking a proportionate share?

Rob McDonald: I forget the exact wording, but the RPP2 clearly sets out an ambition to make Scotland the most attractive place in Britain for investment in energy efficiency. That is an excellent and laudable aim, and there is no reason why we cannot achieve it. However, I urge the committee to reflect on the fact that, in the context of the planning system, Scotland lags behind England and Wales in a couple of areas.

One issue is that, in Scotland, solid wall insulation is not counted as permitted development. Similarly, air-source heat pumps have to go through a much tougher planning regime in Scotland than they do in England and Wales. The contrast is really quite stark. We have had customers in Scotland who have given up on installing air-source heat pumps because of the need to go through the planning system, whereas the process is much easier in England and Wales.

I urge the committee to reflect on those points. However, we are supportive of the overall ambition. There is no reason why Scotland cannot attract a proportionate and commensurate share of the overall spend.

Rupert Steele: The remark in our submission to which Mr Biagi refers is simply a reflection of the fact that the Government-funded warm front project in England and Wales has come to the end of its funding, whereas I believe the Scottish Government still has a budget for such work. The remark was nothing more than a reflection of the differing budgetary decisions at Westminster and here.

Marco Biagi: Do you consider that Scotland will be able to count on a sufficient proportion of the UK-wide schemes to be able to deliver on the energy efficiency targets?

Rupert Steele: There is no doubt that the ECO energy efficiency scheme is a testing one to deliver. We do not yet know what the demand for solid wall insulation will be, and the scheme is quite complicated. We—and, I think, all energy suppliers—will be looking for every opportunity to deliver on those requirements wherever they can be found.

It is clear that Scotland has a lot of solid-wall properties and will therefore be an attractive place to look. To be honest, however, we will be trying to deliver wherever we can. We would love to deliver a substantial proportion in Scotland, but that will depend on demand and what is available.

Mike MacKenzie: Is it not the case that we would already be much further on in reducing climate change emissions if there had been

sufficient investment in our grid infrastructure so far? I am thinking about grid constraints and the provision of cables to our islands such as the Western Isles, Orkney and Shetland. The necessary investment should surely have been made well before now.

Rob McDonald: I will start on that question, given that you have referred to the Western Isles and Orkney, which are in our patch. One issue with grid investment is a slight chicken-and-egg problem. We have had an issue with transmission charges in Scotland for many years, so I will focus on that first.

The Office of Gas and Electricity Markets conducted an extensive consultation on transmission charges—called project transmit—which led to a set of proposals that would have been beneficial for Scotland and resulted in a much fairer set of transmission charges, although I will not bombard you with too many numbers—

Mike MacKenzie: But not beneficial for Scotland's islands.

Rob McDonald: I agree that there are still issues with the islands. First, we need to sort out the transmission charges in Scotland generally, because it is unforgivable for Ofgem and National Grid to have identified a problem two years ago that has still not been fixed. That is a necessary condition, but still not a sufficiently acceptable condition.

I will come back to Mike MacKenzie's point about the islands. One issue for us—which does not make us very popular, but we have to grapple with it—is that we get slightly conflicting messages. On the one hand, we hear messages from the island groups saying that they need the grid to be built now, very quickly, because there are schemes waiting. On the other hand, there are stakeholders lobbying the Department of Energy and Climate Change and the Government to get a greater subsidy for the island groups on the basis that the schemes are uneconomic.

That situation presents us with a real dilemma, and it is important for two reasons. The first reason relates to the planning regime. If we go to planning for those things, we must be crystal clear that there is a need, and—as I am sure you will appreciate and support—we have to make a needs case. We cannot apply for planning approval, for wayleaves and those sorts of things, on the basis of speculative development that might not have anything on the back of it.

You can imagine, for example, a situation in which we had come to the committee and the Scottish Government with the Beaulieu to Denny proposals without the certainty that there were renewables developers behind the scheme. When a DECC committee is considering the whole

question of the affordability of renewables on the islands, there is a question mark about the economics of those projects. We cannot get away from that issue.

The second reason relates to cost. We are talking about big numbers—the big bets that we are making, if you like. The Western Isles link, for example, would cost £700 million. If there are renewables developers on the end of the project, that is all well and good, and it will be funded through the wind farms and the revenues from them. However, if we place that bet and build the cable link, and there is nothing on the end of it, we expose the generality of customers to a £700 million bill.

Let me put that figure in context: that is roughly equivalent to £150 for every household in Scotland. What we have here is a difficult balancing act. We are keen to get developments away as quickly as possible, but we have to have a definite signal from the developers that they are coming. In the Western Isles, that has proved difficult.

Mike MacKenzie: Is it not basic common sense that where renewables opportunities exist, as they do to a significant extent on Scotland's islands, we should get the cables and the infrastructure in to facilitate development? If the Gordian knot that you described has been tied by the UK Government, will you urge the UK Government to untie it as quickly as possible, so that we can get on with realising the opportunities on Scotland's islands, for the benefit of consumers not just in Scotland but throughout the UK?

Rob McDonald: I agree that the Gordian knot—as you eloquently put it—lies at policy level, with Westminster and, if I may say so, with Holyrood, because both institutions have some of the powers. Somewhere between the Scottish Government and the UK Government, we have to get policy clarity on renewables obligation certificates, on other support for renewables and on transmission charges, which will allow developers to give a clear signal. Once they do that, we will—make no mistake about it—crack on with the cable as fast as is humanly possible. We must have policy clarity then the signal from developers in that order; we cannot speculate. I know that that is not the answer that one or two members want me to give, but I hope that you understand that we are in a dilemma.

Calum Davidson (Highlands and Islands Enterprise): We are in a vicious circle when it comes to transmission charging and issues to do with islands connections. People will not commit because of uncertainty, especially over transmission charging costs and electricity market reform; because they cannot commit, colleagues on the transmission side cannot build. We are

reaching a critical stage and decisions need to be made in the next few months, particularly on the Western Isles connection. Part of HIE's role has been very much about trying to reduce uncertainty, by ensuring that folk work together and focus on addressing common problems.

At strategic level, and in the context of the overall carbon reduction targets, we have a huge opportunity in the Scottish islands, which have a better wind regime. In effect, the islands are like offshore platforms, onshore, so development costs are significantly lower than they are for offshore wind. We have about a gigawatt sitting there ready to go, but we are constrained by some relatively minor—in the greater scheme of things—policy issues and some not insignificant funding issues. If we address those issues, we will open up a new generation of significantly low-carbon, very high-yield wind for Scotland.

Mike MacKenzie: We have been talking primarily about the bigger schemes and the chicken-and-egg situation in relation to triggering the strengthening of the grid that such schemes require. I am also concerned, as I think other committee members are, about all the lower-level schemes—the smaller schemes that would qualify for feed-in tariffs.

Do you agree that because of degression—that word was not in my lexicon until recently; it seems to be a DECC word, which means that feed-in tariffs will be reduced year on year—there will be grid constraints, not just in the islands but virtually throughout the Highlands and Islands? Potential schemes are being delayed all over the network because of grid constraints. Is there a particularly harsh impact on the smaller projects and community projects that could do a lot to mitigate fuel poverty and contribute to our overall targets and which are significant, in aggregate? To what extent are general grid constraints preventing us from meeting our targets?

10:45

Calum Davidson: There is a particular problem in Orkney, where there is, effectively, a moratorium on connecting anything more than about 3kW, which is like a couple of bars on an electric fire. That is a problem because over the past few years Orkney has been a real success story in smart grids—you see small turbines wherever you go in Orkney.

On the earlier point about fuel poverty, much of HIE's focus has been on building up resilient communities, with well-paid jobs in those communities and with strong community energy projects that promote energy efficiency, as a way of mitigating fuel poverty. I am thinking of a project on Gigha, where a community-led wind initiative

has ensured that significant resources are reinvested in the community in things such as high-quality housing and energy efficiency schemes.

In the light of the problems that we face, the Scottish Government has put together resources for community projects through the renewable energy infrastructure fund, the community and renewable energy scheme—CARES—and through a particular debt and equities scheme. However, we are still constrained by the grid. I agree with Mr MacKenzie that we will face problems in community projects until we can solve the major problems that affect us across the Highlands and Islands.

Mike MacKenzie: Convener, I have one more question, which I assure you will be my final question. First, I was a bit intrigued when Rob McDonald mentioned permitted development rights for solid wall insulation. That really puzzles me, because I am unsure what he referred to. As part B of my final question—it is important that there is a part B, I think—I want to ask about air-source heat pumps, which Rob McDonald also mentioned. When the committee heard from Professor Sean Smith last week, he cast doubt over whether heat pumps are a technological solution for fuel poverty or mitigating carbon production. My question is on two things, but Rob McDonald mentioned both together as demand-reduction methods. Can you elaborate a wee bit on that? I am quite puzzled about both of them.

Rob McDonald: I am sorry if I was not clear.

On permitted development rights for solid wall insulation, the point is very simply that in England and Wales solid wall insulation is classed as a development right, so putting in such insulation does not require one to go through the normal planning paraphernalia. My understanding is that in Scotland—

Mike MacKenzie: I got that bit, but I am still mystified. Are we talking about external cladding?

Rob McDonald: Ostensibly, yes we are. The requirement to go through the more formal planning route means that such schemes need to jump over a significant number of hurdles in Scotland compared with what must happen in England and Wales.

Mike MacKenzie: We are talking about external insulation envelopes.

Rob McDonald: Yes. Such insulation is particularly important for older harder-to-treat properties, of which we have a lot in Scotland. As was pointed out earlier, that inequity does not help us to achieve our fair share of the spend.

I do not want to overplay the importance of air-source heat pumps. They have a role to play, but

they are not a magic bullet for tackling fuel poverty and energy efficiency. My point about them was similar to my point on planning: in England and Wales, provided that the air-source heat pump technology hits certain pre-specified noise-level requirements—which are actually quite tough—there is no need to go through the planning process. In Scotland, that is not the case, and the process can take between one and three months. That discontinuity between the two planning regimes makes it more difficult to invest in Scotland on a like-for-like basis. I hope that I have clarified the issue.

Mike MacKenzie: Thanks. That was the clarification that I was looking for.

Chic Brodie: Good morning, gentlemen. My first question is for Dr Williams. The publicly owned Scottish Water is the single largest consumer of electricity in Scotland and captures the entire Scottish customer base. I have asked the question of several people, although Scottish Power and SSE may not like it. Given that Scottish Water has Business Stream as a commercial subsidiary, why does it not consider entering the energy retail market?

Dr Mark Williams (Scottish Water): I want to lay to rest the matter of Scottish Water's being the largest energy consumer. We are, as a single entity, one of the largest bill payers in Scotland, and in that context all the national health service boards, for example, have as big an energy and electricity demand as Scottish Water.

Entry to the energy retail market is not something that Scottish Water has considered. We see ourselves primarily as a water and waste water service provider. That is the core function of Scottish Water. It would be a bit of a leap to enter the energy retail market.

Chic Brodie: Perhaps you might think about it. If I had such a customer base with a company that was publicly owned and was already providing stakeholders with a service, it is something I would consider. As I said, SSE and Scottish Power might not like that.

Rupert Steele: We would be delighted to compete with them.

Chic Brodie: I bet you would.

I want to ask Rob McDonald about another area of interest. You are now supporting a new district heating system as part of a £27 million regeneration of homes in Maryhill, providing heating and hot water to more than 1,500 tenants and more than 360 home owners. Do you see geothermal energy as a potential area of major development?

I have been talking to the British Geological Survey and East Ayrshire Council—because there

are many disused coal mines in that area—to see what can be done to provide cheap heating to communities. How do you see that developing?

Rob McDonald: We categorise geothermal as an emerging technology. It is an interesting technology that is quite far away from mass-market deployment. We have an interest in that and a number of similar emerging technologies and are keen to see how they develop. I categorise it as being one to watch.

Chic Brodie: I will move on to the other Mr McDonald.

In your submission you talk about measures for assessing energy performance in commercial properties and businesses. What discussion has taken place with local authorities and the Scottish Government about assessing and generating more energy efficiency from public buildings? That would, I hope, reduce both local and national Government expenditure. Has there been a conversation about our wanting to do that? Just two weeks ago, I was privy to the viewing of an information and communications technology system that can measure the energy efficiency of buildings. The sequitur to that is how we take that into the domestic marketplace.

