



The Scottish Parliament  
Pàrlamaid na h-Alba

## Official Report

# MEETING OF THE PARLIAMENT

Thursday 10 October 2013

Session 4

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# Scottish Parliament

Thursday 10 October 2013

[The Presiding Officer *opened the meeting at 11:40*]

## General Question Time

### Unscheduled Care Action Plan (Recruitment)

**1. Jim Hume (South Scotland) (LD):** To ask the Scottish Government how many additional accident and emergency consultants and nurses have been recruited under the unscheduled care action plan. (S4O-02492)

**The Cabinet Secretary for Health and Wellbeing (Alex Neil):** The Scottish Government is fully committed to improving unscheduled care in NHS Scotland and has invested £50 million across three years in supporting health boards to make sustainable improvements. That includes dedicated funding of £1.8 million to support recruitment of emergency medicine consultants to reduce pressures and improve access to decision support. National health service boards' local unscheduled care action plans also identify actions to recruit additional nurses, allied health professionals and support staff.

I have been informed by health boards that the recruitment is fully under way. For example, NHS Greater Glasgow and Clyde has informed me that it has successfully recruited three additional A and E consultants and NHS Lanarkshire has recruited an additional 5.24 whole-time equivalent nurses to support improvements outlined in local unscheduled care action plans. The number of consultants working in accident and emergency had risen to 152 whole-time equivalents in June 2013, which is a 100.6 per cent increase compared with September 2006. Although statistics do not identify the settings in which nurses work, overall we have increased the number of qualified nurses and midwives by 1,086.1 whole-time equivalents since September 2006.

**Jim Hume:** The cabinet secretary will recall that the promise of additional consultants was intended to avert a repeat of the crisis that we witnessed last year, with hundreds of patients waiting over 12 hours on trolleys to be treated. We were promised 18 additional consultants in June to serve Scotland's 35 emergency departments, but I think that the cabinet secretary has just mentioned only three in the Glasgow area, although there might be others. Does the cabinet secretary agree that, eight months on from the promise of more consultants and with winter fast approaching, the Government has simply not moved quickly

enough? Does he agree with the deputy chairman of the British Medical Association in Scotland, who described the cabinet secretary's plans as nothing more than a "sticking plaster"?

**Alex Neil:** No, I do not agree with the deputy chairman of the BMA in Scotland. The unscheduled care plan was agreed with the College of Emergency Medicine, which helped to devise the plan. There has been a huge increase in the number of A and E consultants and we now have twice the number that we had when Mr Hume's Liberal Democrat party was in power. Of course, we could increase the figure if the Scottish Government was not facing overall a 12 per cent slashing of our operational budget, which is being imposed by Mr Hume's Government in London.

**The Presiding Officer (Tricia Marwick):** Question 2 from Helen Eadie has been withdrawn and the member has provided a satisfactory explanation. Question 3 from Bob Doris has been withdrawn for understandable reasons.

### Scottish Fire and Rescue Service Control Rooms (Closure)

**4. Lewis Macdonald (North East Scotland) (Lab):** To ask the Scottish Government what public consultation there will be on the proposed closure of Scottish Fire and Rescue Service control rooms. (S4O-02495)

**The Minister for Community Safety and Legal Affairs (Roseanna Cunningham):** Throughout October and November, the Scottish Fire and Rescue Service is meeting key stakeholders across Scotland who will be directly affected by the plans set out in the strategic intent document.

**Lewis Macdonald:** Is the minister aware that more than 1,200 people already have signed an online petition to save Aberdeen fire control room and that many people in the north-east agree with the Fire Brigades Union that neither the highly trained control room staff nor anyone else have been properly consulted on the scale of the cuts to front-line services? If the minister will not instruct there to be a full public consultation, will she at least agree today to instruct the board of the Fire and Rescue Service to publish the criteria on which it will decide which further control rooms to close and which to keep open?

**Roseanna Cunningham:** Lewis Macdonald knows perfectly well that the decisions will be for the Fire and Rescue Service to take. What it has announced thus far, after a board meeting on 26 September, on the intent is that no final decisions on any aspect have been made, apart from the clear indication that Johnstone is the one control room that will remain open—it, of course, was the control room for the old Strathclyde Fire and

Rescue Service area. The rest will be the subject of conversations that will be held over October and November. I understand that Lewis Macdonald has already met members of the Scottish Fire and Rescue Service, so he knows that those meetings are taking place.

I understand that some people have concerns, but the progress that the Scottish Fire and Rescue service wishes to make on considering all its strategic assets is to improve the service to the public and includes looking at the proposals regarding control rooms.

**Sarah Boyack (Lothian) (Lab):** I add my plea that safety issues should be paramount among the criteria that the fire service looks at.

I recently met staff at Tollcross fire station and was struck by their regional—not just their local—knowledge across Lothian and the Borders. With particular issues in the capital city, such as tourism, and given that knowledge is vital, I hope that safety is paramount among the criteria for consideration.

**Roseanna Cunningham:** Safety will always be first and foremost in the Scottish Fire and Rescue Service's consideration. The chief fire officer, very particularly, looks precisely at public safety when he considers the decisions that the board has to make.

I understand that members will all want to argue for their area, but I remind people that thus far, although the general intent has been laid out, the only control room that has been specifically mentioned is Johnstone. People will understand that that control room already deals with more than half of all emergency calls in the whole of Scotland. One emergency control room deals with more than half of all the calls and seven other control rooms deal with the remainder of the calls, to a greater or lesser extent. It is precisely issues of safety that are driving this look at the future of control rooms in Scotland.

## Fish

**5. Christian Allard (North East Scotland) (SNP):** To ask the Scottish Government what plans it has to encourage people to both buy locally and eat Scottish fish. (S4O-02496)

**The Cabinet Secretary for Rural Affairs and the Environment (Richard Lochhead):** The Scottish Government is working with the seafood sector to deliver a range of activities that seek to encourage people to eat Scottish fish. They include the eat more fish campaign, first launched in 2009, and on-going initiatives such as the seafood in schools project, which aims to teach schoolchildren where seafood comes from, and the eat in season campaign, which has a strong seafood focus.

**Christian Allard:** As an MSP who represents the north-east, and someone who has worked for more than 20 years in the Scottish fishing industry, I want to see sustainable fishing communities thrive. Will the cabinet secretary join me in asking everyone, Sea Fish included, to get behind the label and trust the Scottish fishermen, processors, chefs and fishmongers who are responsible for bringing Scottish fish to our plates?

**Richard Lochhead:** I have no doubt that Christian Allard's healthy glow is down to the amount of seafood he eats each and every week.

Of course, I agree with Christian Allard. We should get behind our fishing industry from net to plate. Scottish seafood is healthy, tasty and increasingly sustainable. We have to talk up the health benefits—especially as I am sitting next to the Cabinet Secretary for Health and Wellbeing—because fish is packed with healthy essentials, such as protein, minerals and vitamins. Oily fish is also rich in omega 3, which has been shown to help protect against coronary heart disease. By eating at least two portions of fish a week, consumers can get a major health boost and support the fishing industry.

I am sure that the chamber will want to join me in congratulating Roy Brett of the Ondine restaurant in Edinburgh, which recently won best Scottish restaurant at the British hospitality awards. Ondine is of course a seafood restaurant. More and more people in Scotland and who visit Scotland are enjoying Scottish seafood.

**Jamie McGrigor (Highlands and Islands) (Con):** Will the minister encourage Scottish consumers to buy only Scottish and European Union-caught mackerel products and boycott Icelandic and Faroese-caught products, given those countries' unilateral and unsustainable pillaging of mackerel stocks?

**Richard Lochhead:** As Jamie McGrigor will be aware, the scientific advice for mackerel stock, which is subject to international dispute, was issued just last week and shows that there has been a healthy improvement in mackerel stock, despite the overfishing by some countries to which he refers. I hope that that provides us with a window of opportunity to allow the international dispute to be settled finally in the coming weeks and months.

A lot of sensitive issues need to be negotiated, but of course I encourage all consumers from Scotland and elsewhere to enjoy the fantastic mackerel landed by Scottish fishermen, which is healthy and tasty.

## **Scottish Fire and Rescue Service Control Rooms (Closure)**

**6. Alison McInnes (North East Scotland) (LD):** To ask the Scottish Government what discussions it has had with the Scottish Fire and Rescue Service regarding the planned closure of control rooms across Scotland. (S4O-02497)

**The Minister for Community Safety and Legal Affairs (Roseanna Cunningham):** The Scottish Government has regular meetings with the Scottish Fire and Rescue Service; indeed, I met the service as recently as last Thursday morning. Decisions on the allocation of its resources, including control rooms, are a matter for the Scottish Fire and Rescue Service Board.

**Alison McInnes:** The report that the fire board believes supports the proposed closures is based on the premise that the new nationwide service will allow for support estate rationalisation and the realisation of capital returns and reduced revenue costs, but it does not recognise that the staff who take 999 calls in control rooms across Scotland deliver a front-line service.

Last week, I visited the under-threat fire control room in Aberdeen. The staff there boast years of experience and a wealth of local knowledge, which enable them quickly to get a grasp of an emerging incident and to best direct resources to where they are needed. Does the minister recognise that, therefore, fire control rooms are not typical backroom assets, and that they cannot be flogged off without that impacting on the service that they provide to their local communities? Is it right that the closure decisions are being made on the basis of a property management report?

**Roseanna Cunningham:** I suggest to the member that using phrases such as “flogged off” in respect of a decision-making process of the Scottish Fire and Rescue Service Board and the chief officers is, frankly, not acceptable. The fact of the matter is that they must look at the strategic assets that they inherited from eight different services, which include eight different control rooms. I have already indicated to the chamber that one of those control rooms—the Johnstone control room—is responsible for dealing with more than half of all the emergency calls that come in across Scotland. Is the member suggesting that that control room cannot handle that work, when it has been doing so for a large number of years?

One of the remaining seven control rooms handles an average of only four calls per day. I believe that it is quite proper for the Scottish Fire and Rescue Service to look very carefully at the provision that is being made in respect of control rooms. Safety is paramount. One control room—the one that deals with an average of only four calls per day—is at the limit of its information

technology capability and viability. Such safety issues confront the service, and it is right and proper for that safety concern to be at the forefront of what the service is doing in respect of control rooms. To suggest that anything other is in the service's mind is quite wrong.

**Maureen Watt (Aberdeen South and North Kincardine) (SNP):** As control rooms are only one aspect of the Scottish Fire and Rescue Service, and as the activity pattern of demand for call centres has changed, is it the case that reconfiguration could lead to improved public-facing services and more jobs in the Aberdeen area?

**Roseanna Cunningham:** The member is right to flag up the wider issues. She also makes the important point that what is being considered at the moment will not affect the outward-looking public face of the fire service. The public will not see any change. When an emergency calls comes in, the same appliance will, most likely, be sent out from the same fire station as previously, with the possible exception of the improved service that will come from there no longer being boundaries, which is something that people need to take into consideration.

The safety issues that are at the forefront of the service's mind include the fact that we currently have five different IT services across the eight control rooms. That makes it almost impossible for them to work as one, which from a safety perspective is the big advantage that the new system would offer.

The member raises the fact that a broader range of services will be made available in Aberdeen and throughout Scotland as decisions are made about the full range of assets that are currently available and where they will be placed. I ask all members to engage directly with the board members, who will come out to speak to them in their areas, and the chief fire officer and the various hub commanders. That way, they will get a better understanding of the possible improvements that may be available in their area.

## **Haudagain Roundabout**

**7. Mark McDonald (Aberdeen Donside) (SNP):** To ask the Scottish Government what recent discussions it has had with Aberdeen City Council regarding the timescale for improvements to the Haudagain roundabout. (S4O-02498)

**The Minister for Transport and Veterans (Keith Brown):** I met Barney Crockett, leader of Aberdeen City Council, last Thursday to discuss the timescales for the Haudagain improvement.

**Mark McDonald:** I note from the coverage that the city council has agreed to follow the Scottish Government's timescale, which will be welcomed

by my constituents in Middlefield, who were concerned about the impact on them of the council's proposed two-year timescale. Is the minister aware of comments by Councillor Willie Young, convener of finance at Aberdeen City Council, who has threatened to withdraw the council from the project and remove it from the regeneration of Middlefield unless he receives what he describes as a written contract on the Haudagain roundabout? Does that reflect the minister's discussions with Barney Crockett?

**Keith Brown:** I made clear to Barney Crockett the same position on Haudagain that I have made clear to Richard Baker, Lewis Macdonald and Mark McDonald's predecessor Brian Adam and in numerous public statements: the Scottish Government will pay proper compensation for any affected households.

We have already started the design work on the Haudagain at a cost of around £3 million. I had what I thought was a very constructive meeting with Barney Crockett that covered a range of issues on which the Scottish Government and Aberdeen City Council can work together. Unfortunately, as seems to be the pattern with such meetings, as soon as Councillor Willie Young heard that some constructive dialogue was going on between the council and the Government, he got very agitated and responded by trying to create a drama out of a non-existent crisis.

Perhaps the best thing that could happen in the circumstances is for Councillor Willie Young to let the leader of the council, Councillor Crockett, undertake the dialogue with the Scottish Government and to enter into a period of silence for everyone else's benefit.

**Richard Baker (North East Scotland) (Lab):** Every year of delay to this project costs local businesses in Aberdeen tens of millions of pounds. When will the minister submit a planning application for this route? How long will it all take? In fact, what is the problem with the Scottish Government giving a legally binding commitment to meet the costs? Why can the minister not do that?

**Keith Brown:** If Mr Baker considered the procedures that have to be followed for purchasing land, making legal commitments and avoiding, if possible, protracted legal cases such as the one involving the Aberdeen western peripheral route, he would understand why we are taking this approach, which is, in fact, the approach that was taken by previous Administrations. If, for example, we committed to giving compensation to households that we did not intend to take over, that could be held against us at the public local inquiry.

I am determined to approach this in the correct way: Haudagain will happen as soon as the AWPR is completed. Indeed, the council itself has accepted that; its own engineer's report said that that was the right way to do things. I thought that Richard Baker had accepted that position. Barney Crockett has accepted it; perhaps it is time for those on the Labour benches to do likewise.

### Climate Justice

**8. Graeme Dey (Angus South) (SNP):** To ask the Scottish Government what progress it is making on promoting climate justice. (S4O-02499)

**The Minister for Environment and Climate Change (Paul Wheelhouse):** Yesterday, the Scottish Government hosted a groundbreaking international conference on climate justice in Edinburgh that was addressed by Mary Robinson, president of the Mary Robinson Foundation – Climate Justice, international businesses and non-governmental organisations, the United Nations Environment Programme and UNICEF.

The conference welcomed Scotland's leadership and highlighted the need for more collaborative working between Governments, NGOs, businesses and communities, and the Scottish Government will build on the excellent work being done by Scotland's 2020 climate group to encourage and nurture these partnerships.

The First Minister announced a doubling of funding for our climate justice fund, which is currently supporting five water-related climate adaptation projects in Malawi and Zambia, with a further £3 million, which again will be additional to Scotland's commitments on international development funding.

**Graeme Dey:** Further to yesterday's conference, will the minister outline the opportunity that the forthcoming United Nations Framework Convention on Climate Change talks in Warsaw will provide to make further progress on this important issue?

**Paul Wheelhouse:** Scotland is at the forefront of world thinking on climate justice and we are building on trust between developed and developing nations. Climate justice not only reinforces the economic case for a swift and sustainable transition to a global low-carbon economy that delivers jobs, investment, trade, growth and equitable sustainable development but provides a platform for a new inclusive and progressive agenda that builds on existing actions by Governments and businesses on human rights and sustainability issues.

Those are the messages from Scotland that I will take to November's UNFCCC summit in Warsaw in support of international efforts to bring about a secure and ambitious new global climate



change treaty in 2015. Given the context of the Intergovernmental Panel on Climate Change's report on man's impact on climate change, it is crucial that we get that agreement. Like those who attended yesterday's conference, I am determined to take forward that message and ensure that we bridge the gap between developed and developing nations and reach what is a badly-needed agreement.

## First Minister's Question Time

12:00

### Engagements

**1. Johann Lamont (Glasgow Pollok) (Lab):** To ask the First Minister what engagements he has planned for the rest of the day. (S4F-01620)

**The First Minister (Alex Salmond):** I know that the whole chamber will wish to offer our warm congratulations to Professor Higgs on being awarded the Nobel prize for physics. [*Applause.*]

Later today I will meet Tim Gregory, the United Kingdom president of the Canadian company CGI, which is establishing a digital services centre of excellence in Glasgow. The announcement will see the creation of a further 250 high-value jobs in the city and reinforces Scotland as a leading destination for foreign direct investment.