Andy McDonald (Scottish Enterprise): I am afraid that I cannot answer the question directly because I have not been involved in that kind of discussion.

I have been involved in considering the development of some of the technologies to improve energy efficiency, and particularly in working with companies to improve the efficiency of their facilities. That has taken place as part of the general improvement of businesses—not just in cost saving, but in making them better and more profitable generally.

We have actively sought to improve the building standards of the estate that we are responsible for in SE's construction and buildings.

Chic Brodie: Would it make sense to move the focus from the Scottish manufacturing advisory service, which is very good in terms of lean and Six Sigma processes, to helping companies to drive down their energy bills?

Andy McDonald: That is a key part of what they do. One of the things that companies focus on is energy reduction and one of their targets is carbon reduction and their contribution to energy efficiency.

Chic Brodie: I have one more question. The Energy Bill is before the Westminster Parliament. Will you share with us your opinions on the pricing mechanism in that bill and on the bill generally?

Rupert Steele: I am sorry. What do you mean by the pricing mechanism?

Chic Brodie: I mean the contracts for difference.

The Convener: That is a little bit off topic, so just give a brief response.

Rupert Steele: We think that the Energy Bill is good legislation—which is not to say that there are not details that need to be improved, although we think that it provides a good framework to take forward expansion of low-carbon energy in a cost-effective way, and to maintain security of supply. The only thing that I would urge the Westminster Government to do as it takes the bill forward to implementation is to try to keep things reasonably simple. There seems to be a lot of complexity building up, which may eventually slow things down. I therefore encourage the Westminster Government to keep it simple, keep to the timetable and get it done.

Rob McDonald: We have a slightly less benign view of the bill than Scottish Power, because we are concerned about the bill's direction of travel and the safety mechanism. There is huge uncertainty in that regard, which if we are not careful will create—arguably, it has done so already—an investment hiatus, certainly for thermal plant. I think that we will progressively, over the next six to 12 months, see it impacting on renewables development, unless the renewables obligation is extended beyond 2017.

To save time, convener, I will quickly list some of our concerns. The bill is very prescriptive, and the track record of Governments not just in this country but around the European Union shows that being prescriptive about plant mix is not good. There will be bidding for a fixed-price contract, but in this country we have evidence and experience of that, whereby people get the winner's curse if they are not careful; people bid and the lowest price wins and it does not get built out, so sometimes there is less build. Sometimes people put a premium in when they are bidding for a fixed price contract. We do not know whether the proposed package is consistent with EU state aid. We do not know the strike prices or, indeed, whether there will be one strike price or several, or whether it will vary. We do not know who the counterparty is for the risk, which is quite important. When an energy bill was first mooted, it was going to be the state that would be on the other side of the contract, but now your guess is as good as mine as to who will be on the end of the contract.

Those are all fundamental questions, but we are not much further forward in answering them from where we were 12 months ago when the bill was first mooted. For those reasons, we are much

more worried about the bill than colleagues at Scottish Power.

Calum Davidson: From the enterprise agencies' viewpoint, we are very concerned that there will be a wall at 2020. For encouraging investment, particularly large-scale investment in Scotland, the bill is giving only a four-year window for offshore wind. We therefore think that it is critical for the UK Government to follow the Scottish Government's example and publish 2030 targets.

Rhoda Grant: What are the witnesses' impressions of RPP2? We have had evidence that all the proposals and policies will need to be met before we can meet our targets. Do you believe that that is the case? Do you believe that something is missing from RPP2 that could help in meeting the targets?

Dr Williams: From my perspective, RPP2 is pretty much all-encompassing and provides a great range of opportunities. It is obviously directionally correct on the range of proposals and policies, and the levers that need to be pulled. The only thing that I would like to see more of is the incremental steps or indicators that sit beneath some of the higher-level policy objectives that will allow us to understand how the direction will pan out in reality. I think that RPP2 covers all the right areas, but the issue now is delivery. Over the next few years, what metrics will we need for progression of measures that will be driven by the policies, such as insulation, to allow us to understand how effective they will be by 2020? Such things need to be mapped as we go along.

Rob McDonald: We believe that RPP2 is an important document that sets out the clear intent and political support for low-carbon technologies, which is very welcome and positive, and will create a pro-investment climate to which the market will respond. Where the targets are ambitious, it is right that they should be; we should not shy away from setting ambitious targets. As colleagues have said, the devil is in the detail now in terms of the underpinning policy framework.

I am probably qualified to talk only about the energy component. It seems to me that the target is reliant on two policy levers: one is the EMR reforms, which we have just covered, and the second is the 30 per cent emissions reduction target at EU level. We are quite worried that the EU will not set a 30 per cent target; therefore, the targets overall look challenging. However, they are still an appropriate ambition.

11:00

Rhoda Grant: Carbon capture and storage is also important to the targets. Later, we will consider a legislative consent motion on

emissions. The Scottish Government is ceding the power to set emissions for generators to the UK Government. We have had evidence that suggests that, if that happens and the emissions levels are as we have discussed, there will be no drive towards carbon capture and storage because it will be possible to create new gas-fired stations within those emissions levels. If the Scottish Government gives those powers to the UK Government and the targets are set as suggested, what could it do to encourage carbon capture and storage in Scotland?

Rob McDonald: I am sorry, but I am not familiar with the debate about the different powers and emissions levels, so I cannot comment on that. However, I will talk generically about carbon capture and storage.

We have a project at Peterhead that is in the UK Government competition. My take on CCS is that we need to demonstrate the technology; we need to build a couple of plants and prove that they work. We can worry later about how they are set up and regulated and all the rest of it, but we need to prove that the technology works. Therefore, the Government needs to make a decision as quickly as possible on the schemes. Let us get them built and worry about the detail later.

Rupert Steele: I will come at it from a slightly different point of view, which concerns the emissions performance standard.

In the Great Britain market as a whole, we will face a problem with security of supply in the latter half of the decade. Ofgem has made it clear that that needs addressed. To be realistic, that will require combined cycle gas turbine power stations to be built. It is unlikely that they will be built if investors believe that there is a risk that, relatively early in the lifetime of those stations, they will be required to fit CCS—which is as yet untested and, potentially, quite expensive—at their own expense.

The Westminster Government was right to give a guarantee that those who build CCGTs now will not need to fit CCS until 2045, because that will drive the investment that is necessary to keep the lights on. If Scotland sets a different policy, the likely result will be that CCGTs will be built in England instead. That is the reality when we face a security of supply problem.

Rhoda Grant: Are you saying that the problem with security of supply will mean that we will miss our carbon emissions targets? Do we need CCS if we are to meet those targets?

Rupert Steele: I am not saying that CCS cannot be developed. If a framework is developed that makes it worth investors' while to fit CCS, they will do it. To tell investors that they cannot build a power station unless they fit CCS is quite risky

with the current state of the technology. We would not be happy to recommend that.

The Convener: Longannet will have to close by 2020. Our existing nuclear plants will eventually be decommissioned and the current Scottish Government has no plans to replace them. We will need a lot of new gas capacity. Are you saying that neither Scottish Power nor SSE has any plans right now to build new gas plants?

Rupert Steele: I cannot speak for SSE. As far as Scottish Power is concerned, we have not set a closure date for Longannet. As of today, we have not taken a decision about whether Longannet will opt out of the industrial emissions directive. I do not want anyone to think that there is a fixed end date for Longannet; we certainly do not have one. We are investing in the plant and are improving its efficiency and performance.

We have consent for a CCGT on the Cockerzie site. That development needs to be looked at in comparison with other sites that we have in the GB electricity market. We have a site in Kent, where—under the current transmission charging regime—it is more attractive for us to develop. That may change. The Cockerzie site has strong advantages, and we are looking at it, as well.

We have projects. What people say about the future of CCS will affect the attractiveness of those projects, unless there is funding available for CCS to be fitted.

The Convener: I will ask Rob McDonald that question, but first I would like you to clarify whether there is a conflict between having a target to decarbonise the electricity supply and security of supply.

Rupert Steele: There is not necessarily a conflict, but energy policy involves decarbonising, security of supply and affordable cost, and achievement of all three of those at the same time is very hard. Most people would say that trade-offs will have to be made between the rates of achievement of the various objectives. My guess is that people will be extremely anxious to maintain security of supply under all circumstances.

Rob McDonald: I would like to make a couple of points. As far as our gas station at Peterhead is concerned, I mentioned the bid for CCS. How that bid plays out will determine the situation there.

On future new-build CCGTs, I absolutely agree with Rupert Steele that relative to the rest of the UK Scotland is an unattractive place to invest, just because of the economics of the transmission charging regime. That reinforces the need to get that fixed. It is unforgivable that it has been left unresolved for two years.

On wider security of supply, I do not think that we should necessarily jump to the answer that CCGT or any other particular type of plant is what is needed. What Scotland will need in the 2020s, as we approach 2030, is flexible generation that will, in a 100 per cent renewables world, be able to cope with the ebbs and flows of demand and supply. That could be a CCGT. Whether a CCGT with CCS would be able to fulfil that function is a moot point, because CCS—at the moment, at least—is quite an inflexible technology, but there are alternatives, such as storage. We have an interest in a couple of pumped-storage schemes—one at Coire Glas and one other. That might be another option. There is also battery technology, although that is a bit further away. There are other alternatives to solve the flexibility conundrum as we reach the 2020s.

The Convener: From what you say, it sounds as if there is a huge degree of uncertainty.

Rob McDonald: There is uncertainty not just for Scotland but, with the UK Energy Bill, for the wider UK. We do not know what the market structure will look like as far as capacity payments for thermal plant are concerned. We do not know how the strike prices will work. We do not even know whether pumped storage will qualify for a capacity payment. I agree that there is huge uncertainty—we just do not know.

The Convener: I am sorry, Rhoda—I rudely interrupted you.

Rhoda Grant: That is fine.

I turn to Scottish Water. Based on—

The Convener: I am sorry—Marco Biagi wanted to come in on CCS.

Marco Biagi: The energy mix that RPP2 projects for 2020 is quite specific. It sets out that there will be 500MW of CCS gas capacity. From what you have said, I am unclear about whether you think that that is a credible and achievable target. Could you clarify whether you think that it is?

Rob McDonald: The target is perfectly reasonable, but the first priority must be to deliver a demonstration project and prove that the technology works, because there is uncertainty about its effectiveness. We think that it will work but, when you are doing things on a scale for which there are not many precedents around the world, you must try them first. All that I was saying was that there is uncertainty around the technology, which is not to say that the target, per se, is wrong.

Rupert Steele: I agree with SSE's comments. Obviously, we are not involved with CCS as things stand, although a lot of our earlier work has been helpful to other people who are in the UK

Government's competition. There is a question about whether 500MW of CCS will be available by 2020. If it is not, within a single Great Britain energy market Scotland has other options for importing power from England and Wales and exporting renewable energy when the wind is blowing. There are lots of degrees of freedom.

Marco Biagi: I want to stretch things out slightly, given that we are discussing security of supply. Rob McDonald mentioned the pumped storage projects, which is a topic that I wanted to bring up. The headline figure is 600MW. If that is the figure for each project, we are talking about potentially 1.2GW in total, which is almost 20 per cent of Scottish demand, so those seem to be a pair of substantial projects. Do they have any implications for the energy mix projections? If the projects are successful, will that make anything else redundant?

Rob McDonald: Those are good questions. There are many uncertainties because the projects are at an early stage of development—they are in what we call gate zero or gate 1. There will have to be a lot of water under the bridge, if you will pardon the awful pun, before we come close to making investment decisions. It is early days with the projects but, equally, it is early days with CCS, and Rupert Steele has talked about the uncertainties around the existing coal stations. I categorise the targets as exactly that—they are targets that are broad aspirations. There might be changes around the edges, but I hope that the targets will hit the overall carbon constraint cap. I suppose that I am saying that we will get there, but by a different route.

Marco Biagi: What is your expected timescale for the pumped storage projects?

Rob McDonald: I would have to get back to you on that, but it will be the back end of the decade. As I said, the developments are at an early stage and we still have to fix the transmission charge issues and all the other issues that I talked about relating to the EMR.

Marco Biagi: By RPP2 standards, that is practically tomorrow.

Rupert Steele: Pumped storage is, inevitably, different in character from a CCS power station or, indeed, any other type of power station. Once the water gets to the bottom of the hill, the game is over until fresh electricity is available to pump it back up again. Pumped storage will deal with a peak, but net generation will not be possible.

The Convener: A problem will be created if there is no wind for an extended period.

Rupert Steele: Pumped storage is not a solution when there is no wind for an extended period—that problem would be better solved with

a gas-fired power station or a similar type of development, of which there are a number.

Rob McDonald: Of course, the opposite is also true. If demand is low on a windy day, the electricity generated can be used to fill the reservoir. That is the point.

Rhoda Grant: I would imagine that it is wrong to count pumped storage as generation because it is really the storage of generation. When the wind is blowing, we will store the excess energy that is generated. Storing it is like having a battery so, rather than counting that as part of the contribution towards generation, we need to look at it differently. Am I correct? Are we not double counting if we count what pumped storage can put out at peak times?

Rob McDonald: I take your point. It is a contribution more to capacity than to net energy, but it is still an important contribution in an energy mix with 100 per cent renewables, for example.

Rhoda Grant: Indeed; it is about security of supply and storage, but you cannot add on that generation and say that using pumped storage is part of the equation that leads to a full complement of power. That would be double counting.

11:15

Rob McDonald: It is still part of the mix, but I take your point. You would have to take into account the energy for the pumping part of the operation.

Rhoda Grant: Earlier, I asked whether something was missing from RPP2 that could help us in trying to meet our emissions reduction targets. Chic Brodie alluded to the fact that Scottish Water has huge water resources as well as land resources. Are we missing a trick if Scottish Water is not using those resources for generation?

Dr Williams: Not necessarily. It is true that Scottish Water has a great deal of potential out there. In our submission we highlight the scale of the ambition, which could be as high as offsetting our entire electricity demand and enabling more generation. We are actively seeking to pursue that ambition, partly through the regulated business. When it is in the best interests of customers for us to invest in hydro schemes, we are taking the opportunity to do so. About 25 gigawatt hours' worth of hydro is involved in the current programme.

However, it is important that as we move beyond the core asset base, we engage with experts—other delivery partners—to deliver energy opportunities. We highlight in our submission the extent to which wind, for example, can provide us with an opportunity in the

catchments that we operate in—from large-scale projects down to small-scale wind power at individual treatment works. A couple of sites up in Stornoway and Stronsay are well on with delivery for use on site.

Scottish Water is trying to understand our best opportunities to deliver long-term benefits to customers and to contribute towards Scotland's wider renewables opportunities. We are primarily focused on partnerships where there is that real need for commercial investment and for a commercial interface with other partners to deliver the opportunity.

The Convener: A number of members still want to ask questions. We need to finish this evidence session by 11.45, so I ask members to keep their questions short and to the point. So far, our witnesses have been very good at giving short and to-the-point answers—I thank them for that.

Margaret McDougall: The Scottish Government's energy efficiency action plan established a Scotland-wide target to reduce energy consumption by at least 12 per cent. Local authorities and energy companies have led the way in the provision of energy efficiency measures up until now. What has been the role of the enterprise agencies to date, and what has been the impact?

Andy McDonald: To pick up on the point that was made earlier, Scottish Enterprise has been looking at the efficiency of the companies that we work with as part of our development of growing new businesses. We have been looking at the technologies that bring in new and efficient forms of energy and supporting those with development and innovation support. Quite a lot of our work to date has been on developing new technologies with small and larger companies.

Earlier, we touched on the fact that we have been looking at the efficiency element as part of our programme of providing business support to individual companies in order to improve their efficiency. This not just about those companies saving money, because a more efficient business that makes better use of its energy will improve its overall standing and its ability to grow. We have also been looking at how some of the technologies can be transferred into international market opportunities.

Margaret McDougall: You quite often say that you are looking at different ways of improving energy efficiency. Can you give us some examples?

Andy McDonald: We are looking at how to support specific companies. For example, we work with some companies on the development of technology and with others on building controls and building sensors. As noted in previous

evidence—from Sean Smith last week, for example—we will be funding a lot of development work in companies that are developing new technology through Edinburgh Napier University programmes and through the Building Research Establishment in order to prove that technology and bring those products to market.

Margaret McDougall: You mentioned Professor Sean Smith, who said in evidence that consumers could be expected to pay an average £80 a year to run smart meters while

“the best and most efficient one, which is manufactured by a Scottish-based company, costs £4 a year”.—[*Official Report, Economy, Energy and Tourism Committee*, 20 February 2013; c 2504.]

What are energy companies doing to ensure that the costs of using smart meters do not outweigh the benefits to consumers?

The Convener: You can fight over who is going to answer that question.

Rupert Steele: Given that the UK Government's programme requiring the installation of smart meters has been assigned to retail businesses, we all have an incentive—and indeed are under tremendous pressure—to implement smart metering as cost effectively as possible. After all, we will be put at a competitive disadvantage if our competitors can install their smart meters more cheaply than we can.

How the costs and benefits balance out depends on how customers use smart meters. Clearly, they enable us as energy suppliers to provide much better customer service: we will not be able to send out so many estimated bills, and we will not need to bear the costs of dealing with those estimated bills. Under the pressure of competition, those savings will flow through to consumers. In other words, people should be getting a better service and lower operating costs.

Of course the programme itself has its own cost. However, the Government's impact assessment suggests that that cost is well justified, and we will do our best to implement the programme as cost effectively as we can.

Rob McDonald: I have nothing to add to that, convener.

Margaret McDougall: Is the draft RPP2 sufficiently clear on where its financial costs will be incurred and who will incur them?

Rob McDonald: We have no strong view on that question.

Rupert Steele: On the things that fall to us to deliver, one of the very first questions that we ask as a business—indeed, any business would ask this—is where the money is going to come from. Our main responsibility is the delivery of

renewable power, which happens principally through large onshore arrays. We have about 1,000MW currently in operation, of which half is in Scotland, and 500MW more either consented to or under construction. That is the cheapest large-scale renewable option available to consumers. We understand that consumers will pay for it through the renewables obligation and, in due course, through EMR. Our aim is to maximise the delivery of that low-cost option to minimise the amount that we have to bill consumers.

Margaret McDougall: But is RPP2 clear enough about the financial costs and who will pay what? It does not, for example, quantify the distribution of the expected costs. Do you think that it should?

Rupert Steele: When people are considering policies, it is always helpful to consider their costs and who will pay them. That is good discipline in any policy making and I encourage that approach to be considered in RPP2.

Margaret McDougall: Are there any other costs aside from the financial costs that should be incorporated into RPP2? What about environmental costs, for example?

Rob McDonald: I can speak only from an energy perspective, but given that most of the focus is on reducing the carbon intensity, nothing springs to mind. I think that RPP2 is clear about where the costs lie. There is a generic debate to be had about how we can better engage as an industry with the public and consumers, as Rupert Steele said, on the costs of delivering new investments, the security of supply and decarbonising the sector. I thought that the document was reasonably clear on those issues, to be honest.

Joan McAlpine: My question is for Rob McDonald. You spoke earlier about serious concerns around the UK Energy Bill. Can you give us an idea of the number of jobs in Scotland that will be threatened if your concerns are not addressed?

Rob McDonald: I have no numbers on jobs that are threatened in Scotland or the rest of the UK. My key concern is that, unless the fog of policy uncertainty is cleared pretty soon, there will be an investment hiatus, not just in Scotland but in the rest of the UK. We are extremely worried about that.

Joan McAlpine: An investment hiatus would have a significant effect on jobs.

Rob McDonald: It would be a serious matter. It would affect the number of jobs across the UK that could be created through the building of new stations and, as Alistair Buchanan from Ofgem said the other week, it would put at risk security of

supply for the UK. I do not want to get too melodramatic about that at this stage, but we are very worried.

Joan McAlpine: We talked earlier about the grid upgrade and the difficulties caused by uncertainty over transmission charging. I represent the south of Scotland. Is it the case that the transmission issues affecting the northern and more remote parts of Scotland are putting more emphasis on renewables development in the south of Scotland?

Rupert Steele: I would not put it in quite that way. We look for the best sites to develop wind projects, which are those where we can develop substantial schemes with a broad degree of local support, wherever that is possible. That was achieved with the 539MW Whitelee development and a number of other ones. Most recently, permission was granted for a 288MW development at Kilgallioch in the south of Scotland.

Obviously, transmission issues are one of the inputs considered when we are developing a site. We are investing a huge amount of money in building out the grid to accommodate those developments. I think that Iberdrola is going to invest £3.8 billion in the UK over the 2012 to 2014 period, the majority of which will concern grid enhancements, to enable, among other things, the development of wind power.

We consider all those factors, and we are looking at sites in the north of Scotland. We just look for the right sites for the developments that will make the vision of low-carbon Scotland a reality.

Joan McAlpine: Do you have a timetable for the grid upgrade in the south of Scotland?

Rupert Steele: Yes. We were fast-tracked by Ofgem in our first transmission price control review under the RIIO model—revenue = incentives + innovation + outputs—as, indeed, was SSE. That involved getting Ofgem's approval for a fairly detailed business plan that set out the major investments that would be made. We are cracking on with that plan.

Alison Johnstone: As Chic Brodie highlighted, Scottish Water is the largest single power user in Scotland. Its written evidence suggests that it has the potential to generate two or three times the electricity that it consumes. In areas where power generation outstrips Scottish Water's local need, have you considered adopting a community renewables model? About 49 per cent of the energy potential on the national forest estate is up for grabs by local communities. Is Scottish Water doing any research on adopting a similar model?

11:30

Dr Williams: We are looking across the estate and trying to find those opportunities where, primarily because of grid connection issues, it is in our best interest if we can use the power ourselves. Those are the projects that are most economic for our customers for us to invest in, because of things such as paybacks. However, we have bigger opportunities than those. Although we have not specifically considered community partnerships, an examination of the outlets for power and how we can export it will be part of the consideration of whether it is proper for us to invest in certain areas.

Such opportunities tend to come through our commercial arm, Scottish Water Horizons, because they are not fundamentally part of the core regulated business. We are very much working in partnership with developers and others, first of all to seek those great opportunities. Much of our estate is in remote areas, so it is not easy for us to find an immediate outlet for power. We are looking at some opportunities in the central belt, which might or might not provide those connections. However, as a large consumer of power, in the first instance we are focused on using that power on our estate, and then on exporting what we cannot use. Because our catchments are located away from the population centres, we come up against the overall grid connection issue, rather than a community engagement issue.

Alison Johnstone: But if community groups were to approach you, you would engage with them.

Dr Williams: Speaking on behalf of our commercial arm, Scottish Water Horizons, I can say that it certainly would be interested in speaking to anybody out there who has an opportunity. At present, the portfolio of opportunities is extensive. We are considering the feasibility of those opportunities and which of them look economic at any point in time. I imagine that we would certainly be open to speaking to local partnerships.

Alison Johnstone: I will move on to the topic of renewable heat. Highlands and Islands Enterprise's desk-based study shows that 45 per cent of the Highlands and Islands population is off the gas grid. Its submission states:

"despite the Renewable Heat Incentive ... and loan schemes, high switching costs remain an issue."

Mr Davidson, what are your thoughts on how RPP2 assists off-grid households to switch to renewable heat? What more could be done to help? Scottish Enterprise's submission refers to evidence that suggests that there are cost savings from renewable heat. I am aware that Scottish

Enterprise has considered a successful scheme in Denmark. I would like to hear views on how effective RPP2 is in addressing the challenges that we face surrounding renewable heat. Are there any other proposals that might help us to meet our targets?

Calum Davidson: Renewable heat is a particular issue in the Highlands because, as you say, almost half the population is off the gas grid. We have been addressing that primarily by trying to encourage a supply chain of alternative types of heat provision for domestic and commercial users. That is important for decarbonisation because, in the past, businesses such as distilleries have used very polluting heavy oil, so moving them towards biomass or wood pellet fuel sources is a significant step.