**Johann Lamont:** Last week, the Scottish Government's fiscal commission announced that an independent Scotland would have not just one oil fund but two, yet the First Minister's own civil servants reported in March last year, and again in October, that an oil fund would not work unless the First Minister either raised taxes or cut spending. Which is it and when was he going to tell us?

**The First Minister:** John Swinney said it last week when he announced the fiscal commission's findings. Let me quote exactly from Mr Swinney's comments last week:

"It has been widely assumed that Scotland would have to run an absolute fiscal surplus before investing in a savings fund, and this has been reflected in the Scottish Government's early thinking on the subject. However, the commission is clear that there is a compelling case for starting to make early investments into an oil fund whilst in deficit so long as it is manageable and debt is on a downward path."

That was reinforced in a letter to *The Herald* last Saturday. I think that Johann Lamont should probably read John Swinney's letters to *The Herald* before asking her questions.

**Johann Lamont:** I had expected an attempt by the First Minister to blind us with science. Perhaps I should have predicted instead that he planned to deafen us with gobbledygook. That did not answer the question that I asked. To remove doubt, here is what it says in the advice that he was given last year:

"if the Scottish government had wished to establish an oil fund, it would have had to reduce public spending, increase taxation or increase public sector borrowing."

In the reporting of this issue, the First Minister has said that events have overtaken that advice, or that the fiscal commission's report reflects it. Can

he now read out where that advice was repeated in the fiscal commission report or tell us which events have overtaken it?

Once again, just like with John Swinney's paper that doubted the affordability of the state pension and talked of public spending cuts—we knew that the Scottish National Party members would groan because they did not expect other people to know what they said in private—we know that this Government says one thing in private and another in public. Will the First Minister now come clean with the people of Scotland? Will he raise taxes or cut spending to pay for his oil fund, and when was he going to tell us?

**The First Minister:** Let me read that incredibly scientific quote from Mr Swinney again:

"It has been widely assumed that Scotland would have to run an absolute fiscal surplus before investing in a savings fund, and this has been reflected in the Scottish Government's early thinking on the subject."

That is a straightforward explanation to answer the question that Johann Lamont asked. I do not think that that can be described as scientific or gobbledygook. It is a straightforward suggestion that that was the early thinking.

The fiscal commission pointed out that, in marshalling Scotland's enormous natural resources to invest in the future, there should be two oil funds—one, a stabilisation fund to take advantage of windfall gains, and two, a long-term savings fund—and it set out the criteria by which it should be done. I think that that is an entirely sensible thing to do. If we had had those funds when these resources were being mismanaged by the United Kingdom, we would be in an entirely better place. How do I know that? The former Labour Chancellor of the Exchequer, Denis Healey, said that there should have been an oil fund. He said that

"we should have invested the money in things we needed"

in terms of an oil fund

"and I had thought about an oil fund ... but it wasn't my responsibility by then"—

it was all Margaret Thatcher's fault.

Perhaps even more interesting is that, in *The Scotsman* on 21 August, Alistair Darling, when asked that very question about whether there should have been an oil fund, said:

"if we had our time over again, perhaps we should have".

So even Alistair Darling wants to have his time over again. Well, Scotland has the opportunity over the next 40 years, and we are not going to make the same mistakes as in the past.

**Johann Lamont:** It was not my party that walked through the lobbies to create a Tory

Government under Margaret Thatcher.  
[*Interruption.*]

**The Presiding Officer (Tricia Marwick):** Order.  
[*Interruption.*] Order!

**Johann Lamont:** I know that SNP members do not like to remember their history, but that is what the SNP did to Scotland and Scotland will never forgive them.

For all that chuckling nonsense from the First Minister, he ignored the central question. The one thing that the fiscal commission report makes clear is that the oil fund is not a saving scheme; it is an insurance policy against the volatility of oil prices, although it does rather sound like the kind of oil fund—[*Interruption.*]

**The Presiding Officer:** Order.

**Johann Lamont:** The noisier the SNP members get, the more troubled they are.

It sounds rather like the kind of oil fund where people get a free Parker pen just for inquiring. The fact is that the First Minister does not want to admit that his oil fund will not work without tax rises or spending cuts. He does not want to admit that he has been told that, rather than setting up a Norwegian-style oil fund, Scots would be better off investing in United Kingdom bonds. That is why the issue is serious.

There is a central deceit in what the First Minister says—the people of Scotland, upon independence, are immediately expecting increased spending on services while his own independent advice says that, precisely because of independence, he would need to redirect moneys from public expenditure to a stabilisation fund. So let us have an answer: does the First Minister want tax rises to pay for his oil fund or cuts in hospitals and schools, and when was he going to tell us?

**The First Minister:** Let us start with the trip down memory lane. Actually, James Callaghan, in his autobiography, "Time and Chance", allocated responsibility for the fall of his Government to Labour Party anti-devolutionists. I am surprised that Johann Lamont does not remember that, because she was a Labour Party anti-devolutionist at the time, so I really think that that historical script will have to be changed. If we come right up to the present day, Johann Lamont is in alliance with the Conservative Party in a campaign called better together.

On the questions on the oil fund, those matters were of course addressed in the fiscal commission report. For example, the issue of bond yields against returns from our oil fund is dealt with on page 61, which states:

"As an illustration, over the past five years yields on 10 year UK Government bonds have averaged 3.1% whilst the Norwegian Oil Fund has achieved average annual returns of 5.9%."

Now, 5.9 per cent is greater than 3.1 per cent. I think that that deals with the point that Johann Lamont was trying to make.

The concept of a stabilisation fund is very important indeed. Let us say, for example, that the Scottish Government's forecast of oil at \$113 a barrel over the period to 2017 is not right and that the Department for Energy and Climate Change, which is forecasting maybe \$130, is right. That would give a windfall gain that we did not forecast or expect, because we would have taken a modest view of the future course of oil prices. The fiscal commission sensibly pointed out that it would be sensible to put that into an oil fund so that we have a stabilisation fund in case the forecasts go the other way. I hardly think that that is a matter of great contention. It seems to me a very sensible process to propose.

The fundamental difficulty that the unionist parties have with that is clear: they want the people of Scotland to believe that having an asset whose estimated wholesale value over the next 40 years is £1.5 trillion is somehow a major encumbrance and disadvantage. It is a huge advantage for the people of Scotland—would that we had had it over the last 40 years; we are certainly going to have it over the next 40 years.

**Johann Lamont:** Whatever that was, it will not give anyone confidence that the First Minister has a clue about what he is talking about. His own fiscal commission said:

"It therefore requires fewer resources to be allocated to current spending, or to reducing other taxes, than would otherwise be the case."

The First Minister is simply dishonest when he talks about a stabilisation fund—

**The Presiding Officer:** Ms Lamont, I think that you should withdraw that.

**Johann Lamont:** The First Minister is not being accurate when he says that a stabilisation fund—*[Interruption.]*

**The Presiding Officer:** Order.

**Johann Lamont:** However we describe it, the First Minister said that the stabilisation fund was about a windfall. The stabilisation fund is to address the volatility of oil over time and his own fiscal commission says so.

We know that John Swinney told the First Minister the truth about the state of the public finances in private. The First Minister wanted that hidden from the public. Now he says that, in a separate Scotland, we would have two oil funds, when he has been told in private not once but

twice that that would not work without there being an impact on taxation or public spending.

Unless the First Minister is denying that that advice was given to him, he needs to explain why it is no longer relevant. When was he going to tell us? When was he going to tell us whether his choice is to raise taxes or cut public spending? The answer is never. Honesty is not something that this Government deals in. *[Interruption.]*

**The Presiding Officer:** Order. Ms Lamont, I think that you should withdraw that.

**Johann Lamont:** I am astonished. I do not know what word we use to describe somebody saying—*[Interruption.]* I accept the advice of the Presiding Officer, but I have to say that I do not know what word we use to describe a Government that says one thing in private and something different in public.

The fact of the matter is that Scotland is on pause and we will not be given the full facts by this Government ahead of the referendum.

**The First Minister:** It might have been better for Johann Lamont to withdraw the comment than to try to talk her way round it.

Johann Lamont asked a precise question, so I will read out from page 4 of the fiscal commission proposal. I assure the member that this is not too scientific or complicated:

"We have however, proposed a model which takes into consideration the fiscal position that an independent Scotland is likely to inherit, and which, in principle, allows investments to be made into both a stabilisation fund and a savings fund without an automatic offsetting change to public spending or taxation."

That is on page 4 of the fiscal commission report. I think that it reflects exactly the question that Johann Lamont had to ask me—if indeed there was a question somewhere in there. That is what the fiscal commission said last week, and John Swinney wrote to the papers to point out the importance of the fiscal commission's recommendations.

We know that this is an issue on which Alistair Darling—if he had his time over again—and Denis Healey would have liked to have done something, in terms of investing for the future. The fiscal commission report sets out clear criteria on how we can marshal Scotland's resources and ensure that that asset is used for the benefit of this generation and future generations.

Nobody would seriously argue that the UK has handled oil well as a resource over the past 40 years. Nobody would seriously dispute that Norway, the country across the North Sea, has handled that resource much better. The fiscal commission has put forward a proposal that allows Scotland to get towards the fortunate position of

Norway, as opposed to making the unremitting bungs that Westminster and successful United Kingdom chancellors have made.

### **Secretary of State for Scotland (Meetings)**

**2. Ruth Davidson (Glasgow) (Con):** To ask the First Minister when he will next meet the Secretary of State for Scotland. (S4F-01612)

**The First Minister (Alex Salmond):** I saw him yesterday. Other than that, I have no plans for the near future.

**Ruth Davidson:** I am not sure that we got terribly far on the matter that has just been raised, so let us try again from the beginning.

The Scottish Government is quoted in the press this morning as saying that the secret Government oil papers from last year

“have been overtaken by the expert report of the Fiscal Commission Working Group”.

Can the First Minister confirm that, in this case, “overtaken” means that the Government has just lifted the good bits and thrown away the bad bits that do not suit his separatist agenda?

**The First Minister:** The fiscal commission is part of the Council of Economic Advisers, which includes two Nobel laureates in economics and has a range of economic expertise. Nobody would seriously dispute that it has very substantial economic firepower.

When we published the report, John Swinney pointed out in a letter to the papers how our early thinking on the matter had been different. Surely the whole point of having a fiscal commission of such prestige and authority is to take the advice that it offers, which is exactly what we have done.

Ruth Davidson should, to be fair, acknowledge that the work that the fiscal commission has published is a very substantial piece of work, which sets out clear criteria about how we can handle and manage the amazing natural resource off the shores of Scotland, and do so in an extremely effective manner.

**Ruth Davidson:** That is all very interesting. The First Minister may be interested to know that this morning I ran the Government’s secret reports from last year and the recent report of the independent fiscal commission through university cheating software. What did I find? Whole sections have been cut and pasted, including entire paragraphs on Scotland’s projected net fiscal debt, on the country’s debt interest payments and on notional borrowing costs. All the good stuff made the grade; all the bad stuff hit the bin.

This is the Alastair Campbell school of dodgy dossier writing. It seems that, when the Government reached any section in the original

reports—and there were plenty—that said that an oil fund would mean higher taxes, more borrowing or lower public spending, it simply hit “delete”.

This is another case of Alex Salmond’s say-anything, do-anything and promise-anything approach to independence. Is it not the case that the First Minister has no wish to be straight with the people of Scotland but would rather try to hoodwink them into a yes vote with spun lines, half-truths and incomplete analyses?

**The First Minister:** The fiscal commission had available to it research that had been done by the civil service. Therefore, common to both reports is the analysis of what would have happened over the past 40 years if Scotland had had control of its own resources.

Common to both resources—Ruth Davidson is correct here—is the point that, under that scenario, the existing fiscal position would have been that, instead of having a share of the voluminous national debt that has been run up by the Conservative and Labour parties, Scotland would have assets of something approaching £100,000 million. There is no disagreement between the two reports on that analysis of the past.

What is interesting, of course, is that it is now accepted as a given—even Alistair Darling agrees—that it would have been a good idea to have had an oil fund. Over the past 40 years, unionist politicians were telling us what a bad idea it would be if we controlled our own natural resources. Ruth Davidson should look seriously at the fiscal commission’s proposals on that point. *[Interruption.]*

**The Presiding Officer:** Order.

**The First Minister:** I have to say that I am interested and surprised that Ruth Davidson should want to cover these issues; they were part of a fascinating analysis of Ruth Davidson’s ability to count that was made by Peter Jones—a well-respected commentator who, incidentally, no one would suggest is a card-carrying member of the Scottish National Party.

In looking at the claim that oil decommissioning was part of a £30 billion or more black hole, as has been suggested by Ruth Davidson and the better together campaign, Peter Jones said:

“if this is an example of her ability to add up numbers, she should never be allowed to look at a government office, still less get inside it.

The Better Together paper confused annual current spending with one-off spending; it added one-year sums to totals that don’t occur for another 47 years, and it did some asinine double counting. In short, it added two and two and made 44. It is complete nonsense.”

If a respected commentator, who is not suspected of being a member of the SNP, says that—using terms that I would never use—about Ruth Davidson, I feel that we must question the point that she makes.

Peter Jones ended his analysis with a great lesson:

“Meantime, Better Together needs to learn ... this nonsense commits a cardinal political sin—insulting the intelligence of the voters”.

Perhaps the better together campaign should stop insulting the intelligence of Scotland by telling us that oil of massive quantities and massive wealth is a liability to Scotland, while it tries to hang on to it for Westminster.

### National Health Service Workers (Wage Rise)

**3. Rhoda Grant (Highlands and Islands) (Lab):** To ask the First Minister whether the Scottish Government plans to implement a wage rise for NHS workers in Scotland. (S4F-01622)

**The First Minister (Alex Salmond):** Yes, we do. The announcement last week from Jeremy Hunt that he plans to block the pay rise to national health service staff for 2014-15 is nothing short of bad faith. To try to steal the pay rise back from workers’ hands risks destabilising the NHS across the United Kingdom and damaging morale. Therefore, the Scottish Government has no intention of following Jeremy Hunt and will use Scotland’s independence from Westminster on the health service to block that move.

However, I have to say that, as long as our budget remains tied to Westminster, the UK Government’s damaging approach could further drive down Scotland’s budget in the future.

**Rhoda Grant:** The First Minister has sanctioned a pay rise of up to 4 per cent for the top managers in the NHS. Can nurses in the NHS in Scotland expect a pay rise of the same degree?

**The First Minister:** Rhoda Grant should examine the reality behind that. [*Interruption.*] It is important. On the pay increase of 1 per cent for 2013-14, which was effected from 1 April this year, we made additional payments to low-paid staff to ensure that everyone earning below £21,000 received an increase of £250. For senior managers, there was a cap at £80,000. That is what we have done in terms of equity within the pay scales of the health service, and it has been strongly supported by the health service unions.

Rhoda Grant should reflect on the fact that we are able to say that we will not go in the direction that Jeremy Hunt has, because Scotland has independence of thought and action on the health service—albeit that we may be constrained by

future finances and dragged down by the Barnett formula. I am very worried about this.

Last week Andy Burnham, the Labour shadow secretary of state for health, said:

“I am talking quite passionately about getting English ... MPs back up the road and ... sitting down with ... Richard [Simpson] and Rhoda [Grant] and others and saying, let’s get health policies that can be consistent across England, Scotland and Wales. Wouldn’t that be a good thing, pulling in the same direction as opposed to pulling our separate ways?”

I doubt that there is a health worker in Scotland who is not glad that we have autonomy over the health service and can avoid having a breach of faith being imposed by a Westminster Government.

### Specialist Crime Division

**4. Christine Grahame (Midlothian South, Tweeddale and Lauderdale) (SNP):** To ask the First Minister, in light of the specialist crime division’s responsibilities for organised crime, counter terrorism and intelligence, what its role will be in relation to the National Crime Agency, which sets the United Kingdom’s overall operational agenda for tackling these matters. (S4F-01616)

**The First Minister (Alex Salmond):** Police Scotland’s specialist crime division has wide-ranging national responsibilities and works closely with the local police divisions. I expect it to work closely with the National Crime Agency. The National Crime Agency can conduct operational activity in Scotland only if authorised by the Lord Advocate. Any activity within Scotland would be in support of Police Scotland operations to tackle serious and organised crime. Police Scotland will work closely with the NCA to make best use of resources to complement and support our operational activity to tackle criminality as it affects Scottish communities.

**Christine Grahame:** I thank the First Minister for his reply, from which I take some comfort that the operational independence of Police Scotland through the specialist crime division is not compromised. In the light of the referendum next year, have there been discussions about the relationship between the rest of the UK and Scotland post-independence in combating, for example, international terrorism?