As an enterprise agency, our focus is on helping businesses to solve their problems and, crucially, on working with the wider supply chain to ensure a coherent and affordable source of alternative technologies and to help individual companies and small businesses to move on to those.

On RPP2, one interesting thing about the energy market for electricity and heat is that setting policy defines the market opportunity. Therefore, setting a policy that focuses on decarbonisation in the domestic market helps to create that opportunity. It is then the job of the enterprise agencies to support businesses that want to move into that market. Crucially, the agencies work at the interface between academia, further education and the skills agenda to try to ensure that the supply chain goes forward.

For example, our written submission highlights the Inverness College sustainable energy and micro-renewables centre, which we have supported for a number of years. It has demonstrated different types of activity and, crucially, it is involving further education and the wider supply chain. There are also larger investments, such as that in the Balcas plant in Invergordon, which is one of Scotland's major producers of wood pellets as well as of low-carbon electricity.

Andy McDonald: I will not repeat what Calum Davidson said, but our approach is similar. We have been looking at the supply chain. As Alison Johnstone rightly pointed out, we have been looking internationally to see what lessons we can learn from other countries. As Calum Davidson said, developing the supply chain is only one part of the issue. Another part is about ensuring that the demand exists, and another is about ensuring that the physical infrastructure can cope or can be amended, particularly to allow district heating programmes. We have also been considering the renewable energy investment fund and some of the investment support that is available to

encourage district heating programmes, either at community level or a larger level. In that way, some of the challenges of bringing forward new technology and allowing the supply chain to develop might be recognised and addressed.

We are working with a number of projects to try to balance the potential demand for small-scale heat programmes with the potential to supply the material or power base. Particularly on wood and renewables, we are working on projects with the Forestry Commission and others on small-scale rural programmes to try to develop a feedstock that then allows other programmes to develop.

Alison Johnstone: I have one more question, which is on district heating. We recently had a presentation in Parliament about the island of Samsø. The presentation highlighted that 85 per cent of renewables in Denmark are community owned and that any profits that are generated from the 11 turbines on that small island go back into the local community. There is also a district heating scheme on the island. Scottish Enterprise led a visit to a district heating scheme in Denmark. Did you learn any lessons that could be applied in Scotland to provide a faster roll-out of the technology?

Andy McDonald: One main lesson that we learned was that we cannot look at just the companies, the supplier or the user in isolation; we need to look at the whole process and the whole system around the opportunity. Samsø is a good example of that. The whole system there was taken into account, including the local industry, the local community, the scale of the community, who would own the scheme, who would invest in it and who would run it.

One of the lessons was about the need to bring together the potential technology and utility and very definitely the users and the community. The community had to see a benefit, and perhaps behavioural change was needed so that the community could own and manage the system and take full benefit from it. Behind that, the support and investment structure to allow those things to happen at community level also had to be in place. There was an opportunity to learn from that. Further discussions and visits are planned to take some more of that learning and consider examples in Scotland where we could potentially apply it.

Alison Johnstone: It would be good to hear more about those.

The Convener: In view of the time, we had better call a halt. We have had a good and thorough discussion on a broad range of subjects. I am grateful to the witnesses for coming to help us with our scrutiny of RPP2.

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

11:44

On resuming—

11:39

Meeting suspended.

Energy Bill

The Convener: Item 3 is evidence on legislative consent memorandum LCM(S4)20.1, which relates to the United Kingdom Energy Bill. I welcome Fergus Ewing, Minister for Energy, Enterprise and Tourism. He is joined by Katherine White, team leader, electricity market reform, and Mike McElhinney, head of electricity market reform, in the Scottish Government. I welcome you all. Minister, do you want to introduce the item?

The Minister for Energy, Enterprise and Tourism (Fergus Ewing): Thank you, convener. For the record, and if this is in order, I have some remarks to make that will set out our position with some clarity—I am afraid that they are not brief.

I am grateful for the opportunity to address the committee in respect of the motion that was lodged by Mr Swinney, Cabinet Secretary for Finance, Employment and Sustainable Growth, on 11 December 2012. As you know, the UK Energy Bill was introduced in the House of Commons on 29 November 2012 and completed committee stage on 7 February.

The bill's main purpose is to implement proposals for electricity market reform. It is fair to say that the proposals are crucial to Scotland's future energy mix, to maintaining investor confidence and to developing our vast renewables potential and carbon capture and storage technology in Scotland.

We agree with the recommendation in the committee's report on the achievability of the Scottish Government's renewable energy targets that EMR must deliver

"a new support regime that will have both durability and stability".

If we are to maintain the considerable momentum in the renewables industry in Scotland, it is clear to us that EMR must provide the same degree of market certainty that the renewables obligation currently delivers. That is key.

I assure the committee that the Scottish Government is working closely with UK Government officials on the content of the bill to get the best outcome for Scotland's electricity supply industry and Scottish consumers. We have made some progress towards that end. We have secured a statutory consultation role in a number of important areas and we have been working closely with the UK Government and National Grid in the analytical phase for the first delivery plan. I met John Hayes and National Grid in London

during the February recess to discuss those matters, *inter alia*.

Some areas are too important. We want assurance that the right levels of support will be available for the technologies in relation to which Scotland has natural advantages. We need to see progress, to ensure that Scotland's engagement in the EMR process is robust and meaningful and is clearly set out in legislation. We continue to discuss such issues with the UK Government before the bill is finalised.

Today, we are principally concerned with the provisions that fall within the devolved competence of the Scottish Parliament and with the legislative consent motion that is required to allow the UK Parliament to legislate on those matters. The elements of the Energy Bill that are the subject of the LCM relate to the introduction of a UK-wide emissions performance standard—EPS—to limit the amount of CO₂ emitted by new fossil fuel power stations.

The provisions in the bill for which consent is sought are in clauses 42, 43 and 44, in chapter 8, and will impose a duty on operators of fossil fuel plant not to exceed an annual carbon dioxide emissions limit; provide for a suspension of the emissions limit in exceptional circumstances; and create a duty on the Scottish ministers to put in place an appropriate monitoring and enforcement regime for Scotland, which will be undertaken by the Scottish Environment Protection Agency, the environmental regulator.

The EPS will act as a regulatory backstop on the amount of carbon emissions that new fossil fuel power stations can emit, providing a clear signal that investment in new power stations must be consistent with our decarbonisation objectives, including the objective for all new coal-fired power stations to have a proportion of their capacity equipped with CCS.

Those provisions fall within the legislative competence of the Scottish Parliament, in relation to environmental protection and emissions control; they also relate closely to reserved provisions in relation to electricity generation. On balance, the UK Energy Bill represents an appropriate and proportionate legislative vehicle to enable the provisions to apply across the UK, while acknowledging the Scottish ministers' powers in the area.

We consulted separately on the matter last spring and received a range of responses. The balance of views called for a consistent regulatory approach across the GB market. That factor is important for investor certainty and, as we are committed to a single electricity market following independence, we are agreeing in this case to

subscribe to the uniform application of the EPS across the UK.

The Scottish ministers will have a statutory consultation role in relation to the duty where it applies in Scotland and if the emissions duty is suspended. That will ensure that specific Scottish issues can be taken into account as part of the developing regime that will work across the UK.

At the currently proposed level, the EPS alone will not deliver our commitment to a largely decarbonised electricity generation sector, as prescribed in our recently announced target to reduce carbon emissions from electricity generation to 50g of CO₂ per kilowatt hour by 2030. That target should be seen in the context of our wider policies and powers, including our executive devolved powers under section 36 of the Electricity Act 1989, our policy on thermal generation with CCS, increased renewable generation and demand management. The principle of a consistent regulatory regime is our overriding objective, which must be used together with existing powers and policies to limit CO₂ emissions.

In closing, I know that there is considerable interest in the outcomes of the Energy Bill. I intend to bring this issue and the wider EMR proposals back to the chamber—with the agreement of the relevant parliamentary authorities—before the summer recess. That will allow the Scottish Parliament fully to consider the impact of the proposals before the final amending stage of the bill. As minister, I invite the committee to consider the relevant provisions of the UK Energy Bill relating to an EPS. However, in view of the ongoing negotiations that I have sought to outline and my intention to secure an opportunity for the whole Parliament to discuss the bill proposals, the committee may wish to defer a final decision on the LCM until discussions between the UK and Scottish Governments have had the opportunity to progress further. I have already made the convener and committee members aware of that proposal.

In the meantime, along with Katherine White and Mike McElhinney, I am happy to seek to answer members' questions.

The Convener: Minister, thank you for that and also for your letter, which is very helpful, as it means that the committee is not under the same time pressure for agreeing the terms of the LCM. It is useful to have the extra time in hand.

Before we come to questions from members, let me say two things. First, we are very short of time this morning. Secondly, our discussion is not about the Energy Bill generally but is very much focused on the terms of the draft motion and the specific proposals contained therein. If members

could restrict themselves to addressing those points rather than wider points on the Energy Bill, that would be helpful.

Let me start the questioning. By coincidence—a very timely coincidence—we have just had an evidence session with Scottish Power and SSE in which this very point came up for discussion. Both power companies pointed out that, because of the potential cost, there may in fact be no business case for new combined cycle gas turbines if they are required to attach CCS. Certainly, if there were more stringent emissions standards in Scotland, any future investment in new CCGT plant would likely be made south of the border, which would mean that Scotland would lose out on investment and jobs. Has that been a factor in arriving at your decision?

Fergus Ewing: We obviously bore that factor in mind, along with many others. As I mentioned, when we were consulting on the electricity generation policy statement in March last year, we received a wide range of views, including from SSE and Scottish Power, on the desirability of having a UK-wide target. Obviously, that was repeated in the evidence that the committee has just heard, the tail-end of which I caught. That is one reason why it makes sense that setting the level of EPS at 450g per kilowatt hour should be accepted, as that would ensure that there is, if you like, a broad equivalence within the UK.

Of course, there will be no gas-fired power stations at the moment, because the power companies do not know what the capacity payments will be, because there are no figures and no rules available on that. As a result, sadly, there is an investment hiatus and there is a risk of leakage of investment to other countries. Again, that was made clear in evidence to the UK Parliament by Keith Anderson and Ian Marchant in July last year, when they gave evidence on these matters.

Another factor is that Cockenzie and Longannet, if they were being considered for future investment in gas-fired thermal stations, have the potential advantage of already having the infrastructure that connects them to the grid. In that respect, Cockenzie and Longannet have in-built advantages over greenfield sites. Another factor is that, as I understand it, the transmission charges are generally higher in Scotland than in England, so sadly there has not actually been a level playing field for Scotland under UK policy for some time. I understand that that may be put right if the project transmit proposals eventually become law—which would be a step forward for the mainland, but not for the islands, which is another matter.

The primary answer to your question is that we recognise the broad concerns of the industry

about having a reasonable level playing field. There will always be a slight tilt for various factors, as I have mentioned, but we recognise that, and that is one of the reasons behind our decision to go with a single EPS level throughout the UK.

Rhoda Grant: Why has the Scottish Government decided to pass the powers for devising the emissions performance standard to the UK Government in the legislative consent memorandum?

Fergus Ewing: I have sought to work in partnership with the UK Government on the matter, which I think is important. I have had reasonable relations with the various ministers with whom I have dealt and am dealing. As I mentioned, most recently I had a meeting with John Hayes during the February recess; I had several meetings with Charles Hendry before him, and several with Ed Davey.

It is broadly sensible to work in partnership. Why is that? Scotland is a net exporter of electricity to England, and the scale of that will massively increase. I think that the export capacity is going to quadruple to about 8GW by 2014, partly as a result of the investment in the grid about which you heard towards the end of the previous evidence session.

We wish to be as close as possible to being a partner under the devolved arrangements. We wish to have a role and an ability to influence and to be a part of decisions regarding, for example, contracts for difference and strike prices, which will be the meat and potatoes of EMR. We do not know what those are at the moment. We need to know that the capacity payments and strike prices will be sufficient to incentivise renewables and to make CCS work, at long last.