**The First Minister:** The Deputy First Minister reflected those points at the Foreign Affairs Committee on 28 January this year. She said:

“In terms of security and intelligence I would envisage Scotland having independent domestic intelligence machinery in Scotland sitting alongside our police service but working very closely—given our sharing an island with the rest of the UK.”

We as a Government are keen to discuss what a future post-independence relationship with the UK Government would look like, but, as yet, UK ministers have not been willing to engage with us on this and many other subjects.

**Elaine Smith (Coatbridge and Chryston) (Lab):** What progress is being made on the Scottish crime campus, which is being built in my constituency, given that it is a key part of the Scottish Government's strategy to tackle serious and organised crime? When is it due to open and how many jobs will it bring?

**The First Minister:** I expect the Gartcosh crime campus to be operational early next year. I am pleased to say that it is on time and on budget. Once complete, it will be for each partner located there to recruit any staff they need. Many staff will be moving from existing locations. It is worth noting that the project has provided employment for 350 contractors. The work currently under way is supporting 43 apprentices, including six brand-new apprentices. I am sure that the whole chamber welcomes that.

#### **Higher Education (Economic and Social Research Council Report)**

**5. Kezia Dugdale (Lothian) (Lab):** To ask the First Minister what the Scottish Government's response is to the findings of the Economic and Social Research Council regarding higher education. (S4F-01628)

**The First Minister (Alex Salmond):** Since we took office in 2007, the percentage of 18-year-olds from the most disadvantaged backgrounds at university has increased from the 8.1 per cent that we inherited from Labour to 13 per cent for the academic year 2013-14. That is progress but, as the findings of the Economic and Social Research Council show, much more needs to be done.

That is why we brought in the Post-16 Education (Scotland) Act 2013, which was passed in June and which gives widening access the force of law, requiring universities in Scotland to bring more students from poorer backgrounds through the university experience. It is why we are also providing £10 million of support for 2,089 additional funded places at universities in 2013-14: 727 for widening access; 1,020 for students coming from college; and 342 for sectors likely to have the greatest academic impact.

**Kezia Dugdale:** The report clearly says:

"The abolition of the graduate endowment in Scotland ... has not led to increased representation of students from more socially deprived backgrounds in universities."

The First Minister has presided over the worst student support packages, the worst widening access records and the highest drop-out rates on

these isles. If he truly believes that education in Scotland is based on the ability to learn and not the ability to pay, why cannot poor kids get into his universities?

**The First Minister:** It is Kezia Dugdale's party, the one that she supports, that wants to reimpose tuition fees on the students of Scotland. I have accepted that progress is not fast enough, which is why we are proposing further measures, but to take the figure from 8.1 to 13 per cent over our term of office is at least a right move forward. I know that it is not her personal responsibility, but perhaps Kezia Dugdale should give some thought to how her colleagues on the front bench could have allowed the figure to fall as low as 8 per cent in 2007.

One of our measures is the Post-16 Education (Scotland) Act 2013, and I have explained how we believe that it will be instrumental in widening access. If memory serves me correctly, the Labour Party voted against that bill, so what is the point of Kezia Dugdale asking her question, having voted against one of the measures that we hope will improve the situation?

I offer a warning of what happens when tuition fees are imposed. As we know—and we should be celebrating this—the number of Scots accepted into Scottish universities for 2013-14 has risen to a record 27,990. That is an increase of 2 per cent compared with this time last year. In England this year there was a slight increase in the number of students going to university under the fees situation, but the figure remains almost 20,000 below the pre-fee level. The figure is 20,000 less than it was before the imposition of the £9,000 tuition fee. Does Kezia Dugdale believe that, among those 20,000 students who are no longer going to university in England, it is the well-off students who are not going to university? Believe me, it is the people from disadvantaged backgrounds who are being excluded from university in England, under the very measures that Kezia Dugdale and her party would like to impose on the Scottish people.

#### **2014 Commonwealth Games (Ticket Allocations)**

**6. Liz Smith (Mid Scotland and Fife) (Con):** To ask the First Minister what discussions the Scottish Government has had with the organisers of the 2014 Commonwealth Games regarding ticket allocations. (S4F-01623)

**The First Minister (Alex Salmond):** The Scottish Government is working closely with the Glasgow 2014 organising committee, which has developed a ticket allocation policy. I am delighted that the games are, and can claim to be, the most affordable Commonwealth games ever. They are the first to offer half-price concessions for children

under 16 and for the over-60s, and the demand for tickets, as Liz Smith knows, has been absolutely fantastic, with more than 2.3 million requests for around 1 million tickets.

**Liz Smith:** I thank the First Minister for that reply and I agree that it is good news about the size of the demand. During the London Olympics and Paralympics, 125,000 tickets were made available for young people to see different sports events completely free. Judging by today's excitement as the Queen's baton route in Scotland has been unveiled, a large number of Scottish youngsters would greatly appreciate the same opportunity for the Commonwealth Games. Is it the First Minister's understanding that such an opportunity will be provided by the games' organisers and that it will include allocations for Scotland's most vulnerable children?

**The First Minister:** The latest measures to ensure that that happens will be announced very shortly by the games organisers but I hope that Liz Smith will agree that the announcements that have been made to date have taken account of not just where the London Olympics had successes, but where there were some early failures with regard to attendance at certain venues. Those issues have been taken into account when considering affordability and the ticket allocation process, so that we can learn the lessons and, I hope, do things even better.

Liz Smith is quite right to raise the issue and I assure members that the matter is being addressed by the games organisers. As they roll out their announcements, I believe that Liz Smith will see some of her hopes realised.

## Citizens Advice Youth Outreach

**The Deputy Presiding Officer (Elaine Smith):** Order. I ask guests in the public gallery to leave the chamber quietly, please. The Parliament is still in session.

The next item of business is a members' business debate on motion S4M-07862, in the name of Jim Hume, on citizens advice bureaux-run innovative youth outreach projects. The debate will be concluded without any question being put.

*Motion debated,*

That the Parliament congratulates Scotland's citizen's advice (CAB) service on its work; notes what it sees as the success of the many CAB projects that reach out to and support young people in their community; believes that one of the best examples of this is Roxburgh and Berwickshire CAB's highly successful Youthinfo@CAB, project; considers that this provides excellent work in offering free, impartial and confidential help and support to 16 to 25-year-olds in the Borders on issues that concern them, including money, housing, jobs and relationships; applauds it on being awarded an extension of funding, which, it understands, will allow it to continue into its fourth year; commends it on its principle of involving young people from the community directly in its governance and operations; believes that the success of the project is due not just to the hard work of those involved, but also to their imaginative use of many different ways of engaging with people, including face-to-face advice sessions, interactive workshops in schools and colleges and extensive use of information technology and social networking; welcomes the news that, thanks to funding from the Bank of Scotland Foundation, the project has now extended its area of operations to Roxburgh as well as Berwickshire, and believes that it is an excellent example of innovative work that enables young people to support and help others of the same age through the problems of life.

12:32

**Jim Hume (South Scotland) (LD):** I am delighted to have secured this members' business slot for two reasons. First, it is always a privilege for members to be able to lead their own debate in the chamber. Secondly, for some time I have been minded to utilise the next opportunity that arose to celebrate the outstanding contribution that the citizens advice service has made to British society and, more specifically, to highlight an innovative and successful project that is being run in my region.

It would be fair to say that, as parliamentarians, we all have a healthy regard for the work that citizens advice bureaux do around Scotland; I have often referred constituents to them due to the excellent expert advice that they can provide, free of charge, on issues ranging from legal matters to immigration.

Citizens advice bureaux have become woven into the fabric of British life, and their network of

more than 3,500 advice-offering locations across the United Kingdom—250 of which are in Scotland—are pillars of the local communities that they serve.

Like many institutions that have gone on to have a profound impact on the UK, the CAB service was born out of wartime necessity. The day after war with Germany was declared, the first 200 bureaux were opened—run from private houses, public buildings and, in one instance, even a horse box. As is the case today, the service was dependent on the good will and assistance of volunteers. The casework of advisers back then was certainly different from today's caseload, but it was no less important, of course. It ranged from issues with ration books and evacuation to locating missing relatives and prisoners of war.

It was during the war that the CAB service first gained its reputation for providing valuable support in advising people about their benefits entitlement and helping families to complete applications for all the wartime allowances that were available to them. Crucially, the CAB service's experience of witnessing the distress that was caused by a delay in the processing of those applications led it to raise the issue with the relevant Government board of the day. It managed not only to speed up the process but to convince the board to open up more offices to process applications. Thus began the CAB service's long and successful tradition of advocacy and of lobbying the Government—of whatever colour—and agencies to influence and change policy to the benefit of the people it serves.

Citizens advice bureaux have shown an ability to evolve throughout their 74-year history. Nowhere is that better demonstrated than at a project in my region that provides valuable advice on a range of issues to an often underrepresented section of society—young people. In May, I had the pleasure of visiting Duns to see at first hand the outstanding work that is being done by the Roxburgh and Berwickshire Citizens Advice Bureau. In 2009, the young citizens project was created, thanks to funding from the Scottish Borders Council fairer Scotland fund. The objectives of the project, which began in Berwickshire, were to provide regular confidential advice sessions for people aged 16 to 25; to attract, recruit and train young people to become volunteer advisers; and to liaise with local community groups.

I am pleased to say that the project has gone from strength to strength over the past four years. As a result of its success, it has expanded into Roxburgh, and it has undergone dramatic changes. Following consultation with a group of young people, the project has been rebranded as youthinfo@CAB. It delivers a youth-led service,

with a steering group of young people from throughout Roxburgh and Berwickshire who direct the project's aims and objectives.

The CAB now employs Sophie Charlotte Wild, who I believe is up in the public gallery. She is one of its former youth volunteers—she volunteered as a young persons adviser—and, along with Annette McGraith, the project leader, she works closely with local schools and colleges to raise awareness of what citizens advice bureaux deliver. Workshops have taken place at six high schools in the area. To date, more than 3,800 pupils have received advice, and 95 per cent of them said that they enjoyed the workshops.

That work has only been possible because of continuing funding from the Scottish Borders Council fairer Scotland fund and generous grants from the Bank of Scotland Foundation. More important, it is the tireless efforts of the CAB staff and the 31 young volunteers that continue to drive the project forward. I cannot mention them all, but volunteers such as Aaron Bolton and Aaron Millar, who run the bi-monthly *Newsflash*, which is distributed to high schools and colleges, have helped to secure nearly £700 in funding from a project called youth chex, and others such as Oscar McAndrew, Kyle Wilson and Jess McLean, who, alongside Aaron Bolton, comprise the project's steering group, have helped to secure £4,500 in funding to produce a CAB awareness-raising video.

The success of the youthinfo@CAB project has understandably come to the attention of others. I understand that the Dalkeith CAB sought guidance from the project, following a successful application to the Big Lottery Fund to develop a similar service in its area. I also understand that the two other bureaux in the Borders—the Central Borders Citizens Advice Bureau and the Peebles and District Citizens Advice Bureau—are now interested in entering discussions to roll out the project Borders-wide, which would be a fantastic testament to the hard work of all those associated with Roxburgh and Berwickshire CAB.

I was delighted to welcome representatives of Roxburgh and Berwickshire CAB on a visit to the Parliament back in July, and I am pleased once again to welcome them to the Parliament this afternoon. I wish them well in continuing their good work, and I encourage people in other areas to consider rolling out similar essential youth projects.

12:38

**Christine Grahame (Midlothian South, Tweeddale and Lauderdale) (SNP):** I, too, welcome the debate, and I congratulate Jim Hume on securing it. I welcome members of the Scottish



Youth Parliament from the Scottish Borders—they happen to be in the Parliament today, and I think that they are listening to the debate. I declare that I was once a volunteer lawyer who gave advice at a CAB. You see? Lawyers do give free advice sometimes—hold the front page.

The public, and indeed politicians, are not fully aware of young people's need for free advice across a whole spectrum of areas. The inhibitions that we all share when it comes to asking for advice—let alone knowing that we need it or where to find it—can be worse for the young.

The outreach work that has been developed in Roxburgh and Berwickshire in the constituency neighbouring mine is very much to be welcomed. It is an excellent development, and I am delighted to hear from Jim Hume that it might be extended to other parts of the Borders.

I scanned the Citizens Advice Scotland website specifically to see what issues were on it. There is a myriad of them, and they are complex. I will quote from the page on “Young people and consumer rights”, and we will all learn something. The section on betting and gambling says:

“If you are under 18 you may not enter a public betting shop or gaming club. You can go into a licensed bingo club or other premises where bingo is played, as long as you don't take part in the game. If you are under 18 you can take part in prize bingo at fairs and amusement arcades as long as the prize does not exceed £15.”

How do people know that? Who is to know that? It is so complicated.

Much to do with age and what is prohibited or allowed is very complex. Perhaps gambling is a serious issue, but let us take the more serious issue of firearms and other weapons. Again, there is guidance on the CAS website, which says:

“If you are under 17 you cannot purchase or hire any firearm. If you are under the age of 15 you cannot have in your possession an assembled shotgun unless supervised by someone of 21 or over, or unless the gun is covered with a securely fastened gun cover”—

I hope that members are still awake—

“that prevents it from being fired.”

Things are very complicated.

I do not use Twitter, but I use Facebook and other social media. It is important that the young can access that information, as well as outreach information, through social media.

Problems around access to benefits and housing are perhaps unfortunately more prevalent among young people now. Who knew that we would look to our 16 to 25-year-olds to have to know such stuff? When I left school just a couple of decades ago, I walked straight into a job. I was 16 and a half and had had enough of school. I walked along Chambers Street, knocked on the

doors of four insurance companies and was offered a job at every one. Those days are gone. Unfortunately, straight from school or even university or college, young people have to know how to access benefits.

Young people have entitlement—wonderful. The CAS website has information on young people and benefits. However, it explains that

“Young people under the age of 25 are entitled to 20% lower Jobseeker Allowance ... payments”

and that they have lower benefits all round. Of course, I and, I am sure, many members in the chamber think that that is a scandal. Lower benefits are not an issue for older people or for people who suddenly find themselves unemployed.

Although some of the information to do with firearms, for example, is complex but necessary, the issues to do with young people, benefits, access to housing and rights are, regrettably, very serious. My colleague Alison McInnes, who is in the chamber, knows that, in the Justice Committee, we find the complexity of what can and cannot be done at different ages a mystery. It is time that that mystery was resolved.

Citizens Advice Scotland's report “Being Young Being Heard: The impact of the recession on young people in Scotland” is an excellent document.

I thank Jim Hume for the debate.

12:43

**Jackie Baillie (Dumbarton) (Lab):** I join other members in congratulating Jim Hume on securing time for the debate and on his very thoughtful speech.

It is appropriate that we recognise the work of the citizens advice bureaux and Citizens Advice Scotland. They deliver front-line, essential advice to many people, both young and old, in our communities across Scotland. With the serious cost-of-living crisis that people face, the numbers who are appearing at their doors is increasing exponentially. Apparently, there have been half a million new inquiries from more than 200,000 clients just in the past year, and the figures will undoubtedly go up.

Jim Hume rightly praised the work of Roxburgh and Berwickshire CAB. We have received a briefing on Motherwell and Wishaw Citizens Advice Bureau's reachout project for young people, and members have spoken positively about their local services. I will join in, as I want to speak in equally positive terms about West Dunbartonshire Citizens Advice Bureau.

Not content with providing advice on a range of issues, from out-of-work benefits to disability allowances, child tax credits and pensions—all CABs do that exceptionally well—CABs go further. That illustrates their creativity in responding to local needs, as has been done in Roxburgh and Berwickshire. They look beyond the immediate problem and focus on practical solutions. Their hallmark is that they work in partnership with others in our local areas to help some of the most vulnerable people.

I will give a couple of examples of what we are doing in West Dunbartonshire, starting with food banks. West Dunbartonshire CAB is at the forefront of organising and supporting volunteers for the food bank in our area. Staffed by volunteers, many of whom are young people, and working with the churches, the CAB has helped to organise food collections, bag packing to raise money to expand what it can do, and the distribution of parcels to those who are most in need.

The CAB has done those things because it has recognised that there is a growing need for the service in its area. We know that the numbers of people who use food banks have increased enormously. Figures produced by the Trussell Trust show that 4,500 families in Scotland used food banks a year ago, but the number has increased to almost 15,000. The trust provides only a proportion of those food banks, and we know that there are different local arrangements across Scotland. Of those who depend on food banks, about a third are children and about a fifth are employed. It is increasingly clear that we are facing a cost-of-living crisis—that is something that the CAB is taking action on, and it affects young people, too.