Those things need to be done with a grid system that operates across the mainland. Scotland's advantages have been recognised through the fast-tracking of grid approval to a value of £7 billion. To take advantage of that decision, it makes sense to operate on a share basis. A consistent approach is very important for investor certainty—I cannot overemphasise the importance of having a system that attracts the necessary investment for CCS and renewables.

At the moment, I am afraid, we are not quite there, and we need a bit more certainty from the UK end of the partnership, it is reasonable to say. However, we will have a statutory consultation role in relation to the application of the emissions duty, and we will have a responsibility to put in place monitoring and enforcement arrangements, which will ensure that any specific Scottish issue can be taken into account within the developing regime across the UK.

Mike McElhinney (Scottish Government):

Support for the UK-wide EPS level is contingent on securing concessions from parts of the electricity market reform process, as ministers have made clear from the outset. As we are still in negotiations, the suggestion is that it is becoming difficult to separate that out from a wider consideration of some other points of detail around electricity market reform.

Those points of detail will be quite important, for a number of reasons. Earlier, convener, you spoke about incentivisation for CCS. There will be a strike price for CCS, which may well mitigate the impact of other parts of the market framework for CCS in Scotland. We do not have that line of sight yet. We are working very hard with our colleagues at UK level, who are doing some proactive work on that, and we are in there, but we are not yet at the stage in the negotiations of having the necessary assurance and confidence to transition into proposals in the way that we would perhaps like.

Rhoda Grant: With respect, neither of those replies answered my question, which was about why we are transferring those EPS powers to the UK Government. Could we not retain the powers and do all of it?

12:00

Fergus Ewing: If the policy recognises that the market should operate across the UK, logically we need to work in partnership for all elements. That would apply post independence as it applies now. That is a matter of practicality and common sense, and we must recognise that. That is what the industry wants.

I do not know whether Rhoda Grant is proposing some independent Scotland option in which we disengage from the national grid, but I should clarify that, as Mike McElhinney has quite rightly suggested, although the areas where we think progress needs to be made are details of the bill, they are still fundamentally important. I do not want to leave any impression that these matters are trivial; for example, we need to get a result for the islands from the intergovernmental working group on transmission charges and do not feel that it would be prudent to cede power until we know that the islands are going to take part in renewable policies and not be excluded from them. I know—or at least expect—that Rhoda Grant would support that line of argument.

Rhoda Grant: That is all well and good, minister, but it does not really answer my question. Let me give you an example: given that our grid decarbonisation target is different from that for the rest of the UK, it seems to me strange that we are giving up powers over emissions performance

standards to the UK. There is no reason why we cannot retain those powers, pin them to the UK's approach and work collectively on the matter. I totally agree that we need to work collectively, but I do not really get the policy of having different targets in one area but then giving up powers to set targets in a similar area.

Fergus Ewing: Let me try a slightly different answer in the hope that it will curry more favour with Rhoda Grant.

Rhoda Grant: I am just looking for an answer, minister.

Fergus Ewing: The decarbonisation target is one measure but the fact is that EPS alone will not deliver it. Other important elements, levers and means of achieving it include increased interconnection and transmission upgrades capable of supporting the projected growth in renewables. At the moment, too many developments are constrained or simply cannot get on to the grid. Once they can get on to the grid through, for example, the investment in the south of Scotland that we have heard about—including, I should add, investment in training people in the grid in Dumfries and in renewables in Ayr—more renewables can be exported to England.

The second extra lever in achieving our decarbonisation target is the demonstration of commercial-scale CCS in Scotland and the third is, of course, demand management. CCS is extremely important. Although I cannot predict or prejudge any planning application that might fall to local authorities for a decision, there are two potentially exciting applications—Summit Power's proposed development at Grangemouth and a joint venture between SSE and Shell at Peterhead—that I believe have reached the final stage of the CCS commercialisation programme, which we support. To be fair to the UK Government, I should say that it, too, supports CCS and the huge supply chain advantages that will arise if we make it a reality.

It is reasonable to point out that this is not just about setting a target or figure but about putting in place implementation measures. As a result, we need more renewables and a grid that enables such a move; more CCS; and demand management measures to reduce the amount of energy that we waste. We will all recognise, I think, that those three key measures will be sine qua nons in achieving our target and are areas in which our objectives are broadly consonant with those of the UK Government.

Rhoda Grant: That does not really answer the question of why we are giving up the lever that I mentioned, but I will move on. Given that, as we have been told, the performance standards have been set so high that they will do nothing to

encourage CCS, what steps is the Scottish Government taking to encourage it?

Fergus Ewing: We support the commercialisation programme, which represents £1 billion of capital funding for commercial-scale CCS and is targeted specifically at reducing its cost to ensure that it can be commercially deployed by 2020. The problem is that CCS technology has not really been applied in the UK or Europe at the kind of commercial scale that the industry believes is necessary for it to be able to submit applications for developments that reduce costs and make CCS capable of being commercially deployed from 2020 onwards.

The other facet that will support CCS is contracts for difference. That will be key. The £1 billion could be divided up in several ways and we are not sure what the outcome is going to be, although I discussed the matter with John Hayes last week and we hope that a decision is imminent. For CCS to be made to work, it will require CFD and a strike price, and that will have to be sufficient to merit a commercial decision by the two potential operators that I mentioned, or by any others who propose CCS schemes. Otherwise, it will not happen. Mike McElhinney is an expert on this, so he will come in now.

Mike McElhinney: That brings us back to the process of negotiation with the UK Government. The key determinants in the discussion will be the strike prices that are set for CCS, how they are framed, how enduring they are and how much confidence they give developers who want to develop and deploy CCS that some of the potential market disadvantages or challenges of doing so will be edged out. We will not see the indicative strike prices until April or May this year. We are working to get detail on them to ensure that they are robust and defensible, but we are not quite there yet.

As we said earlier, the key policy approach is to work with the grain of the proposals. If we accept the outcomes of the consultation on the EPS and go for a UK-wide application of it, we will look at how that works across different parts of the UK. Other parts of the process should also be designed in such a way that we have equal influence over them, for example strike price setting and the strategic policy statement for Ofgem that is covered elsewhere in this bill, which is wide ranging and significant.

As in any other discussion between Governments, there is an opportunity to deploy powers in one way in one part and to deploy them differently or engage differently in the joint exercise of functions in another part. The underlying rationale for doing that is that we engage with all parts of the market and we hear that there is an underlying need to deliver stability

and on-going confidence in the market. There has been much discussion around the Energy Bill proposals about an investment hiatus and a lack of investor confidence. We believe that it is incumbent on us to try to mitigate that as far as possible by working with the grain of the proposals. That is why we are so keen to continue the negotiations with the UK Government to try to deliver outcomes that work for both Scottish Government energy policy and UK energy policy.

The Convener: Okay. In view of the time, I need to bring in other members. I sometimes wonder whether I have entered a parallel universe in which the nationalist minister is proposing the ceding of powers to Westminster and his Labour Opposition is opposing him, but anyway—

Rhoda Grant: I am questioning him. *[Laughter.]*

Alison Johnstone: We are clear that the Scottish Government does not intend to set a Scottish EPS and we have confirmed that the LCM recognises that the EPS on its own will not deliver decarbonised electricity generation. We have also heard about the other measures that the Government intends to pursue to limit CO₂ emissions from fossil fuel power stations. Will the final electricity generation statement include additional measures that add up to meet the decarbonisation targets?

Fergus Ewing: Sorry. I do not understand what you mean.

Alison Johnstone: Given the recognition in the LCM that the EPS on its own will not deliver the Government's commitment to a largely decarbonised sector, do you intend that the final electricity generation policy statement will include additional measures that add up to our meeting that decarbonisation commitment?

Fergus Ewing: The purpose of the EGPS is to set out how Scotland's requirements for electricity supply will be met and to demonstrate that we can achieve our target, but also to show from which sources it will be met. A variety of sources is needed for us to keep the lights on. There are many good reasons why we need a mixture of sources such as renewables and—certainly at present—thermal generation back-ups. However, it is not the purpose of the EGPS to provide all the explanations. Its purpose is to show how, by 2020, electricity needs will be met through a policy that recognises that, when it comes to electricity supply, as Churchill once said, the priority is “variety and variety alone.”

That is the purpose of the EGPS. The purpose is not really to be an all-encompassing policy document and to set out what I have just said, which is that we also need great improvements in renewables capacity and to demonstrate CCS on a commercial scale.

I hope that the Greens support CCS, but I am not quite sure. Perhaps Alison Johnstone could keep me right on that point.

Alison Johnstone: We would certainly welcome further investment. As we heard from our earlier witnesses, there are still serious concerns about CCS and we need to see a live project that shows us the technology's potential.

Can I ask how SEPA will monitor and enforce the emissions limit and what the costs of that might be for it?

Fergus Ewing: You can ask, but I am afraid that the answer will have to come from SEPA, because I could not competently speak on its behalf.

To return to CCS for the moment, convener, the matter is serious. When I attended the Council of Ministers in Brussels with the UK delegation in November 2011, the leader of the International Energy Authority made a statement to the assembled ministers from all European Union states basically saying that, without CCS, European emissions targets could not be achieved.

Let us step back for a moment and think about that. How can carbon emissions be reduced unless carbon-emitting power stations cease to emit carbon or massively reduce their carbon emissions? How can it be done? It is blindingly obvious, is it not? Therefore, the longer we wait in the UK for CCS to be tried out, the less prospect there is of achieving targets—an objective that, I think, is shared by all parties.

As Alison Johnstone fairly says, CCS needs to be tried out and demonstrated, but it seems to me to be a *sine qua non* of green policies as I understand them.

Katherine White (Scottish Government): I could answer some of the points on SEPA in relation to the LCM, if that would be helpful.

We have talked about part of the LCM giving consent to the UK-wide application of the EPS, but the second part of it concerns additional powers that the Scottish ministers and the Scottish Parliament would have in relation to setting the monitoring and enforcement regime for the EPS. We would develop that; there would be a secondary legislative process under the UK Energy Bill to develop the monitoring and enforcement regime.

We have talked to SEPA about that several times and are meeting again tomorrow to talk about the development of the EPS, what SEPA's role in that will be and how to design the regulations to make them work for SEPA. The timeframe for developing those regulations will be into 2014.

The costs have been estimated by the UK Government. We have not done any cost exercises with SEPA, but the principle will be that SEPA will be able to recover the costs of running the monitoring regime from the power companies. The costs should be quite low, because the data that will be required will already be received as part of the EU emissions trading scheme monitoring.

Alison Johnstone: Will SEPA be able to provide public information on the efficiency of the plants?

Katherine White: I assume that it will to the extent that it does already. I am not sure exactly what it will report on in terms of efficiency, but there will be a range of reporting mechanisms and data collection. We can discuss that later if that would be helpful.

The Convener: Minister, for management purposes will you clarify that you need to be away at quarter past 12? Is that right? Other members want to come in.

Fergus Ewing: I am quite happy. I have lunch in the diary for 12.15, but I am sure that that can be postponed.

The Convener: We need to be out of this room by 12.30 so, if it is all right for you, we will run on for another 15 minutes, because other members want to come in.

I have a follow-up question to your response to Alison Johnstone on CCS. Given everything that you have said about the centrality of CCS to meeting our targets, what will we do if the approach does not work?

12:15

Fergus Ewing: With respect, convener, neither of us is an expert in this area. However, I speak to people like Mike Farley of Doosan Power Systems and Graeme Sweeney, formerly of Shell, who head up the carbon capture and storage sub-group of the Scottish power advisory board. I co-chair the sub-group and have attended several of its meetings, so it has been impossible for me to avoid acquiring some knowledge of the topic over tens of hours of meetings on it. There is no doubt that the technology can work; it is the commercial application of it that needs to be pursued. I do not think that there is any doubt that it can be achieved technically.

The value of the process is enormous. We have asked the UK Government to pursue an industrial strategy to demonstrate the value to the supply chain of CCS. I think that the conventional view is that opportunities for businesses in the UK in the supply chain for CCS are very substantial and strong, given the engineering excellence of

businesses north and south of the border. I hope that I am not overstating the case, but I think that it is fair to say that the technology exists but has not yet been put into practice sufficiently. Is that fair, Mike?

Mike McElhinney: We have other potential commercial and research and development advantages in Scotland. We have some of the best CCS storage sites in Europe, extremely strong R and D capacity in Scottish universities and colleges, and extremely strong industrial capability in the offshore oil and gas sector. So, if CCS is going to work anywhere, it will be in Scotland.

The Convener: But you are still saying “if”, which is my concern. The fact that the UK Government is going to do a trial of CCS suggests that it is not a done deal. Anyway, we will leave that hanging. Marco Biagi has a question.

Marco Biagi: I am putting on my pedant’s hat in order to clarify something for the record. I wonder whether you can confirm that the legislative consent memorandum is a consent to legislate for one bill rather than, as it perhaps has been described thus far, a re-reservation of the power to set an EPS. Rather than handing back an EPS to the UK Government, are we not simply consenting to the passing of this particular EPS.

Fergus Ewing: It is even less than that, because the consent is to just three clauses of the bill and not the whole bill, so it has limited application in that regard. However, basically, the answer to your question is yes.

Marco Biagi: The alternative seems to be the unspoken proposition among some members of a unilaterally lower EPS in Scotland. We heard from one of the power companies earlier that the only implication of that would be that plants would be built in England. I have looked at some reports that project an entirely non-thermal generation future in Scotland, which project increased imports from England. I presume that they too model the plants being built in England. Do you agree that the likely outcome of a unilaterally lower EPS in Scotland is that the same plants would be built, but they would be built somewhere else, and that we would not assist the environment overall?

Fergus Ewing: That is certainly a possibility; there is a risk that that is what might occur. However, the 2030 decarbonisation target that we have set is an essential means of giving confidence to a number of important sectors, including offshore wind. There is great worry that the lack of a matched target from the UK Government is not providing the confidence that the sector requires.

The committee might be interested to look at the Cambridge Econometrics report that considers

offshore wind versus gas and studies the pros and cons economically and otherwise. The report’s conclusion is that if there were to be the entirely supportive approach that we are urging from the UK Government, UK gross domestic product could grow by nearly 1 per cent by 2030.

Why is that? At the moment, the UK Government is supporting offshore wind and other renewable sources of energy, but it will do so only to 2020 and until the £7 billion runs out. If you are a turbine manufacturer who is looking to locate in Scotland—several are—you want to know that there is a business beyond 2020 and that there will be support for your business in the UK after the current round is, as it were, exhausted and applications proceed.

On the wider issues, beyond the scope of the LCM, which it is inevitable that we will be considering, I recommend to the committee the Cambridge Econometrics report, which is an interesting study of the huge benefits that would accrue to Scotland and the UK if we pursue what I would call a whole-hearted approach to incentivising appropriately the offshore wind sector in particular.

The Convener: Margaret McDougall would like to ask a question. I ask for brevity.

Margaret McDougall: I will be brief, as I am not very knowledgeable in this field.

SEPA is already working with the Scottish Government on the better regulation bill. How closely are you going to match that with the LCM?

Katherine White: That has been part of our discussions with SEPA and we will pick the matter up again tomorrow. Unfortunately, given the timing—with this bill coming in a bit later than the review associated with the better regulation bill—we will align SEPA’s functions, if they are revised or refreshed, with the EPS. However, SEPA is aware of the EPS provisions coming in. We have done our best so far and we will keep it on the radar.

Margaret McDougall: You are doing that so there is no duplication of work.

Katherine White: Exactly.

Chic Brodie: I am sure that SEPA will monitor, enforce limits and report regularly. Do we exchange information with the Westminster Government in relation to plants outwith Scotland? How do we ensure that the same rigorous level of monitoring and enforcement is happening elsewhere?

Katherine White: The monitoring framework will operate under the EPS directive. The information is collected by SEPA and goes into a UK-wide depository of data. The Environment

Agency in England and Wales performs the same function down south as SEPA does in Scotland. The framework is strict, so I do not believe that there will be any inconsistencies between the regimes.

Chic Brodie: I hope that you are right, but I got a terrible feeling of panic when I watched the select committee considering the Energy Bill—panic with a small P at this stage, perhaps. The idea that we will be the only ones who are applying rigorous monitoring of the situation worries me.

Katherine White: The EPS concerns new plants. Probably a relatively small number of plants will be monitored.

Mike McElhinney: The point about ensuring the consistency of the measures across the piece is important. We are having a discussion with our UK counterparts about how we can build a future-proof process, which will allow the Governments of Scotland and the UK to assure themselves that the application across the GB market as a whole is equitable, transparent, open and robust so that, if there are areas in which we have policy differences, we have a space within Government to have a discussion about them. The last thing that a sector such as the energy sector wants, given that it works to relatively long investment timescales, is for that sort of discussion to happen in a confrontational way.

It is incumbent on us to work with the grain of the proposals in order to deliver stability in the future market. Ensuring consistency of EPS monitoring across the GB system will be as important as ensuring that the capacity market works across the GB system and that the strike prices are set appropriately across the GB system. Also important is the fact that the National Grid will have a key role in controlling the future strike prices, and we need to ensure that no conflicts of interest emerge in the way in which the National Grid acts.

The market will be regulated in a different way from the way in which it is currently regulated. There are lots of opportunities for obfuscation and lack of transparency to creep in. We want to get to a place with the UK Government in which we have a future-proof process through a statutory presence in the bill, which is strengthened through a joint memorandum of understanding or a mechanism of joint working between Governments, so that we lock each other into a set of behaviours and ensure that we are working in a way that helps our mutual interests.

The Convener: I thank the minister and his officials for coming along. Because of the timescale that the minister referred to earlier, we

do not need to agree today on our report on the LCM or make a recommendation on it.

12:25

Meeting suspended.

13:03

On resuming—

Alternatives to GDP

The Convener: Welcome back to this meeting of the Economy, Energy and Tourism Committee. I am delighted that we are joined by Professor Joseph Stiglitz. Can you hear me this afternoon, Professor Stiglitz?

Professor Joseph Stiglitz: Yes, I can.

The Convener: It is morning where you are. Good morning.

Professor Stiglitz: Good morning. It is a rainy morning in New York.

The Convener: Thank you for taking the time to join the committee. I should introduce myself: I am Murdo Fraser, the committee's convener, and I am joined by a number of colleagues. We are keen to talk to you about alternatives to gross domestic product as a measure of economic success and progress.

Before we get into questions, I believe that you are keen to say something by way of an introduction.

Professor Stiglitz: Sure; let me begin. I am delighted to be here to talk to you. My work with the international Commission on the Measurement of Economic Performance and Social Progress has underlined concerns over the adequacy of GDP as a measure of wellbeing. I hope that my remarks today will provide further impetus for the work in Scotland to improve and implement better measures of performance.

That is important, because what we measure affects what we do. If a country assesses success by the wrong measures, it is likely to do the wrong things. Metrics such as GDP are part of our information system, and information systems guide how we steer the economy. That GDP is not a good measure of wellbeing has long been recognised. Simon Kuznets, who is widely credited with creating our system of national accounts, was aware of its limitations. In 1934, he commented:

"The welfare of a nation can scarcely be inferred from a measure of national income."

Yet, as our report pointed out, while changes in our economy and our society meant that GDP or GNP—gross national product—was increasingly inadequate even as a measure of market activity, it was increasingly relied on as a measure of performance. Thirty-four years later, in a cogent criticism of what was wrong with it as a measure, Robert Kennedy remarked:

"it measures everything except that which makes life worthwhile."

Since then, those warnings have been ignored as GDP and GNP have become even more central to our measurement of success. In performance-oriented societies, we want metrics, and GDP and GNP provide such a metric. However, since Kennedy's time, matters have become worse, because of changes in our technology and because we have shifted focus from GNP to GDP, which is centred on measuring the goods that are produced within a country, not even the incomes of the citizens of a country.

We have been pleased by the reception that our report has received and the research efforts and policy initiatives that it has encouraged and spawned. We hoped that our report would spur not only research, but a framework around which a more meaningful discussion could take place about societal objectives, with a broader engagement of civil society. We said that wider and more open public discussion would be crucial.

Let me commend Scotland for the several efforts that are being made to develop better measures of performance. Under the aegis of the Carnegie UK Trust, a round table on measuring economic performance and social progress in Scotland was created, and its report, "More than GDP? Measuring What Matters", used the template of our report to review the success of Scotland and the extent to which Government was being held accountable in performing its role in contributing to Scotland's success.

A number of the observations that that report made highlight the points of our original report. It said:

"Put simply, GDP measures the 'busy-ness' of our economy. But is a growing economy busy doing the right things? Making our economy do more will not necessarily lead to the things we want."

It also said:

"Our over-reliance on GDP makes it difficult for politicians to back policies that are good for society or the environment, but which might hamper an increase in GDP."

In reviewing the Scottish attempts to assess the country's performance in a way that goes well beyond GDP, the report observed:

"The most important fact about the NPF is that it exists'. The innovative work and thinking in developing it ... deserve praise."

It emphasised the need for indicators of performance for the Government and for society more broadly, but said that it was also critical that measurements helped to move Scotland towards its own goals. In effect, it recognised that many of those goals lay outside the traditional market economy, and that even those goals that lay within the market economy were not necessarily well valued by prices in the price system and,

therefore, were not incorporated accurately in GDP.

A standard theorem in economics is that when the price system works well, it can be used for efficient decentralisation, but a standard problem in the public sector is how to decentralise and devolve responsibility. There is a belief that such decentralisation may lead to better delivery of public services, but that will be true only if those who deliver public services have the right incentives. Problems of agency delegation are pervasive. As we emphasise in the Scottish report, if the price system provides an inadequate framework for delegation and decentralisation, something else must be put in its stead. The Scottish report is an attempt to do that.

I am particularly pleased that a lively discussion has emerged in Scotland over the critical question of what matters and how best to capture that in our metrics. It is exactly what the commission hoped would follow from our report. We hoped that the report would lead not just to better metrics but to stronger public awareness and a more vibrant public dialogue on issues that we believed should be at the centre of our society's concerns. Oxfam's humankind index, which was formulated with the New Economics Foundation and the Fraser of Allander institute, is another commendable example of that approach, but I do not want to comment now on its recommendations.

In conclusion, I will leave you with five general observations. First, technical matters are important; if they are not addressed, our metrics can be misleading. One of the commission's three working groups delved deeply into the issue, and I hope that Scotland will provide support for continued work to improve our measures.

Secondly, distribution matters. What is relevant is not just how a country does on average, but how the benefits are distributed. My recent book, "The Price of Inequality", emphasised the many dimensions of inequality and how they are increasing in most countries around the world. I argued that we pay for that inequality; it weakens our economy, undermines our democracy and divides our society. An economy such as that of the United States in which GDP is going up while most citizens' income is going down is not a successful one, but an emphasis on GDP might lead one to conclude otherwise.

Thirdly, sustainability is vital in every respect—environmental, economic, political and social. Although America experienced growth in the early years of this century, it was a false prosperity and was not sustainable. Even worse, the west's seeming prosperity is not environmentally sustainable. We will have to learn to live within the confines of our planet's limited resources and

cannot ignore global warming. Again, I commend the Scottish Government's work in that arena.

Fourthly, what we care about is wellbeing as it is broadly defined. Material goods are a means to an end, not an end in themselves. We in the 21st century are fortunate enough to have more than enough goods to meet everyone's basic needs if they were fairly distributed, but the organisation of our society might leave many insecure and isolated and lead to a poorer environment and a divided society with more inequality.

Finally, I want to return to my central theme. My hope was that the commission would give rise to a worldwide dialogue on what really matters and that dialogue would in turn become an instrument for creating a better society, in which more individuals would be able to live the kind of life that modern technology can support. I commend you on your work in creating that kind of dialogue in Scotland.

The Convener: Thank you very much for that comprehensive introduction, in which you have raised a load of questions that I know my colleagues will want to pursue. We are quite short of time this afternoon, so I have asked colleagues to ask brief questions in the hope that we can get through the list that we have before us.

First, are you proposing that GDP be replaced altogether as a measure of economic success or do you accept that it still has a role but needs to be complemented with other measures?