Then there is the CAB's activity on payday lending. On our high street we have four payday lenders, which charge huge interest rates—in one case, rates in excess of 3,000 per cent. I sent my staff to check that figure again because I thought that there was a typing error, but it is indeed 3,000 per cent. Such rates suck people into a spiral of debt from which there is little real chance of escape. Some young people who are in work are having to go to payday lenders because, they tell us, the salary that they get, whether it is weekly or monthly, does not last as long as it did previously. It is just not going far enough, because their incomes have declined in real terms and the costs of basics have risen by some 25 per cent in the past five years.

Providing practical advice is important, but so is providing practical support for people in the community who are struggling, and that is where the reachout project in Motherwell and the youthinfo@CAB project in Roxburgh and

Berwickshire come into their own, because they recognise the need for advice and support for 16 to 25-year-olds. Whether they relate to money, housing or jobs, preventative advice and information are critical at a time when unemployment is rising. It is difficult enough for people to negotiate what is a changing workplace, never mind a changing community.

We all owe a debt of gratitude to citizens advice bureaux and their volunteers, young and old alike. We thank them for their efforts on our behalf.

12:47

**Mary Scanlon (Highlands and Islands) (Con):**

I, too, thank Jim Hume for bringing the issue to the chamber for debate. John Lamont is not available today, but he has passed on to me quite a lot of local information on the project.

Like Christine Grahame, in my past life, I was a volunteer at a citizens advice bureau. I volunteered for one afternoon and one evening a week for quite a long time in Cupar and St Andrews, so I too am well aware of the excellent work that the bureaux continue to do.

Like Jackie Baillie, who was given information about West Dunbartonshire, I was given some information about the CAB in Orkney. Although it does not have an identical project, it kindly gave me some information on its work, which is worth mentioning. It provides services to meet the needs of people who are financially incapable of managing their day-to-day finances, helping them to plan ahead and to know where to seek financial advice. Such people may have limited basic budgeting skills and find it difficult to make ends meet. The citizens advice bureau tries to tackle that early, before people go to the payday lenders that Jackie Baillie mentioned, by giving advice on how to avoid getting into unsustainable debt.

I was pleased to hear that the Roxburgh and Berwickshire CAB project has been used to highlight the benefits of volunteering. Registration with the Saltire awards, which recognise volunteering achievements by young people aged 11 to 24, is a mark of someone's commitment to their community. Christine Grahame mentioned employment, and I think that employers would be interested in that—I certainly think that it is impressive.

Given that 77,000 young people in Scotland are not in education, employment or training, the project is a great help as it provides support and advice as well as raising awareness. The outreach surgery locations and publicity material are helpful and the project would certainly lend itself to being rolled out in areas such as the Highlands and Islands.

As Jim Hume did, I commend the project's close working with the six local secondary schools, as well as its delivery of monthly outreach surgeries in Borders College. That work gives young people the opportunity to raise issues relating to cyberbullying and many other topical issues that are coming on to our agenda.

I was concerned to read that the new focus for the Roxburgh and Berwickshire project will be on planning its exit strategy if funding is not secured. Although we are good at identifying and praising good practice and achievements, we are not always so good at adopting good practice and rolling it out across the board. I hope that Roxburgh and Berwickshire CAB will identify the need for its service and, if it needs an exit strategy, I hope that it will be able to ensure that the needs of the many young people who benefit from the project will be met.

There is still much to be done to help young people into training, further education and work, and to help them with how to manage their money, benefits and housing, where appropriate. I fully commend the project, as well as the wider work of citizens advice bureaux. To be truthful, I think that there are probably similar projects in citizens advice bureaux throughout Scotland.

As I said, in my past life, I was a citizens advice bureau volunteer. I have nothing but praise for the training that Citizens Advice Scotland gives volunteers and the first-class work that it does, which is topical and responds to topical trends.

I commend Jim Hume for raising this excellent initiative in the Parliament.

12:51

**Alison Johnstone (Lothian) (Green):** I, too, thank Jim Hume for securing the debate. As he suggested, Citizens Advice Scotland is a national institution. Its work with people throughout our communities in Scotland has made it invaluable, and it is the first port of call for many people in crises. It is fair to say that its services, which are delivered by staff and well-trained volunteers, have rarely been more in demand. The challenges that are posed by navigating the ever-changing benefits system, and by stagnating wages and rising prices, mean that many more people need help from their local CAB.

Among its many important aims, Citizens Advice Scotland seeks to help the whole community to bring money into the local economy and to increase knowledge and skills. Although it helps many people who find themselves in crises, it also works proactively to equip young and old alike to help themselves better.

The innovative youth outreach projects that we are debating do just that, and I will mention some of the great initiatives that are taking place in Lothian thanks to Citizens Advice Scotland.

In partnership with East Lothian Council housing service, more than 900 young people who are currently in secondary 4 and 5 in high school will take part in a course called money matters, in which they will discuss and learn about the financial implications of living independently and being responsible for managing their own budgets.

When it comes to budgeting, the Musselburgh and District Citizens Advice Bureau application team—a group of young people—has come up with an app that helps clients to manage their money and keep on top of their personal finances. That incredibly useful device took them to the runners-up slot in the money for life challenge. It helps people to prioritise spending, to keep an eye on how much cash they have available and to better understand their own spending habits. It has been so well received that the team has been given a legacy grant from Citizens Advice Scotland and Lloyds Bank to develop the app further.

I am also pleased to learn that young enterprise sessions will be delivered to disadvantaged young people in East Lothian. Recently, Citizens Advice Scotland worked with young parenting groups on substance misuse issues, but I really like the fact that the young enterprise project is empowering. It gives each group of young people £150 to develop an idea—a product, service or event—with the aim of making a profit. Last year, 35 learners completed the course and every group successfully made a profit. The project develops the skills that are essential to enterprise and helps young people to learn more about starting their own business. Young people know best what appeals to other young people, and they are given a chance to explore and develop exciting business proposals.

At a time when household incomes have never been more stretched, it is essential that we equip our young people with the skills to use their money wisely. Citizens Advice Scotland wants all those who use it to feel that they have some control, and it strives to promote the experience and satisfaction of taking steps to help oneself. Those initiatives dovetail with the aims of the curriculum for excellence. Financially savvy, active and responsible citizens are in a better place to navigate the many challenges of student life, home life and working life, and to play an important role in their own families and societies in these challenging times.

I am sure that we have all referred constituents to citizens advice bureaux or called them ourselves to benefit from their expertise and

experience, and that we have been enlightened by them when they have been called to give evidence to our parliamentary committees. Their positive policy and social development work is a valuable contribution to many of the issues of the day. Investment in their invaluable services is money very well spent. I, too, congratulate Citizens Advice Scotland on all its work and on the innovative youth outreach projects.

12:55

**Malcolm Chisholm (Edinburgh Northern and Leith) (Lab):** I congratulate Jim Hume on bringing this important subject to the chamber and I pay tribute to Citizens Advice Scotland and all the citizens advice bureaux across Scotland, which provide such an important service to thousands of people in the country.

The motion is about a particular age group in a particular place in Scotland, but the pressures that face people under the age of 25 throughout Scotland today are just as severe as, if not more severe than, those that are faced by the wider population. It is therefore vital to ensure that there are adequate services to meet their specific needs.

An important aspect of what Citizens Advice Scotland does is its research on a range of trends. Part of its recent research has told us that young people are finding it increasingly difficult to access the housing ladder and are coming into conflict with landlords and debt collectors more frequently. As we know, changes to benefits for young people are also set to continue, so the importance of advisory groups like Citizens Advice Scotland and the citizens advice bureaux across Scotland is becoming ever more apparent.

The project that is highlighted in the motion illustrates a new way of mainstreaming the work of Citizens Advice Scotland by using a medium that is familiar to younger people. What young people need as a minimum at this time is reliable and accessible information, and today we can celebrate the fact that independent services are responding to their needs, and we can live in hope that others will follow the example of best practice that we are discussing.

I am told that the youthinfo@CAB project ran for an eight-week trial period in the Jedburgh health centre on Tuesday afternoons, with financial support from the fairer Scotland fund and the Bank of Scotland Foundation. What is important in the setting up and running of the services is that young people informed the development, and they now take part in delivery of a drop-in centre solely for use by young people. What interests me is the fact that it is about disseminating information not just in a reactive way, but in a preventative

manner. The CAB not only has drop-ins and information on its website, but engages with individuals of school age to ensure that when they move on to life as adults they are fully aware of the support that is available. The Jedburgh project is an exemplar that other areas of Scotland could look at carefully and benefit from copying.

In its report "Being Young Being Heard—the impact of the recession on young people in Scotland", Citizens Advice Scotland highlights the magnitude of the challenge that it faces in provision of services in the future. As the report points out, young people are three times more likely to be unemployed than the average worker, and in Scotland alone the number of 18 to 24-year-olds claiming jobseekers allowance increased by 79 per cent after 2007. As we know, many are going to be required to engage in voluntary work in return for support, and all will be required to attend the jobcentre and prove that they have been looking for work on a daily basis, much of which now depends on access to digital services. All that puts people at high risk of losing support if they are not kept informed about their rights and what will be expected of them in the new benefits system.

With welfare reform, the need for services such as Citizens Advice Scotland will grow ever greater and more urgent. Parental support and an adult life that starts with state support as the sole source of income will be the lived reality for so many of the younger generation. Furthermore, greater numbers resorting to short-term lending is a very real possibility as the effects of austerity are felt, so it is absolutely vital that the consequences of engaging with payday lenders are made clear to young people.

CAS's research also shows that young people are unhappy claiming benefits and long to find employment, but many are underclaiming the benefits to which they are entitled. The new project will give those youngsters the tools with which to navigate the benefits system with greater confidence and knowledge.

I join Jim Hume in congratulating the Roxburgh and Berwickshire Citizens Advice Bureau on its innovative project in the Borders, and in thanking citizens advice bureaux across Scotland for all the great work that they do.

13:00

**The Minister for Children and Young People (Aileen Campbell):** As every other member in the debate has done today, I congratulate Jim Hume on securing this debate. We have heard some well-deserved praise for Roxburgh and Berwickshire Citizens Advice Bureau's project to support young people. I would like to add to that

chorus of appreciation my voice and the voices of members of the Scottish Youth Parliament from the Borders, whom I met earlier: Nicola Pringle, Finlay Duff and Scott Redmond all spoke positively about the work that the CAB does in the Borders and about the effective collaborative work that is happening in that area. I also reiterate the welcome that we have all given to the people from the CAB who are in the gallery.

The Scottish Government is behind Scotland's young people, and fantastic initiatives such as the one that we are discussing show what can be done in communities to boost young people's chances as they begin adulthood and find their way in the world. We are clear that the future of our nation rests in our young people's hands, which is why we are doing everything in our power to give them the chance to flourish and to have positive and successful futures.

We make no apologies for having high aspirations for young Scots; we want them to aim high and we know that with the right opportunities and openings there is no limit to what they can go on to achieve. Projects such as the one in the Scottish Borders that Jim Hume has highlighted make a valuable contribution to that drive. By showing young people that they are not alone, by giving them help and support and by involving them in such community projects we can make a real and meaningful difference to their lives.

The project is another example of the sterling work that citizens advice bureaux carry out in communities across Scotland. We have heard today about many wonderful local initiatives from members, and I want to plug the Clydesdale Citizens Advice Bureau in my constituency, which gives valuable advice that I have seen first-hand. Such advice centres help families and people in need—often some of the most vulnerable people in our society—to address complex and difficult issues every day. Whether it is on debt, housing problems or benefits issues, the support that is given often prevents situations from spiralling into crises. That is part and parcel of CAS's work over the decades, which Jim Hume outlined. He mentioned that that work has evolved from ration book advice to embrace social media and all the other modern technologies that can be used to get the right messages through to people who are in need.

As Alison Johnstone, Jackie Baillie and Christine Grahame correctly noted, we know that more and more people are going to bureaux for help all the time; it would be remiss of me not to point out that much of that is down to the harsh UK Government's welfare reform measures, including the widely condemned bedroom tax. The Scottish Government has made abundantly clear its opposition to those measures, which are being

imposed on hard-pressed families across Scotland. Such drastic welfare cuts can only exacerbate problems including child poverty and disadvantage, which afflict the lives of too many young Scots, as Malcolm Chisholm pointed out.

We are doing what we can to mitigate those problems' impact, which is why we have committed £7.9 million of additional funding for advice and support services to help address the effects of welfare reform. That includes £2.5 million that is being channelled directly to Citizens Advice Scotland to fund a range of services to help people on the ground, while bureaux across the country are receiving additional allocations from the wider funding pot.

By strengthening those vital services in that way, we can allow them to expand and undertake new and innovative projects; the youth initiative in Roxburgh and Berwickshire CAB shows us that there is no shortage of ideas. People in the age group that the venture focuses on—16 to 25-year-olds—face a period of huge transition in their lives, which can often lead to feelings of isolation and uncertainty, which Christine Grahame mentioned as a theme in her speech.

I understand that the project gives advice on a range of issues, such as study, work, health, money management and housing—areas in which many young people will require a helping hand to steer them in the right direction. The project has two members of staff and has successfully recruited 31 young volunteers. As Jim Hume said, to date 3,806 students have taken part in its workshops. That is a phenomenal result, which shows the excellent impact that volunteers can have in our communities.

The fruitful links that the project has built up with high schools in Roxburgh and Berwickshire, as well as with Borders College, are very much in keeping with the kind of local collaboration that the Government is promoting between our education establishments and organisations in the wider community. It was great to hear this morning from members of the Scottish Youth Parliament about how that collaborative approach is bearing fruit.

Under curriculum for excellence, which is transforming learning for Scotland's children and young people in an effort to improve their life chances, community learning and development has a key role to play. I have seen some fantastic examples of that across the Borders.

Scotland's national youth information and citizenship organisation, Young Scot, is also undertaking excellent work to support young people through key transitions in their lives. Young Scot's vision is for young people to take responsibility for changing our world and tackling social issues, so that they can grow up in a

Scotland that promotes aspiration, enterprise, opportunity, inclusion and wellbeing. I think that all members who are present will share Young Scot's inspiring vision. This year, the Scottish Government has committed more than £1 million to the organisation to support its work. As well as helping young people to become informed and active citizens who are engaged with their communities, Young Scot delivers its hugely successful national entitlement card, which is now held by more than half a million young people in Scotland. The card is the result of a hugely positive partnership between Young Scot, the Scottish Government, the Improvement Service, the Convention of Scottish Local Authorities and all 32 local authorities.

Just as Young Scot and the citizens advice project that brings us here today are, the Scottish Government is committed to ensuring that our young people are at the heart of everything we do. We want Scotland to be the best place in the world for children and young people to grow up. That is why we are breaking down the barriers that hold them back, including poverty, disadvantage and lack of opportunity. Through our getting it right for every child approach and key social policy frameworks such as the child poverty strategy, achieving our potential, equally well and the early years framework, we are driving a focus on early intervention and prevention to give our young people the best start in life.

As Alison Johnstone noted, curriculum for excellence is helping to ensure that all young folk can be successful learners, confident individuals, effective contributors and responsible citizens, and their needs are, of course, at the very core of our Children and Young People (Scotland) Bill.

Moreover, we invest more than £2.5 billion a year in post-16 education, training and student support. We have retained the education maintenance allowance, which has been scrapped for students in England. We have invested about £5 billion in colleges since 2007. Our opportunities for all programme guarantees an offer of an education or training opportunity for all 16 to 19-year-olds across Scotland who are not already in work, education or training. Youth employment is at its highest rate since the end of 2010 and, for the second year running, the Scottish Government has surpassed its target to provide 25,000 modern apprenticeships.

That record shows our commitment to the young people of Scotland. That commitment and ethos are shared by many organisations across the country that strive to do crucial work to support young people, including the Roxburgh and Berwickshire Citizens Advice Bureau. However, we recognise the challenges that exist. Partnership working is key; we must continue to

work together to ensure that our focus never wanes, because Scotland's young people deserve no less from us.

I thank Jim Hume and all the members who have participated in the debate.

13:08

*Meeting suspended.*

14:30

*On resuming—*

## Carbon Capture and Storage

**The Presiding Officer (Tricia Marwick):** Good afternoon. The first item of business is a debate on motion S4M-07974, in the name of Fergus Ewing, on carbon capture and storage.

**The Minister for Energy, Enterprise and Tourism (Fergus Ewing):** I welcome the opportunity to debate carbon capture and storage for the very first time in the Scottish Parliament, and to discuss the part that it can play as part of Scotland's future energy mix and the economic opportunities that can be realised through development of a vibrant CCS industry.