Professor Stiglitz: We need a measure of market activity such as GDP. I must emphasise the important point that I made in my introduction about the major flaws in the way that we measure GDP or market activity. An important issue for certain small economies is that GDP is a measure of the production inside an economy, not the income of its citizens. Those two numbers will be the same in a closed economy but in more open economies they can differ. One dramatic example is that of Ireland, where GDP and GNP have differed markedly because a lot of the economic activity that is supposed to occur in the country actually comes from multinationals, which means that the income does not stay in the country. It gets a little cut from taxes, but its income is not enhanced. As I have said, GDP and GNP are markedly different and I would argue that people should be focusing on GNP.

13:15

The Convener: Thank you for that clarity.

I have one follow-up question before I bring in one of my colleagues. You spoke a lot about the need to reduce inequality. Do you believe that we can reduce inequality without increasing taxation on those who are better off?

Professor Stiglitz: Taxation is one important component that ought to be part of a package. In my book, I have laid out a fairly comprehensive agenda—21 items—for how we can address inequality. I am more familiar with the tax system in the United States, where we tax speculators at lower rates than we tax people who work for a living. Arguably, that distorts our economy and increases inequality.

However, taxation is not the only instrument for reducing inequality. One thing that I was really concerned about in my book is equality of opportunity. Among the advanced industrial countries, America has become one of the worst for equality of opportunity, which is very different from the image of America that is annexed to the American dream. Education is absolutely critical for opportunity, so education is another element. Of course, you cannot have good public education without revenues, so taxes also become part of that agenda.

Thirdly, at least in America—this is true of most other advanced countries—one of the major sources of inequality is what I call rent seeking. That notion is that some people get a large income not because they have contributed to society by making the pie larger, but because of their efforts to take a larger slice of the pie. For example, when the financial sector and the bankers brought the economy to the brink of ruin, they were not contributing to a better economy. What they were doing, particularly in America, was predatory lending, abuse of credit card practices and manipulating markets. All of that is about trying to take money from others, not making our economy work better. Those are all examples of how we can simultaneously reduce inequality and make our economy perform better.

Mike MacKenzie: Good morning, Professor. First, I thoroughly enjoyed your most recent book, “The Price of Inequality”. As I was reading that, I was thinking of the book “The Spirit Level”, which you may also have read, in which Wilkinson and Pickett show that inequality is correlated not just with a range of social outcomes but with GDP per capita. The authors found that, where there was least inequality, there was best economic performance in terms of GDP per capita.

To come to my question—I should apologise to my colleagues, but your introduction answered my initial five questions, so this is actually question 6—are those things mutually exclusive? Does GDP per capita still have some usefulness if we include it with other measures? Should our primary focus be inequality rather than getting too tied up in how we measure it?

Professor Stiglitz: One thing that I emphasised in my introductory remarks is that GDP per capita talks about what is happening on average, but the

average person is not average. When you have a lot of inequality, GDP per capita does not tell you what is happening to the typical citizen or representative voter. That is what we ought to focus more on. If I had to pick up a number—there is no single number that can capture anything as complex as our economy or society—I would say median household income or median disposable income. In other words, you want to talk about the person in the middle, which is not the same as the average.

What has been happening in the United States, just to give you a picture, is that per capita income has been rising—in 2009 it went down, but with that exception it has gone up almost every year—but median income for the typical family in the United States, with half above and half below, is lower today than it was in 1996, a decade and a half ago. Median income of a full-time male worker in the United States is lower than it was 40 years ago. A society that says to the typical worker, who is working full time, putting in all his efforts, that the income today is the same as it was 40 years ago is an economy that is not having progress and is not successful.

People say that America is a great success and everyone congratulates it. It has some strong aspects, and we have to commend the innovation. However, in terms of delivery to most citizens, it has failed. That means that we ought to have a dialogue in the United States. Why has it failed? What can we do to make it work? I am glad that that kind of dialogue is beginning to occur in Scotland.

Alison Johnstone: The purpose of the Scottish Government, as set out in its 2011 document, “The Government Economic Strategy”, is to increase sustainable economic growth. The Government is measuring that by using seven targets, in an effort to broaden measures and consider progress on, for example, inequality. However, GDP still retains its central place. How appropriate is the Government’s framework for measuring economic progress and wellbeing? Have we got the balance right between measures of production and measures of wellbeing? Should the headline indicator in the framework continue to be GDP? Should it be GNP, which you have said that you prefer, or should an entirely different measurement take the central place?

Professor Stiglitz: The commission recommended what we called a dashboard approach. As I said, no single number can capture anything as complex as our society. You want a measure of how much resource is available to you, because that will determine what you can spend on education and whatever else you decide to spend money on. The resources are an

important dimension of the economy and therefore of society.

However, that does not really capture a lot of what is going on. As I said, resources are a means to an end, and the end is the greater wellbeing of our citizens. You therefore want to begin to think about what will affect people's wellbeing. That is what you ultimately want to get at, but it is a more difficult question and economists do not have such good measures in that regard.

I hope that as a result of the impetus of the commission there will be work in each society and each country to try to develop better measures of wellbeing and what it means to be well off. In our original report, we identified several components, and some of the work that is going on in Scotland and elsewhere has reinforced the importance of those components.

I will mention a couple. Health is obviously very important. Security is very important. GDP does not necessarily capture well either health or security. Again, I will talk about the United States, because I know more about it. We have a very inefficient healthcare system, which does not deliver well. We spend 17 per cent of GDP on health, but the health outcomes—the healthiness of our people—are poorer than in the UK, France and other countries that spend a lot less. That is a real example of where GDP is not a good measure.

A third important dimension that we talked about is connectedness. It is very important for people to be connected with other people—the nature of the social fabric is important. Another dimension that we emphasised is employment. People want to contribute to society in one way or another, and when our economy or society does not provide enough jobs, citizens' wellbeing is undermined. That is a real concern in Europe and America today, because we are not creating enough jobs.

Rhoda Grant: Could we in Scotland devise our own indicator that we could use for our own budgetary processes? How meaningfully would that engage with our progress if it was not more widely recognised?

Professor Stiglitz: There are two separate functions of the metrics, one of which is to get a benchmark to assess how well you are doing relative to others. We all need yardsticks to see whether we are doing well or poorly. Standards and comparisons are important for that process. Unfortunately, the comparisons are often very misleading.

Before the financial crisis, for example, a lot of people looked to America and at how good its GDP was. The view in a lot of countries was that they should emulate the United States. One of the motivations for some of our work in the

commission was the view that the United States was not the model for other countries because it had high inequality—most citizens were not doing well—and its finances were not economically or environmentally sustainable, but GDP did not tell us that. If people were chasing GDP, they were chasing the wrong thing. Comparisons are important, but I emphasise that they should be the right comparisons.

There is another important purpose, which is that you must make your own decisions about the direction of your society. There is no reason why Scotland should do exactly the same thing that every other country does. You may want to emphasise educational opportunity more than other countries do. If that is what you decide, it will be important for you to focus measures on such opportunity, and you can say that it is okay if you are not doing so well on some other measures if you are doing well on the things that you care about; you can say that, as a society, you are going to grade yourselves more on that criterion than on others.

The Organisation for Economic Co-operation and Development has undertaken an important initiative that it has really got right. The OECD did follow-up work on some commission work and created a set of indicators, but it said that there is no reason why people need to weigh different things in the same way. The OECD therefore allows different people to come in and, for example, put a lot of weight on the environment or on inequality, depending on what they think is more important. The OECD standardised the metrics in each of the dimensions, but it said that people could put different weights on the elements to create their own report card of their overall performance.

Joan McAlpine: What is your view on the Legatum prosperity index as a measure of fairness and wellbeing in countries?

Professor Stiglitz: Which prosperity index?

Joan McAlpine: The Legatum prosperity index.

Professor Stiglitz: I am not sure that I know the detail of that. There are a lot of indices out there and I do not think that I know that one, at least not under that name. Do you want to describe it a little bit or give any particular characteristic of it? Let me make a general comment first, though. There are many indices—for example, the United Nations development programme has an index—and each of them puts particular weight on particular things and has technical issues about how it does that and what it includes. Obviously, I and the commission did not have the time or opportunity to review all the different measures and come to a view on them; it was more about looking at the principles.

Joan McAlpine: Okay. You mentioned education in the context of inequality in America. To what extent does the American model of university and college education exacerbate inequality?

13:30

Professor Stiglitz: It is one of the most important contributors and it is, unfortunately, getting worse. What is going on in England is a source of concern. I will explain what the basic issue in the United States is.

I mentioned before that real median income—income in the middle—is stagnating and going down. It is lower than it was 15 years ago. However, meanwhile, the cost of a college education has been going up for two reasons. The first reason is that the cost of the inputs has been going up. It is a service sector and requires many skilled workers, and skilled worker salaries have been going up.

The second reason is that the Government's contribution to higher education has been going down markedly. The result is that tuition fees in public schools have been soaring in the United States, especially since the beginning of the downturn.

With incomes going down and tuition fees going up, many children of poor families will not be able to afford a university education. In the 21st century, you need a university education to compete.

Students used to take out loans. Unfortunately, the burden of those loans has gotten larger and larger. In America today, student loan debt is larger than credit card debt—it has soared that much.

We did something that was really bad: we passed a law that said that student debt could not be discharged, even in bankruptcy, to discourage students from taking loans. The consequence is that the average student graduating from college now has more than \$25,000 of debt but some have more than \$100,000.

Joan McAlpine: I am sorry to interrupt, but do you have similar concerns about England?

Professor Stiglitz: Yes. Tuition fees there have been going up, and that makes a college education less affordable. Student loans can become very oppressive.

Australia has designed a good way of getting around it—what they call income-contingent loans. Everybody participates in that programme. Money is lent to students to pay for their education. Everybody takes out such loans and the amount that they pay depends on how well the student

does. If the education delivers a high income, they pay back more; if they decide that they want to go into public service and take low pay, the amount that they pay back is less. Those who wind up with a high income pay back a larger amount; those who have a lower income pay a smaller amount.

That model has been working well. Other countries ought to consider it.

Alison Johnstone: I would welcome your view on how Oxfam's humankind index approach might help to counter the mismatch between people's experience of life and how official statistics describe their situation, as noted in the Stiglitz commission report.

Professor Stiglitz: Oxfam did a good job of listing in its humankind index the things that, in their interviews, people said were important to them. They talked about housing, health, living in a neighbourhood in which they could enjoy going outside, having a clean and healthy environment, having satisfying work to do and family. Income was in the middle of the list.

Obviously, the Government cannot solve all those problems—it cannot solve family relationships—but it plays an important role in many of them, such as the environment, the kinds of communities that we create and ensuring that people have an opportunity for a good job. That provides an important reminder that money is necessary but not sufficient. Government cannot solve every problem, but it can do things to improve the wellbeing of society and of individuals.

Marco Biagi: We have talked a lot about the wholesale alternatives to GDP, but when we look at many of the things that have been mentioned as indicators of wellbeing, such as having a low crime rate, having a fulfilling job, enjoying good health and not depleting resources, we see that they are all matters that have direct economic costs as economists would traditionally understand them. Why has economics as a discipline not kept up?

Professor Stiglitz: Well, it has been trying. Maybe I should tell you a little story. When I was chairman of the Council of Economic Advisers under President Clinton, I tried to get the US to move to what I call a green GDP. That would involve our taking GDP but recognising that we are depleting some of our natural resources and engaging in the degradation of our environment with pollution, and recognising that our success as an economy ought to take those negatives into account. A company that wears out machines takes depreciation into account. When we use up our resources, we ought to take depletion into account. At the level of the firm, we do that, but at the level of our society, we do not.

I tried, but there was a lot of push-back. Why did that happen? As I said before, what we measure

affects what we do. If we start thinking about pollution and environmental degradation, we will discourage certain kinds of activity. In particular, it will naturally lead us to think twice about coal. There is no such thing as clean coal. It is just a question of degrees of dirtiness of coal. Coal has all kinds of effects on environmental degradation and greenhouse gases. The coal industry understood that we were on to something important. It understood the importance of the objective of trying to get good measures, and that is why it tried to squelch it. The industry did what it could. It said, "If you continue to work on this, we'll take away your funding." It really undermined the efforts.