The Scottish Government has consistently expressed whole-hearted support for CCS over a long period of time, and we recognise the important role that the technology can play in reducing CO<sub>2</sub> emissions and in driving economic growth and jobs. We were supportive of the original CCS project at Peterhead—BP's decarbonised fuels project, known as DF1—and the subsequent commercial-scale project at Longannet, so we were disappointed that neither of those projects came to fruition. We do not dwell on the past, however—we must look to the future.

CCS technology can transform how we generate power, can help to reduce carbon emissions and can support the security of our electricity supply. Here in Scotland and worldwide, it is a fact that hydrocarbons will remain a central element of the energy mix for many years to come; currently, more than 80 per cent of global primary energy use is fossil-fuel based.

However, while we move towards an increasing share for renewables, we have a duty to minimise carbon emissions while ensuring sustainable economic growth. CCS is the only technology that is available to mitigate greenhouse-gas emissions from large-scale fossil-fuel usage in the industrial and power sectors, and it is entirely complementary to renewables because clean thermal base-load will still be required to balance the intermittency of wind power.

CCS is part of the lowest-cost route to decarbonisation. When we talk about CCS, we must acknowledge the sobering reality of the cost of not doing it; the International Energy Agency has estimated that, by 2050, the cost of tackling climate change without CCS could be 40 per cent higher than it would be with CCS.

This morning, many MSPs and their researchers attended an excellent briefing from two companies: Shell and the Summit Power Group. I am indebted to the representatives of both

companies who attended, some of whom are here in the gallery to listen to the debate this afternoon. We heard from Eric Redman, who is the chief executive officer of the Summit Power Group, about the exciting opportunities that could arise from development of the captain clean energy project. I am grateful to Eric for travelling from Seattle to speak to us today. He told us about the potential impact of the captain clean energy project, which could deliver up to £3.4 billion gross value added to the Scottish economy, as well as approximately 2,000 jobs in the construction phase and 300 operational jobs as the project is implemented.

We also heard from Belinda Perriman of Shell, who spoke about the Peterhead CCS project. It is clear that, although that project will have short-term economic benefits, it also represents a unique opportunity for Scotland to lead the way globally in this emerging industry. Peterhead CCS will be the first project in the world to demonstrate clean electricity from gas, thereby positioning Scotland to develop key competencies and supply-chain capabilities.

However, economic impact and supply-chain opportunities are only part of the picture. Both projects could create a step change in emissions reductions in Scotland. Peterhead will produce 400MW of clean electricity from gas, and the captain clean energy project aims to produce 570MW of clean electricity from coal. The captain project also aims to capture and store 3.8 million tonnes of CO<sub>2</sub> per annum, and the Peterhead power project aims to capture and store up to 1 million tonnes of CO<sub>2</sub> per annum. The two projects mean clean electricity, new jobs and reduced emissions, which is an impressive triumvirate, and they tell us that global companies such as Shell and Summit Power are willing to invest in Scotland to develop commercial-scale CCS for a range of very positive reasons. Let me outline some of those reasons.

First, Scotland has many skills and engineering experience that have been gained from the oil and gas industries and which are transferable to CCS. We have companies such as Doosan Babcock actively researching CCS technologies, and we have substantial academic expertise in many of our universities. It is hard to single out any project—I mean no disrespect to those that I cannot name this afternoon—but I make special mention of the Scottish carbon capture and storage collaboration between Heriot-Watt University, the University of Edinburgh and the British Geological Society. Few other United Kingdom bodies have done so much to promote, research and advocate CCS. I pay special tribute to Professor Stuart Haszeldine in that respect.

Previous research has clearly highlighted Scotland's massive CO<sub>2</sub> storage capacity. We easily have sufficient capacity to store our industrial carbon emissions for the next 200 years and to receive and store as much as 100 million tonnes of CO<sub>2</sub> a year by 2030. Indeed, the importance of the North Sea in European CO<sub>2</sub> storage is recognised notably by the Zero Emissions Platform and the North Sea basin task force. They understand the importance of the central North Sea as a CO<sub>2</sub> storage hub.

Secondly, on the CCS regulatory framework, Scotland, in conjunction with the UK Government, was one of the first parts of the European Union to legislate for CCS; it implemented the EU CCS directive by the end of 2011. We then proactively developed a regulatory road map to allow the permitting and consenting of large-scale CCS projects. Our regulatory road map has since been shared with Governments all over the world and used by the UK Government, the European Commission, the International Energy Agency and the Global CCS Institute to promote regulatory best practice. Indeed, that was one of the reasons why the Global CCS Institute came to Scotland to celebrate and have its conference in May this year. I had the pleasure of inviting its CEO, Brad Page, who recognised the fact that Scotland has achieved a great deal in promoting, supporting and advocating CCS. Those ideals are at the very heart of that global institution. I think that that is a fairly positive endorsement of our efforts to date.

Scotland is the natural place to develop a CCS industry, and the building blocks of that new industry could be the two CCS projects that have been proposed. The Peterhead power project was announced as a preferred bidder in the UK CCS competition in March, which was very good news for Scotland and places us in a very good position going forward. However, it is equally important, for a number of reasons, that we do not lose highly innovative CCS projects such as the captain clean energy project. The two projects that were selected for preferred bidder status in the Department of Energy and Climate Change's competition—one coal and one gas project—were good news, and we support that. I welcome that support from DECC and obviously wish to make it clear to the UK Government parties here that we are working closely in partnership with the UK Government on all these matters.

However, it also clear to me that we will, looking ahead, need more than two projects if we are to see the benefits for Scotland and the UK. Multiple CCS projects will provide the kind of learning that will be required in order to reduce rapidly the cost of CCS to make it commercially appealing and able to compete with other low-carbon technologies.

As I mentioned earlier, massive economic benefits can be accrued from the development of a CCS project. The Scottish Government has already recognised the importance of delivering CCS in relation to power generation in our national planning framework, on which we are consulting. It will set the agenda for long-term spatial planning in Scotland.

We do not wish to lose this once-in-a-generation opportunity to future proof clean thermal base-load capacity, increase our security of supply and reduce harmful emissions into the bargain, so I want to continue to work with UK Government ministers to ensure that projects that do not enjoy preferred-bidder status are incentivised through the electricity market reform process.

I note that the sentiments of the Conservative amendment are very much in keeping with our thoughts on the matter; the differences are minor. We believe that the Summit Power project should be specifically supported as well as the Shell project, but these things are being progressed in a reasonable way with the UK Government. I want to make that clear for Mr Fraser's benefit, and that of Mr McArthur.

We want DECC's contracts for difference process to move forward as swiftly as possible in order that we can ensure that projects outside the competition have every chance of succeeding. We note that there are also opportunities for enhanced oil recovery, which is being pursued in many other parts of the planet.

I remain convinced that CCS is technically viable. The various components of the technology have been tried and tested throughout the world. Putting them all together is something that has not been attempted in Europe, but in response to Mr Harvie's amendment, I point out that the various components of the technology have been tried and tested, according to the experts whom I have heard.

**Patrick Harvie (Glasgow) (Green):** Will the minister at least acknowledge that we do not yet understand what the overall energy balance and the overall carbon balance will be in relation to either the energy that is used to capture, transport and store the carbon, or the carbon that will be released if he pursues enhanced oil recovery?

**Fergus Ewing:** I am not an expert on these matters, but my understanding from those who are is that application of the CCS technology is such that we can have a high degree of confidence that there will be a very substantial reduction in carbon emissions. The technology has been tried and tested in various parts of the world. I may expand on that if I have the opportunity in my closing speech. We want to work with people in all parties on what seems to me to be a method of delivering



green electricity from fossil fuels, both gas and coal. I hope that we can all unite around that.

I have great pleasure in opening the debate, and I think that it will be constructive. I am pleased that representatives from all parties attended the briefing session and an informal event yesterday evening to hear more about the opportunities for Scotland from both the exciting projects, and from the possible further application of CCS throughout the world.

I move,

That the Parliament believes that carbon capture and storage (CCS) is a critical technology and component in the decarbonisation of Scotland's energy supplies; recognises that Scotland has strong comparative advantages to develop a CCS industry; further recognises the potential for jobs and enhanced oil recovery that CCS can bring to the country; supports the UK Government's CCS commercialisation competition but would like to see swifter progress through the next stages; considers that the announcement of the Peterhead Power Project as a preferred bidder is an important development of CCS on a commercial scale, but that, if a fully-developed CCS industry is to flourish, the UK's CCS competition must have more than the two preferred bidders, and understands the importance of the UK Government continuing to encourage and incentivise other highly-innovative CCS projects such as the Captain Clean Energy Project.

14:43

**Murdo Fraser (Mid Scotland and Fife) (Con):** I welcome the fact that we are having this debate, and I welcome the opening comments from the minister and the manner in which he made them. In a moment, I will address more specifically the wording of the motion and our amendment and the concern that we have, but I think that it is fair to say at the outset that there is little difference between us, as the minister fairly accepted. We just have a concern about one or two minor aspects of his motion.

The minister is right to highlight the importance of the issue. We have a huge resource in fossil fuels in Scotland and in the UK more widely. We have fossil fuel burning power stations, for example at Longannet in my parliamentary region, which provides a high percentage—sometimes as high as 40 per cent—of Scotland's electricity needs in burning coal, and we have other gas-burning stations. We have hundreds of years' worth of reserves of coal in the ground. Indeed, the issue with coal at present, as we have debated previously, is that the world price is so low that it is almost becoming uneconomic to mine it in our own country. We also have continuing supplies of North Sea gas, and we have the opportunity that is shale gas which, as we have heard many times, has been exploited in the US.

Of course, the issue with those sources of fuel is that burning them and releasing carbon into the

atmosphere is incompatible with the climate change targets that we have set, so we must try to tackle that.

We could move wholesale to low-carbon sources of energy, such as renewables and nuclear, but they come at a cost. We have debated many times the fact that the higher costs of renewables and nuclear relative to burning fossil fuels means that it is beyond their reach to provide 100 per cent of our needs at present if we are also to be aware of affordability and the cost of living, which we are always debating in Parliament.

If we can find a way of burning fossil fuels economically and affordably while treating the carbon, we have an ideal solution and can continue to do both. I was pleased to hear the minister accept that if we are to develop more renewables—at the moment, that means, in particular, more onshore and offshore wind—we need to balance their intermittence. Our having more gas-burning stations is the simplest way of doing that, but we have to capture the carbon that comes from that gas.

CCS is absolutely vital for developing an energy industry at an affordable cost and for fulfilling our climate change obligations. It also provides the opportunity to increase the rate of exploitation of North Sea oil reserves by pumping carbon under the sea.

It is good news—I was pleased to hear the minister accept it—that the UK Government has supported the project at Peterhead and the white rose project in Yorkshire, and that the UK has the potential to be a world leader in the technology.

The CCS road map that the Department of Energy and Climate Change has published has a number of proposals. There is a CCS commercialisation programme with £1 billion-worth of capital funding to support commercial-scale CCS. The two bidders have been successful in going to the next stage of that.

There is a £125 million four-year co-ordinated research and development and innovation programme, which covers fundamental research and understanding, and the establishment of a new UK CCS research centre. Universities throughout the UK, including in Scotland, are benefiting from that investment.

There is also the development of a market for low-carbon electricity through electricity market reform, which relates to the feed-in tariffs for contracts for difference. There is intervention to address key barriers to the deployment of CCS, including work to support the CCS supply chain, to develop transport and storage networks, to prepare for the deployment of CCS on industrial

applications and to ensure that the right regulatory framework is in place.

There is also international engagement, so that we share the knowledge that we generate with other countries in the world and learn from them at the same time. That will help to accelerate cost reduction.

A lot of work is going on within the UK Government and DECC; it is good that the Scottish Government is supporting that work. Scotland will receive many opportunities from that—not only at Peterhead, but further afield.

As I said, there is a lot in the minister's motion with which we agree; I was just a little bit concerned about it being so specific about the competition needing to have more than two bidders. I was also a little bit concerned that it mentions a specific project—the captain clean energy project. That is not to say that I in any way disagree with the project. Although I was not able to get to the briefing this morning due to my having other engagements, I had the benefit of meeting its promoters some months ago. It is a great opportunity and I would certainly like it to progress. Indeed, there will be the opportunity for that to happen as the commercialisation programme proceeds, if more money becomes available or is freed up from the current process. However, I was concerned about being too specific about the project at this stage, so I lodged my amendment.

I also want to draw specific attention to the opportunity for Scottish universities from the innovation funding to which I referred a moment ago. Our amendment is intended to be a gentle push in the right direction for the Scottish Government, rather than a fundamental disagreement with the direction that it is taking.

I read with great interest Patrick Harvie's amendment. I must say that I agree with a lot of it too; it makes a lot of sense. I am not quite sure, however, about the point that we undermine our climate change arguments if we promote CCS. The whole point of carbon capture and storage is that we can continue to use fossil fuels while removing the dangerous element, which is the carbon. It does not seem to me to be contradictory, but perhaps in a moment Patrick Harvie will explain.

**Patrick Harvie:** I hope that it was clear from the amendment that we are not suggesting that CCS as a technology undermines the climate change objectives. However, if we use it simply to extract more fossil fuels than we would otherwise have extracted, which are burned primarily in transport modes in which future CCS is not possible, or if we use it as a pretext for increasing fossil-fuel generating capacity before CCS is available, those

things will undermine the climate change objectives.

**Murdo Fraser:** I am grateful for that clarification. Of course, we should all be wary of pretexts, so I am grateful to Patrick Harvie for making that clear.

I want to touch on Longannet, because the minister mentioned it and I am sure that it will come up later in the debate. I want to get my retaliation in first in relation to the Longannet situation. I am disappointed, as many members are, that the Longannet CCS project did not proceed, because Longannet is within my parliamentary region. The background is that the consortium behind the project, which consisted of Scottish Power, National Grid and Shell, told DECC in October 2011 of a number of difficulties with the project, such as that the costs were increasing and were up to £1.5 billion or as high as £1.9 billion, which was above the DECC limit of £1 billion. In addition, there were technical issues, such as the length of the underwater pipeline—of course, that issue is avoided by having the new trial project in Peterhead—and the cost of upgrading it to comply with the EU directive on large combustion plants. Although it was unfortunate that the project could not proceed, it is entirely understandable why DECC said that it did not make sense to invest more money in the scheme.

The Comptroller and Auditor General's report on the issue in March 2012 laid the blame firmly at the door of the previous UK Government. The report concluded that the competition was launched in 2007 with insufficient planning and recognition of the commercial risks. It was unfortunate that the previous UK Government went about it in that way. I hope that having the new plant at Peterhead will mean that Scotland will see the opportunity that was at risk of being lost when the Longannet project came to an end.

I will touch on one further point, in relation to the provenness of the technology, as mentioned in Patrick Harvie's amendment and in RSPB Scotland's briefing for the debate. It has also come up at the Economy, Energy and Tourism Committee. The minister is quite right to say that the technology works, but we do not know whether it works at an economic cost that would allow us to continue to burn fossil fuels on a financially stable basis. Scottish Power and SSE certainly questioned that when they gave evidence to the Economy, Energy and Tourism Committee back in February this year.

It is an important issue, because if the Scottish Government is to meet its obligations in terms of climate change legislation and—specifically—“Low Carbon Scotland: Meeting our Emissions Reduction Targets 2013-2027. The Second Report

on Proposals and Policies”, or RPP2, it must ensure that carbon capture and storage does work, because it will be an essential component. The point that I and others have raised at committee and which is raised in the RSPB briefing is that there is no plan B—no alternative. So, we are keeping our fingers crossed and hoping that CCS will work, that it will be affordable and that it will present a strong economic case. I hope that it does—I am sure that the Scottish Government agrees with me on that—but at the moment there is no guarantee of that, which is why the experimental programmes are being taken forward in Peterhead and Yorkshire. If it does not work, the Scottish Government will have a very serious problem.

I very much welcome the debate and the way in which the minister introduced it. I also welcome the partnership between the Scottish and UK Governments on the issue. Scotland has an opportunity to be a world leader in developing this vital new technology, which is something that we should all embrace.

I move amendment S4M-07974.2, to leave out from “but would like” to end and insert:

“; trusts that progress will be made over an appropriate timescale that takes full account of the need for effective planning at all stages; considers that the announcement of the Peterhead Power Project as a preferred bidder is an important development of CCS on a commercial scale; welcomes the significant funding being made available by the Department of Energy and Climate Change for research into CCS and CO<sub>2</sub> monitoring in Scottish universities, and recognises the need for policy certainty to enable much-needed private sector investment in the field.”

14:53

**Patrick Harvie (Glasgow) (Green):** In opening the debate, Fergus Ewing said that it was the first debate that we have had on carbon capture and storage. It might be the first debate with that phrase in the subject title, but the topic has been discussed in many chamber debates as well as in parliamentary committee meetings on many occasions.

I welcome the fact that we are having a debate specifically on CCS, because during previous exchanges on the topic the Greens have sought to highlight some concerns about the development of CCS technology. However, they are concerns, not objections.

There have been times when we have been, perhaps unintentionally, misrepresented as being opposed to the development of CCS technology. I say again that we welcome the research that is being conducted and are interested in finding out, as Murdo Fraser said, not only whether the technology is technically viable but whether it can be sufficiently cost effective and can achieve the

right energy balance and carbon balance—in fact, whether it has the potential that very many people claim that it already has. There have been times when Fergus Ewing and others have talked about CCS as though it is already here. They have talked about the incredibly important role that it can play, not the incredibly important role that it might play.

I will give an example. A report from SSE and Shell about the Peterhead project landed on my desk today; I am sure that other members have been sent the same thing. Its cover says:

“Up here,”—

by an arrow pointing to the sky—

“too much CO<sub>2</sub> is a problem. Deep down under the North Sea we have a solution.”

No, they do not. Deep down under the North Sea they are working on a solution—maybe. That would be a more honest representation of the facts.

The solution is not there yet. It may be there and, if it is, I will welcome it as a transitional technology as we move away from fossil fuel consumption. It would allow us to ease that transition somewhat. It is not an alternative and should not be used to suggest that we can carry on using fossil fuels for ever, because even if CCS technology is technically and commercially viable and achieves the right carbon balance, it still will not last for ever—we would still be talking about using a finite space to store a finite commodity. It will last a certain amount of time and allow us—if it works—to ease that transition. However, we do not have it yet and we must not rely on it.

One of the dangers that Greens have sought to highlight is that CCS is used politically as a pretext to justify increased fossil fuel energy generating capacity now, before CCS is available to deploy. We debated that in the last parliamentary session in relation to the proposed Hunterston coal-fired power station. A second danger is that CCS is used for enhanced oil recovery.

The minister told me that I should welcome the extraction of huge amounts of oil—he suggested in previous debates that that would be hugely beneficial and that Greens ought to welcome it. If oil is going to be extracted from a reserve, then it will make sense to put carbon back in there. However, if that oil would otherwise not have been extracted, we would be taking fossil fuels from one location in the earth, burning them to produce energy, putting the carbon in another location in the earth and taking more fossil fuel from that location for use in energy sources that cannot have CCS applied to them. That fossil carbon will end up in the atmosphere at the end of the day. In the current political context, it is unlikely that

enhanced oil recovery is an alternative to exploiting new reserves, because the Scottish Government supports the everlasting support of new, additional reserves of fossil fuels for extraction.

I am sorry that I missed the briefing that the Government kindly offered. I had the task of moving some amendments to the Scottish Independence Referendum Bill and I am sure that the minister would not have wanted me to miss that important duty. However, I took the opportunity to meet Professor Haszeldine and Mr Redmond before the debate and I got the impression that they both understand the concerns that enhanced oil recovery will lead to a carbon balance that undermines our objectives to reduce emissions, and the danger that CCS—or the potential for CCS—will be used as a pretext in the short term to justify increased fossil fuel extraction and use.

Fergus Ewing told us in his opening speech that CCS technology offers us clean electricity, new jobs and reduced emissions. Maybe, but only if the dangers that I seek to highlight are understood, acknowledged and avoided.

It is also important that we note the Intergovernmental Panel on Climate Change's recent report and the increasingly unavoidable body of evidence that the world has far more fossil fuels in existing reserves than we can afford to burn. Paul Wheelhouse, the climate change minister, seemed to acknowledge that recently when he said:

"I have put it on record that I accept that we can't burn all the fossil fuels that there are, and that applies to Scotland as with every nation."

I would be interested to know whether Fergus Ewing has sat down and discussed the question of how much unburnable carbon Scotland has. Every time he talks about assessments of the value of 3 billion barrels of oil that CCS technology can unlock, he talks about it only as a positive economic resource. Oil and fossil fuels can be an economic resource if we use them within the limits of the environment that sustains us. If we use those resources beyond that limit, it is an economic liability and a threat to the very existence of our civilisation.

**Fergus Ewing:** Patrick Harvie mentioned the IPCC which, as I understand it, clearly stated in its 2013 report:

"Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions."

Earlier, I made the point that the International Energy Agency has calculated that the global carbon clean-up of energy will be faster and 40 per cent cheaper if CCS is used. Does Mr Harvie

feel that that is a strong argument in favour of learning about and adopting CCS technology?

**Patrick Harvie:** If CCS meets the test that I have set out and is used in the right way, it may well offer such a saving, but if it is used in the wrong way—as a political pretext for extracting ever more fossil fuels or for expanding fossil fuel generating capacity before CCS is available to deploy at a practical level—it will do the opposite.

I echo the comments that are made in the RSPB paper. If CCS technology does not become available to deploy in the short term, what is plan B? Once we have it available to deploy, we can talk about the choices that it opens up. Before then, those choices are not before us.

I move amendment S4M-07974.1, to leave out from "is a critical" to end and insert:

"has significant potential as a transitional technology, allowing a more gradual reduction in reliance on fossil fuel consumption for electrical generation, if it can be shown to be efficient and commercially viable; notes that there are significant hurdles yet to overcome in the development of CCS, but recognises the positive role that Scotland may be able to play in overcoming these; is concerned however that CCS is seen by some as a pretext for increasing fossil fuel extraction, or even as a means of doing so through enhanced oil recovery, both of which would entirely undermine the climate change arguments for CCS, and encourages government and industry to proceed with research to determine the viability of CCS in the fight against climate change, but to guard against the view that CCS represents an alternative to reduced fossil fuel extraction and use."

15:01

**Iain Gray (East Lothian) (Lab):** I, too, welcome the opportunity to debate the potential that exists for carbon capture technology to be used here in Scotland. I am surprised that this is the first time that the subject has been debated in the chamber.

Last week—both inside and outside the chamber—we spent some time exploring our differences with the Scottish Government on aspects of energy policy but, as other members have said, today's debate takes place in one of those crucial areas in which we find ourselves largely in agreement with the Government and, indeed, other parties that are represented in the Parliament. We agree on the potential of carbon capture and storage technology, on the urgency of progressing that potential and on the opportunity that it provides.

I think that it is worth going back to first principles—as Patrick Harvie did—and reminding ourselves that the greatest driver for progressing CCS is the imperative of addressing the global issue of climate change. As Patrick Harvie pointed out, in recent weeks we have had the IPCC's latest and, I think, strongest ever assertion that global warming is real, and that it is very likely that

more than half of recent temperature rises are directly caused by human activity.

Earlier this week, delegates at the climate justice conference here in Scotland heard powerful direct testimony of the impact that global warming is already having on the world's poorest and most vulnerable citizens, who are, of course, the least culpable in creating the problem. Therefore, we are right—indeed, we are obliged—to pursue dramatic reductions in carbon emissions. However, the populations that we represent oblige us to ensure that we continue to provide electricity production for the economy and for personal use. To square that circle, we simply have to find ways of generating electricity without releasing millions of tonnes of carbon into the biosphere.

We believe that the Scottish Government is right to commit itself to the decarbonisation of the power industry by 2030. Indeed, we believe that the whole of the UK should make that commitment, too, as Labour has said that it will, should it win the next general election. That is an issue on which the industry needs clarity, so that it is clear what is required of it.

I will digress briefly into an area of disagreement, which is also one of constituency interest to me. It seems perverse that we should discount as a way of achieving the objective of decarbonising the power industry the expansion of non-carbon-emitting consistent base-load produced by nuclear power, especially as any chance that we have of reaching the decarbonisation target is based on extending the life of Scotland's two existing nuclear stations. One of them—Torness, which is in my constituency—not only continues to provide a significant proportion of our electricity but recently passed the landmark of producing 200TWh since 1988. That has avoided 130 million tonnes of carbon—the equivalent of removing all cars from the whole UK for two years.

**Fergus Ewing:** Does Iain Gray acknowledge that the Scottish Government has clearly and consistently stated that we welcome the extension of the life of the existing nuclear power stations? I attended the ceremony at Hunterston to recognise the extension of that station's life. An extension is expected to apply to Torness, provided that that is safe. On the existing stations, we support the position that Mr Gray has adopted.

**Iain Gray:** Up to a point, but we restrict ourselves if we veto expanding into new nuclear generation. However, I accept that what has been stated is the Government's position. That throws even greater urgency on the development of CCS, which is also urgent because of the Government's target of producing the equivalent of 100 per cent of our electricity from renewable sources by 2020. As the minister acknowledged, that will have to be

backed by about 2.5GW of conventional thermal generation.

We agree with the Scottish Government that we need to move forward on the demonstration of CCS on a commercial scale. We also agree that that means that the UK Government must make significant support available, particularly for the Peterhead proposal, which would demonstrate how the technology could work with Scotland's geography and our history of North Sea oil production.

It is regrettable that such support has been reduced to £1 billion from the £2 billion that the previous Government planned. I have concerns about the consistent uncertainty over the availability of the cash in the comprehensive spending review period. We need to see the cash with certainty and we need tangible momentum.

The captain clean energy project holds out enormous potential, although—perhaps importantly—it involves a different technology: a new build rather than a retrofit. I understand that the project does not depend on Government capital investment, which is always helpful, but that a decision is needed on the contract for difference price. We are happy to echo and support the minister's representations to the UK Government for that decision to be expedited.

We have some concerns about the Government's motion, but they relate to clarity rather than substance. We do not want the UK Government's support to be spread more thinly among projects, but we assume that the motion calls for more Government investment overall, and we are happy to agree with that. We feel that the reference to the captain project is a little ambiguous, as it suggests that capital investment is being sought, which I understand is not the case. However, the minister made it clear that in this case he means incentivisation through the contract for difference system.

We might have some differences with or criticisms of the Scottish Government's approach to cutting carbon emissions, and I have no doubt that some of them will be explored this afternoon. However, there is no doubt that we agree with the principal proposition that we must pursue carbon capture technology if we are ever to meet our obligations to address climate change. On that basis, we will happily support the motion this evening.

**The Deputy Presiding Officer (John Scott):** We move to the open debate. There is a little time in hand, so a modest number of interventions would be welcome.

15:09

**Stewart Stevenson (Banffshire and Buchan Coast) (SNP):** As the constituency member for the area in which Peterhead power station is based, I have a particular and long-term interest in the Peterhead project. It is disappointing that previous attempts to move ahead with carbon capture at Peterhead have come to naught, but we look forward with optimism to where we are now going.

A number of people, including the minister, have referred to Professor Stuart Haszeldine and it is worth quoting what he says:

"The Peterhead carbon capture and storage project is a visionary opportunity for Scotland and the UK—it is the first step towards opening up the North Sea as a global hub for the carbon storage industry, and will bring investment and long-term growth to the region."

I cannot disagree with a single word.

We should not imagine, of course, that there are no carbon capture and storage projects around the world. There is one in Inner Mongolia and several others in China, and there are some in Canada and the United States. There is a lignite-based one in Poland.

What makes Peterhead unique is that there is as yet no gas-based carbon capture and storage project in operation. For Peterhead, that is a key opportunity. In the context—whatever we may feel about it—of an increased focus on gas extraction by unconventional means in many other countries—possibly in Scotland but probably not—there will be a bigger market for the technologies related to carbon capture and storage from gas plants.

We have particular advantages in Scotland and at Peterhead. At Peterhead, you are within spitting distance, near enough—approximately 4 or 5km—of the St Fergus terminal, where the carbon dioxide from Peterhead will be transported, liquefied, purified and pumped out over existing pipelines to now unused oilfields in the North Sea. The infrastructure is in place. With a pipeline from St Fergus all the way down to Mossmorran in Fife, the connection between Longannet and that pipeline, or that route, is not a huge technical challenge. It is of a different character and I will not say a great deal about that.

Pumping the CO<sub>2</sub> into subsea reservoirs addresses several issues. First, it gives us a new way to exploit an asset that we have. Yes, it enables us to get more oil out of the oilfields, and in North America there exists a carbon capture and storage system that is designed to repressurise a field and extract more oil. We know that that works. However, oil is not simply something to put into our cars and buses for transport. It will in the long term be of continuing importance as a feedstock for our chemical

industries, long after we have found the technologies to move totally away from it in the transport network. It is important that we get more oil out of our fields.

The £1 billion of Government money that we believe is required to start this industry on its road to success is much less than the tax take that there will be from repressurising oilfields to get more oil out. With the tax on that you will get your money back. Of course you have to pay now and get the benefit later and there are challenges in that. In China, there are six carbon capture projects already working. Interestingly, they are in a range of areas; there are projects either already running or being planned in the thermal, coal, chemical, cement and steel sectors, but not in gas. The opportunity is there for us.

We have a network of pipes throughout the North Sea, which means that we will be able to take CO<sub>2</sub>, and carbonic acid from a range of countries. Public opinion in Poland, for example, is not very keen on the idea of storing the CO<sub>2</sub> under a place where people stay. I happen to think that the evidence for that is not particularly material, but we can solve that problem for the Poles by taking the CO<sub>2</sub> away and storing it under the sea.

We have unique advantages in that we have a well-understood geology, and we know where all the holes that have been drilled into that geology are because we have good records from the exploitation of the oilfields. We have a good network of pipes. They are the biggest risk to releasing CO<sub>2</sub>, but we understand the pipes and we understand the valve technology. We have lots of companies that have worked in this industry.

By the way, in China, CO<sub>2</sub> from carbon capture is even being used in the food industry, in baking and the making of fizzy drinks.

One of the most exciting things that might come and that plays to Scotland's strength in the bio sector is that, in Australia, there are algal synthesis facilities in which CO<sub>2</sub> from carbon capture is used to feed algae to produce fuel. There is therefore a series of opportunities. We are taking just the first steps, and there is a huge opportunity that will extend to many different areas.

Many jobs in my constituency and across Scotland are in the bio sector. There is more oil than we can afford to burn, but we need it for other purposes. I have stood on the top of the pile at Torness, and nuclear has no fear for me but, on the other hand, nobody will commercially pick up the whole-life risk for nuclear. In carbon capture, we have a good prospect of commercial success whereas, after decades, nuclear remains entirely unproven.

15:16

**Lewis Macdonald (North East Scotland)**

**(Lab):** As we have heard, the debate on carbon capture and storage has already moved on beyond the issue of whether it is desirable to the issue of whether it can practically be delivered at scale in a sustainable way and, if so, when and where that should be done.

In recent years, a general view and indeed a consensus has developed among most parties at Holyrood and Westminster that the technology is worth taking forward for environmental and economic reasons. Of course, there will be debates about how best to support projects, which part of the technology to do first and where to start, but the principle is widely agreed that capturing carbon from electricity generation can be done and that storing it securely can help to reduce levels of CO<sub>2</sub> in the atmosphere and to reduce the damage that is caused by climate change.

More than that, whatever the source of the carbon, the North Sea offers the best opportunities for storage in Europe, and Scotland is particularly well placed to provide storage for carbon that is captured in Great Britain and further afield. There are arguments about whether captured carbon should be used to enhance oil recovery, as we have heard. There is much less dispute about the security of depleted oil and gas reservoirs offshore or saline aquifers as a safe place of storage for captured carbon.

With other members, I have had the opportunity to hear at first hand from project leaders twice in recent weeks—three weeks ago in Aberdeen and this week here in Edinburgh. We wait a long time for a briefing on carbon capture then, just like buses, two come along at once. Clearly, there is something going on.

As Patrick Harvie said, this is not the first time that the Parliament has debated the merits of carbon capture and storage, although previously we have done so in the context of the wider energy debate, including in particular as part of the inquiry into Scotland's energy future that was carried out by the Economy, Energy and Tourism Committee in the previous session of Parliament.

As part of that inquiry, I went with colleagues to Germany to visit the pioneering carbon capture plant die Schwarze Pumpe in the brown coal producing area of the former East Germany near the Czech and Polish borders. That plant was already pioneering the technical feasibility of carbon capture in the days of the former East Germany, but the problem, which still existed when we visited, was how to transport the carbon without emitting more of it and where to store it.

As Stewart Stevenson said, a number of European countries have still not found a solution to those problems that they are happy with. Clearly, we have a solution in the North Sea and the existing pipeline network. Just as offshore oil fields that have produced hydrocarbons can now provide storage for captured carbon, so pipelines that have taken oil and gas ashore and carried it to Grangemouth or St Fergus can now be used to carry carbon in the opposite direction.