Economists have been aware of these problems for some time—that was 20 years ago—but there are special interests that are resisting the introduction of these ideas into the main stream of political discourse. I hope that Scotland will lead the way in introducing them.

Marco Biagi: Do you see a role for a baby-steps approach with a modified form of GDP, which might be easier for certain quarters in the debate to swallow, or do you think that in some ways that might be more difficult?

Professor Stiglitz: The basic ideas that I tried to articulate are all baby steps, but they are multiple. They include going from GDP to GNP, taking into account resource depletion and degradation, looking at inequality and looking at the median rather than the average. Those are not big, revolutionary things and we already have all of them in our toolkit. We could do them right away and put them on what I call our dashboard, so that we keep them in our vision.

In the long run, there are some more difficult things. Some of your questions have been about wellbeing in a broader sense, and incorporating those things will be more difficult, but we know some of the elements of the problems, such as unemployment and health, and we can get some indicators of those things on to our dashboard.

It will be more difficult, however, to decide how we weight and think about those indicators. They cannot simply be added up—they reflect different dimensions of our society. That is why I have been emphasising the point about dialogue. This goes back to the point about metrics. You will not easily add up health, environment and GDP. There is no way to put those numbers together in a single number. It is important to have an array of numbers that you can start to think about.

I can give you an analogy, which might be helpful. A driver wants to know how much gas is in their gas tank, and they want to know how fast they are going. If they add up those two numbers, they get a number, but they do not know what to

make of it. Both of the numbers are needed for someone to know what to do when driving their car.

That is what I would urge you to do. Let us not try to get everything into one number. Let us consider various dimensions and then discuss things. Are we not emphasising the environment enough? Are we not emphasising inequality enough? Are we not emphasising employment? Let us have a dialogue about that.

Rhoda Grant: You spoke earlier about the OECD indicators. Could those, or indeed something else, be used as an alternative to GDP as an international indicator? If so, how would we develop and implement such an index?

Professor Stiglitz: Internationally, a number of efforts are being made to provide a small set of indicators that would be internationally comparable across countries. There are better data for the advanced industrial countries than there are for developing and emerging markets, so the data sets are richer for the developed countries and you could do a better job comparing the advanced industrial countries.

I have mentioned the efforts of the OECD to create a set of benchmarks in various areas. There are three things that I think are essential to include in a small set of indicators concerning the narrow economics, leaving out health and other attributes such as incarceration—there are lots of social attributes. The first of those three essential things is to have some measure of GNP and the income of citizens. I say "some measure"—we want to include something about environmental degradation and resource depletion, as I said before. We want to take into account the things that are going on—not just the conventionally measured market income.

Before I come to the second essential thing, let me make one more comment about conventional measurement. One problem is that we often mismeasure the contribution of Government to GDP or GNP. The reason for that is that we tend to measure the output in the public sector by the input, because we do not have prices. As a result, we are not really assessing the contribution of the public sector to wellbeing. It distorts our metrics and, in effect, we assume that there is no increase in productivity in the public sector. However, we could consider, for instance, how the public sector social security programme increases security, which is very valuable. People would have been willing to pay quite a bit for that insurance if the market provided it, but the market typically does not provide good disability insurance, good annuities and so forth, so we are not capturing the importance of the public sector's contribution to our wellbeing. That gives rise to a real bias, and it biases our thinking about the importance of what

the Government can do to enhance wellbeing. That is one statistic that I would include.

13:45

The second statistic that I think it is important to focus on—remember that I said before that GDP or GNP is an average, whereas you want to know what is happening to the representative individual—is some form of median income. That is an important measure of inequality. Where you have no inequality, the median and average will be the same; where you have a lot of inequality, the two can differ a lot. Where you have growing inequality, the two can move in different directions. That is why I would talk about the median.

The third number that is very important is a metric or measure of sustainability. Again, we would like to have measures of environmental, economic and social sustainability, but even in a narrow set of indicators economic sustainability is a critical measure. For economic sustainability, you have to look at the wealth of the economy; what it is saving; what increases it is making to its capital stock; what it is depleting or using up or wearing out; and its indebtedness—if a country is borrowing from abroad, the wealth of its citizens is not increasing.

For example, when I looked at what was happening in the United States from 2000 to 2007-08, I said that the United States was not performing well. Why? Because we were borrowing so much from abroad. We were becoming more and more indebted at the level of the nation, at the level of the Government and at the level of the household. Our wealth was not going up in the way that it should have been, and the wealth that was going up was the fake wealth of a housing bubble, which was not going to be sustained. I came to the view that this was not sustainable economically—it was not sustainable environmentally, but that is another set of numbers—and, therefore, GDP was not telling us how well we were doing.

Chic Brodie: Good morning, Professor Stiglitz. The commission's report says that the issue is about measurement rather than policies. In the book "The Spirit Level", to which my colleague Mike MacKenzie referred, Wilkinson and Pickett state:

"different ideologies will of course affect not only government policies but also decisions taken in economic institutions".

Given your cynicism regarding the USA, which is not applying these measures, how do you see that these new measures can be applied in such a way as to support business and fund competitiveness internationally?

Professor Stiglitz: As I said, these metrics are part of our information system, and having good information is critical for steering an economy. At the level of the firm, firms have a balance sheet and income statements, which are the accounting frameworks that firms use for steering. When they look at their accounting framework, they will want to know what different divisions are doing, what their income and profits are and what their balance sheets are. That is the way that firms steer. In some sense, the same thing applies to the economy.

For instance, if an economy is growing but it is growing on the basis of natural resources that are being depleted, that raises a question about whether it is sustainable. One question that many people are now asking about the UK is whether the so-called period of prosperity that it had was really a false prosperity, in which it took all that income coming in from the North Sea but, rather than investing it in enhancing physical capital and human capital such as technical skills, it spent a disproportionate amount elsewhere and did not create the basis of capital accumulation. That is where this notion comes in that we should have a careful look at whether, in depleting your natural resources and using up your endowment, given that wealth below the ground is getting less, you are more than offsetting that by creating wealth above the ground. That should have been at the centre of the debate from the beginning of North Sea gas and oil. If it had been, you would have said, "Well, if we aren't investing above the ground, we're becoming less competitive, because in some sense our wealth is going down. We don't have the productivity or inputs that will make us competitive with other countries."

Margaret McDougall: Good morning, Professor Stiglitz. Do you agree that one of the reasons for measuring alternatives to GDP is to report publicly on them so that wider society can relate to how flourishing and prosperous Scotland is and, we hope, become more engaged in the political process?

Professor Stiglitz: Very much so. That is one of the main planks. In a way, when there is a single-minded focus on GDP in a very narrow sense, people will say, "We'll leave that to the technocrats and economists. Let the people who know about that manage the economy." That has led to a set of attitudes that has excessively elevated the importance of technocrats in solving our society's problems.

It is a fact that every society faces complicated trade-offs. How much emphasis should we put on the creation of employment? We ought to put a lot of emphasis on that, but the technocrats—people at the European Central Bank—never talk about that. That is the critical factor. They say that we

should just cure inflation, and that will mean that the economy will work well. They have tried to depict a situation in which there are not all the choices that societies have. By focusing on the many dimensions of what constitutes wellbeing, I hope that we will contribute to this kind of discussion and a broader dialogue in society.

Margaret McDougall: I have a follow-up question on the same line of thought. Would it be beneficial to report on two or three headline measures, such as security of employment, quality of the local environment and equality measures, that would be more comprehensible to people at the same time as considering the GDP, rather than adopt one alternative aggregated measure?

Professor Stiglitz: On the basic framework of benchmarks, in response to an earlier question I said that Scotland's benchmarks do not necessarily have to be the same as those of other countries. Benchmarks can be explorations. Scotland might want to explore things that other countries have not yet done. Many Americans are certainly currently affected by a sense of insecurity. The GDP could go up and insecurity could go up. If we ask what affects people's wellbeing, we will find that a high sense of insecurity is really bad. We are talking about all kinds of insecurities: health, economic, job, fiscal and environmental insecurity. Some of the follow-up work from the commission is beginning to think about how we try to capture the notion of insecurity, as people really care about that. Another issue is a sense of community. There is a lot of evidence that community and connectedness are important for an individual's sense of wellbeing. There are measures of some of those things. They are imperfect, but we have forgotten that GDP is not a perfect measure of output. We have used it for so long that we have forgotten all the imperfections and blemishes. When the measure was being created, everybody who debated it was very much aware of the blemishes. We have used it for long enough to just forget about all the blemishes, but sometimes they turn out to be important.

The Convener: We are getting towards the end of our time. The last question is from Ken Macintosh.

Ken Macintosh (Eastwood) (Lab): Professor Stiglitz, you said in your opening comments that Scotland's national performance framework is a welcome measure, although I think that you said that, at present, just the fact that it exists is perhaps its biggest contribution. You have focused on median household income. The most recent figures in Scotland show that median household income has fallen by £1,200. That suggests a difference between the practical reality in Scotland and some of the steps that we are taking—or not

taking—to counter that reality. What measures could we take to move away from GDP and to use more practical indices that include wellbeing, which would make a difference to the way in which we run our economy and Government?

Professor Stiglitz: One thing is exactly the point that you make: a focus on median rather than average starts putting a focus on what is happening to the average citizen, as we jokingly say. If the upper 1 per cent in the United States do better, that is nice for them but, if that does not affect the rest of our society, do we actually have a society that is working? I do not mean to keep coming back to the United States, but one telling statistic in the United States is that, in the past two years, 120 per cent of the increase in income in the United States went to the top 1 per cent. That means that all the increase went to the top 1 per cent and everybody else was worse off. When something like that is going on, the Government should be worried. Something is failing.

Figuring out what is failing involves a complicated diagnostic. That is why we need to consider other things. Is it employment? That is one of the variables that I would include as an important metric on my dashboard. Is it wages? Are the wages of the people in the middle falling behind and, if so, what is the reason for that? Are we failing to give people the skills that they need to compete? If so, that relates to education.

I come back to the point that I made in my introduction, which was that our metrics are part of our information system for steering the economy. When a doctor does a diagnosis, they start asking questions and they might say, "For this patient, I need to run another test." They need to get more data to separate one diagnosis from another. The same thing applies to your country. As you start to think about where the problems are, you will start to say, "Let's look more carefully." I think that the answer is that you will look more carefully at your education system, wages, your system of employment and job creation. That leads to thinking about the impediments to job creation and whether the financial system is delivering capital to small businesses or is just engaged in manipulating LIBOR—the London interbank offered rate.

Ken Macintosh: I have a brief supplementary question. Your contribution to Scotland is important, not only in the debate about indices of wellbeing but through your comments about moving away from austerity economics and perhaps producing fiscal growth. You are also heavily involved in the fiscal commission working group in Scotland. That group recommends that Scotland should have a currency union with the rest of the UK. Do you think that that is essential for an independent Scotland?

Professor Stiglitz: I will just say that the report to which you refer was a report of the collectivity of that group. We did not each agree on the weight that was associated with every recommendation. As with any group report, it gives a sense of the group's view, although there were differences. For the report to have meaning, we all said that there should be nothing in it that we felt was so outrageous that we wanted to dissent from it. There was a broad consensus, but we did not all give the same weight to the recommendations.

On the issue that Mr Macintosh raises, one important discussion was about transition versus the long run. There was concern about the factors that might make for a smoother transition, but there was also a discussion of the fact that, in the long run, Scotland will have to re-examine its institutions. It will be important to have a structure that has flexibility, so that over time the institutions will be able to adapt to the change in circumstances. As we thought about that issue, the two notions that were influential were the smoothness of the transition and the flexibility to move eventually to the institutional structure that is appropriate for Scotland. So—

The Convener: I am sorry to cut you off in mid-flow, Professor Stiglitz, but our time has gone and we are in danger of breaching parliamentary process by sitting at the same time as the Parliament is sitting. I am grateful to you for giving your time to the committee. We will follow-up this piece of work with great interest. On behalf of committee members, I thank you very much.

Meeting closed at 14:00.

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