Scotland and the United Kingdom have a big advantage in the potential for carbon transport and storage. For those issues, the timing is also good. Offshore operators are beginning the complex and costly business of decommissioning redundant fields and equipment. That creates new opportunities for Scottish engineering companies, but it will also sharply reduce future Government revenues as a result of tax breaks on decommissioning costs.

It is therefore timely to consider how to reuse and recycle offshore pipelines and platforms to support the new business of carbon transport and storage. Delaying some aspects of decommissioning will spread the costs for operators and Government and will extend the life of the offshore sector as a whole.

If the North Sea and its associated infrastructure provide a competitive edge in the transport and storage of carbon, the capture of carbon has been proven in a technical sense and now—as has been said—needs to demonstrate that it can be commercially sustainable and efficient at scale. That is the next challenge to be met.

Successive UK Governments have offered financial incentives for carbon capture demonstration schemes. Something like £1 billion is currently the prize for the successful developer. As we have heard, Shell's Peterhead project, which aims to capture carbon from an existing gas-fired power station and store it offshore in the Goldeneye field, is one of two preferred bidders in that competition.

Aberdeen and Grampian Chamber of Commerce called this week for full support from both the UK and Scottish Governments. It pointed out the benefits for the north-east and highlighted that this would be

"the first industrial-scale, full-chain CCS facility at a gas-fired power plant anywhere in the world, and ... a global landmark project."

There is every possibility of Peterhead securing at least half of the £1 billion for a project that would give the UK a global lead, although it should of course be noted that Scotland will have to be part of the UK for that to happen.

The captain project at Grangemouth is based on using the German gasification technology that we

saw at die Schwarze Pumpe at a new-build, coal-fired power station, and it is looking for contract price support from Government rather than capital funding. The hydrogen that it will produce as part of the gasification process could have a number of uses, not least powering public transport fleets on the model of the hydrogen buses project that is currently being piloted by Aberdeen City Council with Scottish Government support.

There is clearly a strong argument for taking forward coal and gas CCS at the same time, and I hope that that approach will find support from Government at every level. I hope, too, that the Scottish ministers will keep their carbon capture road map up to date in the light of developments over the past two or three years and that, if they do so, carbon capture and storage can continue to command broad support in the years ahead.

15:22

**Kenneth Gibson (Cunninghame North) (SNP):** In May 1979, the US National Oceanic and Atmospheric Association measured atmospheric carbon dioxide levels at the Mauna Loa observatory in Hawaii at just under 340 parts per million; in May this year, levels reached their highest point in human history at 400 ppm. That reminds us yet again of the impact that human activity has had, and continues to have, on our environment.

The Climate Change (Scotland) Act 2009 set ambitious emissions reduction targets of 42 per cent by 2020 and 80 per cent by 2050. If we are to reach those ambitious goals, it is important that we pursue new technologies.

Carbon capture and storage is one such technology. It is a step forward and could be an important investment in Scotland's future. The potential for a thriving CCS programme, which uses the industry skills and expertise that are already in Scotland, is massive. If it is properly integrated in Scotland's evolving energy sector, carbon capture and sequestration could help us not only to achieve an energy-secure future but to be a global policy leader, setting new energy industry standards.

Scotland is ideal for development of this type. As we heard, the central North Sea possesses geological assets that are highly compatible with optimal use of existing infrastructure, which offers us a strong competitive edge.

I visited not Germany but Longannet—before the CCS project there was cancelled—with representatives of Fairlie, Largs and West Kilbride community councils. At the time, 64 people were employed on the project. CCS was being delivered, but 1 tonne of coal was needed to clean 3 tonnes. Different amine solutions were being

tested, with a view to achieving a much more commercially viable ratio of 1:7.

Of course, CCS has to be the right investment in the right place. I am therefore pleased that the project at Hunterston in my constituency, where a CCS coal plant with only 25 per cent carbon capture was planned, is no longer being considered. That relates to what Patrick Harvie said, because 75 per cent of the coal burned at the plant would not have been clean. We must be wary and ensure that CCS projects do not go down that road, as Patrick Harvie warned.

Crucial and welcome steps are being taken to realise the prospects of Peterhead, which is the preferred bidder for the £1 billion CCS commercialisation competition. Such programmes spur competition and ingenuity. Corporations such as Shell have been drawn to the project, which they think has the potential to capture up to 10 million tonnes of CO<sub>2</sub>.

Because of such successes, it is necessary to incentivise schemes like the CCS commercialisation programme. Further successes include the highly innovative captain clean energy project, which involves the construction of a new integrated gasification combined cycle power plant at Grangemouth with a full 570MW potential. Future implementations such as those offer a promising glimpse of the possibilities that CCS has to offer.

According to DECC, Scotland uses more energy per capita than other parts of the United Kingdom—primarily, one suspects, because of our colder climate. DECC also found that, in a comparison of 12 regions and nations across the UK in 2010, Scotland ranked fifth highest in industrial and commercial gas usage. A further comparison of the aforementioned regions and nations also shows that, in the same year, Scotland had the highest average domestic gas consumption per consumer at just below 16,000kWh. Although part of an overall downward trend, those figures further emphasise the importance of the exploration of critical new technologies such as carbon capture and storage.

Scotland has already demonstrated its carbon capture and storage potential, but now is the best time for us to realise the possibilities that CCS has to offer through commercial testing of those technologies. That is the most feasible way of benefiting from CCS. Not only are there positive environmental impacts, but there will be a marked economic benefit.

A July 2012 report for Scottish Enterprise estimated that CCS technology could produce an £11.3 billion increase in direct output for the Scottish economy. That report also found that CCS in Scotland could result in £2.7 billion of



economic growth value added and a potential additional 5,300 jobs. However, those figures can only be realised with the commercial development of the technology.

The IEA estimates that global consumption of coal in 2017 will reach 4.32 billion tonnes, making coal the primary source of energy on earth. The commercialisation of carbon capture and sequestration projects is not just an opportunity for Scotland but for the UK and the wider world to reduce the pollution caused by coal. It is crucial that investments such as the CCS commercialisation programme that is in development move us away from the tradition of the burning of coal towards clean processes such as gasification and that they are celebrated and encouraged. Auspicious plans and proposals for the development of CCS have established that Scotland has the requisite skills, industry, know-how and capability to become a serious competitor and pioneer in the industry.

The energy market is changing. CCS has shown that it has promising prospects and a place in the Scottish economy. The technology is vital if we are to meet carbon reduction standards, vital to the future power supply in Scotland and the UK, and vital to the future of the environment.

New nuclear power has been touched on. As I have a nuclear power station in my constituency, I am concerned about Mr Gray's proposals for new nuclear power, which I believe is hard to rationalise. EDF's call for a strike price that is twice the market price goes against the Labour Party's recent pledge to freeze electricity prices.

As my colleague, Stewart Stevenson, pointed out, the issue for nuclear power is commerciality. No nuclear power stations have been built in the United States of America for 41 years, primarily for that reason, and we already know that Hinkley Point, which will cost £14 billion, is five years late. I am afraid that nuclear power has no future, not just because of the environmental concerns about the waste that lasts for 0.25 million years, but because it simply cannot compete economically at this time.

15:28

**Nigel Don (Angus North and Mearns) (SNP):** I would like to take one step back if colleagues will allow me. We need to ask ourselves why we have this problem in the first place. Why we need to produce carbon dioxide is a question that ought to be addressed at least once on the record.

The major renewable energy technologies—wind, wave, tidal and photovoltaic—can take movement or sunlight and turn it into electricity and, incidentally, a bit of heat without us having to burn anything. That is what makes those

technologies so attractive and distinguishes them from the fossil fuels—gas, oil, coal or wood—that we have heretofore burned in order to get heat. Of course, we have produced carbon dioxide in the process.

Why do we need heat, apart from the low-grade heat that keeps us warm? If we want to move something like a car with an engine, the higher the temperature that the car engine gets to, the more efficient it is. The higher the temperature we can reach in a conventional power station, the more efficient it is. We want hot heat, which means burning fossil fuels.

Until we can produce everything else that we need from renewables, we are going to have to use some fossil fuel to generate hot heat—to generate the electricity that we need. We do not have any options; that really is the size of it.

What we can do in any thermodynamic process is described by the laws of thermodynamics. I am not going to worry about them now, but I want to pick up on a point that Patrick Harvie first articulated and which I think others might need to address: do we know whether the process of carbon capture and storage is energy efficient? Is it capable of storing this waste without expending as much energy in the process?

Although I have not seen the sums, the answer must be yes, because my chemical engineering colleagues and others will have done them. They can be done. It is perfectly straightforward: all the numbers will be known. What the laws of thermodynamics enable us to do is work out what is possible, because they are very good at telling us what is not possible. I am quite confident—even without seeing the numbers—that the process could be made to work.

We need to be very careful. We have to remember that, in all these processes, we do not get 100 per cent. An example of that is breathing. I am breathing in oxygen, which is about 20 per cent of the atmosphere, and breathing out carbon dioxide. I do not breathe out all the carbon dioxide that is in my blood—I cannot; a little bit of it has to stay for the next passage through. We have to be aware that any process of trying to get carbon dioxide out of flue gas will not achieve 100 per cent. It might achieve 90 or 95 per cent, but it will never achieve 100 per cent.

People might just want to reflect that there is a difference between gas and coal. Forgive me for the schoolboy chemistry, but coal is roughly  $\text{CH}_2$ , which means that when we burn it we get one molecule of carbon dioxide and one molecule of water, while natural gas is  $\text{CH}_4$ , which means that when we burn it we get one molecule of carbon dioxide and two molecules of water. The carbon dioxide is thereby inevitably more dilute. That

makes the point, which I think Stewart Stevenson made, that one thing that we have not done on a large scale is carbon capture with the flue gas from a gas plant, which is materially different, even if it also just involves carbon dioxide and water. That is one of the extremely good reasons why Peterhead should be the next opportunity that is taken.

I want to pick up on a couple of other things that I know are going on. Comment has already been made about Scottish Carbon Capture and Storage and Professor Stuart Haszeldine. Some enormously important things need to be done when we are looking at any process. I never worked in the energy industry, but even detergents have their interesting bits and I know that it is only by building something at scale that we discover how it really works. Only by building it at scale can we make it cheaper. There are limits to what we can model.

That is why it is hugely important that we recognise that we need large schemes. The first scheme is the most expensive. The second one might well be 25, 30 or conceivably even 50 per cent cheaper, just because we would have discovered how to do it first time round. Members should not underestimate the absolute urgent need to build the first one, recognising that it almost certainly needs to be subsidised because it will be nothing like as cost effective as it could be.

Even when we get the first one built, there will still be a lot of work to do to improve and optimise it. Chemistry was perfectly straightforward when we had to write it down at school on bits of paper, but there are things that we learn only when we actually have molecules moving around through bits of equipment. We have to do that; otherwise we will not be able to develop the technology and turn it into an economic product.

A huge number of things need to be done to work out the legal framework, the licensing framework and the environmental and economic frameworks. I am glad to report that, as others have mentioned, a lot of that work is being done in Scotland. We should be proud of it and we should continue to support it; I know that the Government will do so.

We need to ensure that, somehow, that work is done in parallel with our ensuring that, somehow or other, a big plant is built in Scotland, so that we do the research and we gain the advantage of having done so. It would be an extremely good idea for such a scheme to come to Peterhead because fitting it on to a gas plant is one of the crucial steps for the planet.

15:35

**Margaret McDougall (West Scotland) (Lab):**

Carbon capture and storage is a subject with which I have had dealings in parliamentary committees and at a local level, when Ayrshire Power proposed to develop an experimental CCS plant at Hunterston in North Ayrshire.

The problem with the Hunterston development was that the proposal was only partial CCS to start with, to be converted to full capacity CCS at some point in future. Concerns were raised about the success of the method of conversion and the costs associated with storing the captured carbon, not to mention the lack of information on the environmental impact. The highly controversial plans received more than 20,000 objections and were refused by the North Ayrshire planning authority. Eventually, Ayrshire Power withdrew the plans, citing the state of the market and the lack of funding opportunities as reasons for doing so. At the same time, it withdrew its submission to the UK Government's CCS commercialisation competition, which would have awarded a £1 billion grant to develop a site with 90 per cent carbon capture and storage. The Longannet project also had to withdraw for economic reasons.

I am pleased, however, that the CCS commercialisation competition has since moved on and that Peterhead is listed as one of the preferred bidders. If the Peterhead bid is accepted, it could create up to 1,000 jobs in the north-east. The plant would also be the first of its type in the world, because Norway had to abandon its plan for a full-scale CCS plant at its Mongstad oil refinery after the Norwegian Government determined that it would be too costly and concerns were raised over the difficulties and timescales involved in development.

If the technology proves to be viable, this would be a great achievement for Scotland and it would be in line with our goal to create greener energy technology. It would also assist the shift towards decarbonisation and help us to meet our carbon reduction target, which we have so far failed to meet. Clearly, we need to up our game if we aim to achieve the 2030 target to slash 80 per cent of carbon emissions produced from electricity generation.

However, we cannot be too reliant on CCS in case the bid runs into problems or—as has been mentioned—the technology fails to deliver. We also cannot depend on “CCS-ready” plants because there are no assurances that that technology will work, as it is still under development. As Mr Fraser and other members have said, we need a realistic plan B.

That said, I welcome the motion's support for the Peterhead scheme, although I note that it is critical of the timescales involved. According to the House of Commons library, the timescales are as follows: the signature of front-end engineering and design contracts by summer 2013; the final investment decision from DECC on up to two projects by early 2015; and operational by 2016 to 2020.

I, too, have concerns about those timescales, although I imagine that it is for a different reason. I wonder whether the minister could enlighten us as to whether this development and independence are compatible. It seems to me that, given that this is UK money, a yes vote in the referendum could put the project at serious risk. Why would a Government award what would in essence be a competing foreign power £1 billion to develop technology when that investment could be put into its own power stations? Can the minister tell the Parliament today what discussions, if any, the Scottish Government has had with the UK Government about the CCS commercialisation competition—or is this another case of “Don't ask questions; assume everything will be all right on the night”? Perhaps the Scottish Government is going to pledge £1 billion to fund the project in the event that UK funding is withdrawn. Or perhaps, more cynically, that is why the Scottish Government is asking the UK Government to hurry up and make its decision.

As already noted, with many carbon capture and storage projects at a very early stage of technical development, funding is crucial because many companies are unable to provide the necessary level of funding or do not want to take the risk. I apologise that I was unable to attend the briefing this morning because of other parliamentary commitments.

Furthermore, when countries such as Norway—which of course an independent Scotland is so often compared with—are deeming development too costly, I am unsure how Scotland could go it alone in developing CCS technology. On this matter, Scotland is stronger together with others as part of the UK community. Scotland has a chance to be a world leader in CCS technology and this is indeed an example of where we are distinctly better together.

15:41

**Joan McAlpine (South Scotland) (SNP):** This week, we are rightly celebrating the magnificent achievement of Professor Higgs of the University of Edinburgh who has been awarded the Nobel prize for physics, so it is appropriate to remember, in this debate on CCS, that another great name associated with Edinburgh was the man who discovered carbon dioxide.

Joseph Black, the Professor of Chemistry at both Glasgow and Edinburgh universities in the late 18th century, called the gas that resulted from the combustion of charcoal “fixed air” and noted that it supported neither flame nor animal life—a phrase that perhaps anticipates the threat that CO<sub>2</sub> emissions pose to our planet all these years later.

Today, that brilliant Scottish enlightenment professor fittingly gives his name to the £1 million Joseph Black laboratory of carbon dioxide chemistry at the University of Edinburgh's world-leading centre for carbon capture and storage, which was rightly singled out by the minister in his opening speech.

The minister talked about Scotland's comparative advantages in the field of CCS and those advantages were confirmed by the experts working on both the Peterhead and Grangemouth projects who briefed us this morning. As an aside, I will say how pleased I was that the briefing from the Shell project at Peterhead was written and presented by two female professionals. I also congratulate the minister on his comments about women in the oil and gas industry, which were reported in the press today.

Along with the existing infrastructure, oil and gas expertise and geological storage opportunities under the North Sea, we must not forget our academic excellence in this field. The centre for carbon capture and storage is the largest research group of its kind in the whole of the UK and acts as a bridge between academia, Government and industry to form a single point of contact—not just for the geosciences and engineering that are required to make it happen, but for the legal and economic aspects of the technology and its environmental and social impact.

The SCCS centre has worked closely with the Scottish Government and international partners in, for example, the US, South Korea and Norway as well as with the Global CCS Institute. The centre has 60 business partners and it is currently undertaking work that could create thousands of jobs and add considerably to the wealth of our country.

As the minister and others have already mentioned, the centre's work on enhanced oil recovery from the North Sea offers many opportunities. That technology has already been used in North America. Put into practice in Scotland, the centre's experts say that the technology could store 75 million tonnes of CO<sub>2</sub> from power plants and increase the amount of oil produced from reservoirs beneath the North Sea by 5 per cent, to 25 per cent.

To quote Professor Stuart Haszeldine from the SCCS centre:

"The North Sea is the most important CO<sub>2</sub> storage region for the whole EU, so we propose that it is both possible and necessary to commence small injections of CO<sub>2</sub> as soon as possible, to transfer capability from science to industry and build confidence."

Professor Haszeldine has pointed out that Government has a vital role to play in encouraging the development and incentivisation of CCS and just last month he urged delegates at the international conference on the subject in Edinburgh to urge policymakers across the European Union to seize that opportunity to enable Europe to meet its targets for carbon reduction.

It is important to emphasise that CCS is not—as some have suggested—a new or experimental technology. The Sleipner scheme in Norway, which has been going since the late 1990s, was the world's first commercial CO<sub>2</sub> storage project. The natural gas that is produced from the Sleipner West field contains up to 9 per cent CO<sub>2</sub>. However, in order to meet the required export specifications and the customer's requirements, that must be reduced to a maximum of 2.5 per cent.

The CO<sub>2</sub> is removed from the produced hydrocarbons at an offshore platform before being pumped back into the ground, and the hydrocarbons are pumped to land. If that process had not been adopted, and the CO<sub>2</sub> that was produced was allowed to escape into the atmosphere, the licensees of the Sleipner West project would have to pay 1 million Norwegian kroner a day in CO<sub>2</sub> taxes. That emphasises the importance of regulation and the role of the state in encouraging such technologies.

Those of us who attended this morning's briefing heard that Summit Power Group, which is one of the partners in the proposed Grangemouth project and which has already been mentioned today, has the same technology up and running at its plant in Texas. I am not a geoscientist by any stretch of the imagination, but I was fascinated to hear the company's CEO explain the technology that it is already using in Texas—in particular, the fact that the CO<sub>2</sub> and other toxins are removed without actually combusting the coal.

I was struck by the CEO's comments about Summit Power Group's work with China. He spoke about flying over China and seeing power stations that have numbers rather than names because the Chinese are building coal-fired power stations at a rate of one a week. He concluded his remarks by saying that the world will go on using coal and we will have to find a way of using it more cleanly. That is why this debate is timely, and I hope that we will heed his words.

15:46

**Mike MacKenzie (Highlands and Islands)**

**(SNP):** I add my thanks to those from the minister to the good folk who gave us an excellent and very interesting briefing this morning. It has reinforced my belief that carbon capture and storage is yet another exciting opportunity for Scotland, in which we can once again be at the cutting edge of a new technology: leading the world in solving the climate challenge, decarbonising our energy supply, providing energy security, keeping down energy prices and providing new high-quality and rewarding careers. It is difficult not to like carbon capture and storage; not to be enthusiastic about it; and not to see the immense opportunity that it represents for Scotland.

I am reminded once again of that great English economist, David Ricardo, and his theory of competitive advantage. There is no doubt that CCS is yet another area in which Scotland has an obvious competitive advantage. Our depleted oil and gas fields offer the perfect opportunity for sequestering CO<sub>2</sub>—the geological conditions are right, and we have the technological skills and capacity to make it happen and the academic knowledge base to ensure that it is done well and safely. The risk of leakage is non-existent, and the pipelines are in place, so it is merely a matter of using existing technology and skills in a new way.

That is not to say that there are not some challenges to overcome, but I have no doubt that Scotland's engineers and academics can rise to those exciting challenges. It is important that we demonstrate carbon capture and storage in commercial operation as soon as we can reasonably do so. The main challenge is for us as politicians to recognise the significant opportunity that CCS offers and to put aside any small differences and work together to make it happen.

I am keen to see the results of the UK Government's competition, and keen for the Peterhead project to be given the green light. I am also keen to see the competition widened if possible to include more than two preferred bidders, and I believe that the captain clean energy project would be the perfect candidate. If that is not possible, I would like to see some form of contracts for difference incentive for carbon capture and storage projects as part of the energy market reform that is going through the UK Parliament. Good government is about good economic stewardship and maximising our economic opportunities and competitive advantages. It is not about letting the grass grow under our feet and seeing other countries take advantage of those opportunities.

There is a wider point. It is about pioneering those technologies where it makes sense for us to do so, not just for Scotland's economic advantage

but to play our part as a responsible nation that is helping to solve the global problem of climate change by leading the way and showing other countries how to do it.

As Joan McAlpine has just said, China is building a new coal-fired power station every week. Perhaps Mr Harvie should reflect on that. The captain clean energy project offers a unique opportunity to demonstrate to the world how coal gasification works. Noxious chemicals and carbon are removed both before and after combustion. Coal is responsible for the largest proportion of worldwide CO<sub>2</sub> emissions, and the technology paves the way for removing 90 per cent of CO<sub>2</sub>—and perhaps more than that—from our energy production. It is also about doing that responsibly in a way that does not throw thousands of people out of work and which instead creates economic opportunities, keeps the lights on and provides affordably warm and healthy homes in Scotland.

Scotland has world-leading climate change legislation, and we have a world-leading wave and tidal research sector. We can have world-leading carbon capture and storage, too.

**The Deputy Presiding Officer:** There is a little time in hand, if members want to use it to make interventions.

15:52

**Liam McArthur (Orkney Islands) (LD):** The debate has been impressively constructive; even disagreements have been expressed in measured tones. The minister has very much led by example in that respect. If this is the way in which we respond to our first opportunity to debate carbon capture and storage as an issue in its own right, perhaps we should do it rather more often.

I generally welcome the content of the Government's motion, although it strays in a couple of areas and would benefit from Murdo Fraser's amendment. I hope that the minister may yet be persuaded about that in the spirit of sustaining the consensus that I know he has worked hard to try to maintain.

Before I turn to CCS and whether and how the technology might be deployed, it is essential to set the debate in its proper context, as Iain Gray, Kenny Gibson, Patrick Harvie and other members have done. Fundamentally, it is about addressing the challenge of climate change, taking the necessary steps to decarbonise our economy, and doing so quickly enough to enable us to avoid the tipping point in temperature rises. That is why the Liberal Democrats are absolutely committed to achieving zero net greenhouse gas emissions from the UK economy by 2050. Challenging though that goal may be, it is entirely achievable. Concerted action across a number of fronts will be

required, and if we are to improve energy efficiency, reduce fuel consumption and lower greenhouse gas emissions, it is clear that we will need to develop and commercialise new technologies in renewable energy, carbon capture and storage and low-carbon modes of transport.

Pinning all our hopes on technology getting us out of the hole that we have got ourselves into would, of course, be misguided. Significant behavioural changes will also be necessary. In some cases, we may simply need to recognise that the only option is to stop doing things. However, given the trajectory that is required in reducing emissions and the continued role that thermal power will need to play in our energy mix over the next decades, I firmly believe that both of Scotland's Governments are right to look to CCS as a means of making the sorts of changes that we need to see in the necessary timeframes.

I note WWF's concerns about what it sees as the Scottish Government's overreliance on CCS in its latest report on proposals and policies for the delivery of our climate change targets. In its briefing, WWF calls for a "Plan B". However reasonable and beguiling that call may be, though, there is a risk that it sends out a confused message, diverting investment and focus away from the development of commercial-scale CCS. The consequence of that would be that we either miss our targets or find ourselves importing the technology and expertise that we need at a later date. That was the unambiguous message from the briefings by Professor Haszeldine of the University of Edinburgh earlier this week.

**Patrick Harvie:** If the member is not so comfortable with the language of a plan B, will he acknowledge that we need to be willing to contemplate a range of scenarios for when the technology may become commercially deployable? It might happen in the 2020s, the 2030s or the 2040s, and we need to plan for all those scenarios.

**Liam McArthur:** That is not an unreasonable proposition, but the message that I gain from what we have seen in the development of renewables is that it is important to set ambitious targets and to be clear and consistent in the steer that we give to industry so that it can respond and put the investment behind that steer.

What steps are being taken to ensure that we do not find ourselves in either of the positions that I mentioned? As the minister confirmed to the Parliament recently, the deployment of CCS on a commercial scale will largely be driven by the carbon price floor, support through contracts for difference under the EMR process and the UK's CCS commercialisation programme competition. To that, I would add the important contribution that the UK's four-year R and D programme will make.

That involves £125 million of funding to support about 100 projects—many of them at Scottish universities such as Edinburgh, Heriot-Watt and Strathclyde—and aims to reduce the costs of CCS by developing cheaper and more efficient technologies and components as well as characterising storage sites.

However, the heavy lifting, as the minister said, is being done through contracts for difference and the commercialisation programme. On the former, concerns have been expressed that the EMR process has created uncertainty. I can understand that to an extent, although I do not think that anybody realistically expected this to be a simple and straightforward process. However, I am pleased that we are now seeing some of the necessary clarity around contracts for difference. They will encourage investment in renewables technologies and CCS by reducing risks to investors and making it easier and cheaper to secure finance, as is reflected in Murdo Fraser's amendment.

I was interested this week to hear the representatives of Summit Power talking rather optimistically about the potential effect that contracts for difference could have on helping to deliver its captain clean energy project at Grangemouth. That is certainly encouraging. That project is one of two reserve projects in the UK Government's commercialisation programme, for which the SSE and Shell project at Peterhead is the preferred bidder. As we know from our experience at Longannet, that offers no guarantees, but it confirms that the Peterhead bid is well placed, which is excellent news for Scotland, as the minister acknowledged.

That £1 billion capital fund aims to support the design, construction and operation of commercial-scale CCS, and I hope that Peterhead will emerge successfully from the competitive process. I appreciate that there was disappointment that the previous competition did not result in deployment at Longannet but, for many of the reasons that Murdo Fraser outlined, that point was reached by mutual agreement between Scottish Power, its partners and the UK Government. Those who are tempted to lambast UK ministers for not stumping up whatever money was needed to make CCS happen at Longannet rather miss the point about demonstrating the viability of commercial-scale CCS.

I believe that CCS should be part of our efforts to reduce our emissions, but we should not lose sight of its importance to global efforts to tackle climate change, as Joan McAlpine mentioned. It was put to me recently by an academic and expert in the field that Peterhead and the captain clean energy project are now a significant part of global efforts to demonstrate the type of CCS power

plant projects with CO<sub>2</sub> storage that will be critical for us to achieve big global emissions reductions. Most other projects use existing CO<sub>2</sub> sources from gas cleaning processes and commercial CO<sub>2</sub> injection.

All of this is contingent on our reaching a global agreement, but Scotland has a large proportion of the EU storage capacity as well as industrial clusters, relevant expertise in the oil and gas sector and academic excellence, all of which can help us to reap significant economic benefits. Indeed, with Scotland and the UK now carrying a disproportionate burden in demonstrating CCS on behalf of the EU, I wonder whether the minister will consider whether CCS electricity should be counted against our EU renewables targets. I suspect that that is not without its problems, but it would help to enhance the viability of the technology.

I welcome today's debate and the tone that the minister set. I acknowledge the general consensus on the importance of CCS in helping to deliver on our emissions reduction and climate change targets as well as those on a global scale, and the advantages that Scotland has in the field. On that basis, I hope that the minister will accept Murdo Fraser's amendment so that we can convey that sense of common purpose.

16:00

**Angus MacDonald (Falkirk East) (SNP):** I welcome the opportunity to debate carbon capture and storage, not least because the issue is of particular significance for me as my Falkirk East constituency is a potential location for possibly the UK's first carbon capture and storage system at Grangemouth.

As we have heard already, if the captain clean energy CCS project goes ahead, it will mean the construction of a 570MW integrated gasification combined cycle power plant, which will be one of the world's cleanest and most efficient power stations. It will be virtually identical to the other Summit Power plant in Texas.

Once it is operational, the plant will produce enough power to heat and light 1 million homes while the CO<sub>2</sub> that is normally released into the atmosphere will be captured, transported along an existing pipeline and stored deep under the sea bed in the central North Sea. To coin a phrase, what is not to like?

Not only could the scheme put Grangemouth on the global map when it comes to showing how to get clean energy from coal, but the £2 billion project, which has an estimated construction period of 48 months, would also create around 300 permanent jobs and 2,000 jobs during the

construction phase, as the Minister for Energy, Enterprise and Tourism already mentioned.

The benefits of CCS are not simply the direct economic benefits from the projects at Grangemouth or Peterhead. The technology as a whole has the potential to deliver ultralow-carbon power to the grid at a cost that is competitive with offshore wind.

It must be said that the UK Government's decision in late 2011 to ditch plans for the Longannet CCS project following disagreement between the UK Treasury and DECC about the necessary funding was a blow to the economic potential of Fife and the wider Forth valley. Therefore, we are extremely fortunate to have the Peterhead and Grangemouth projects still on the table.

**Liam McArthur:** Angus MacDonald will have heard Murdo Fraser's explanation of the rationale for the decision not to proceed at Longannet. The decision was accepted by Scottish Power and the other members of the consortium. On that basis, is it helpful to attribute the blame to an unsupportive attitude towards CCS from HM Treasury?

**Angus MacDonald:** The blame should be shared fairly. There was an issue between DECC and the Treasury. However, I totally accept that there were also operational and technical difficulties.

To help to achieve our carbon emission targets, we must move ahead with such projects apace. It would clearly be welcomed across the parties if more projects came forward.

As we have heard from previous speakers, carbon capture and storage is an industrially proven group of technologies that can reduce the emissions associated with electricity generation from fossil fuel power plants by more than 90 per cent. Given the geographic position of the pipeline heading north from Grangemouth, there is, of course, the added benefit of the future possibility for industrial plants along or near the pipeline route to capture the CO<sub>2</sub> and send it to storage rather than continue with emissions.

CCS, coupled with the extensive deployment of renewables, can be used to meet emissions reduction targets and set standards that can make a significant contribution to providing clean, reliable energy while mitigating the worst effects of climate change.

We have heard already that the captured CO<sub>2</sub> can be used for enhanced oil recovery while being stored underground. As I understand it, there is currently no enhanced oil recovery opportunity in the proposed captain clean energy CCS project. However, there are many existing oilfields in the immediate vicinity that could significantly benefit

economically from enhanced oil recovery were a significant supply of CO<sub>2</sub> to be available.

If EOR were to be incorporated into the Summit Power captain clean energy project, it is estimated that it could recover 30,000 barrels of oil a day. As we have heard, that is not music to the Green Party's ears, although most Scots would welcome the prospect. Although I do not agree with Mr Harvie's argument, I nonetheless follow and understand it.

**Patrick Harvie:** Does Mr MacDonald agree with the Minister for Environment and Climate Change's acceptance that Scotland cannot afford to use all the fossil fuel reserves that we have? How much unburnable carbon does Mr MacDonald think that Scotland has? How much must we leave in the ground unused?

**Angus MacDonald:** We have a significant amount in the ground, but we are not saying that we are going to use it all. However, we must take into account the economic benefits that EOR would bring at the moment. I see where you are coming from, but the economic benefits—

**The Deputy Presiding Officer (Elaine Smith):** Through the chair, please, Mr MacDonald.

**Angus MacDonald:** Sorry, Presiding Officer.

The economic benefits must of course be taken into account.

A good North Sea oilfield might be capable of economically extracting 50 per cent of the oil originally in place, so for every barrel of oil produced, another is left in the ground. As we know, injecting CO<sub>2</sub> can change that and increase the proportion of oil recovered while also safely storing CO<sub>2</sub>. According to a 2012 Element Energy report commissioned by Scottish Enterprise, 19 oilfields in the UK continental shelf have a combined potential incremental oil recovery of 2.5 billion barrels of oil, which is associated with storage in the region of 0.8 gigatonnes of CO<sub>2</sub>. That would have a significant impact on the oil sector and would significantly strengthen Scotland's energy market.

There is of course a counterargument to the benefits of CCS. Those against the technology will say that fossil fuels will never be clean. At the point of extraction or because of transportation, fossil fuel power plants have an impact on our environment. The CCS described in the Scottish Government's power sector policy makes a significant assumption about the technology being both economically and technically viable. The situation is not helped by the fact that current proposals under UK electricity market reform are likely to lead to a dash for gas, undermining efforts to test and deploy CCS at a commercial scale.

I cannot and will not disagree with that viewpoint. I would like to see 100 per cent of Scotland's energy generated from renewables, but we have to accept the reality of the situation before we meet that target, because almost a third of the UK's ageing and inefficient power plants are scheduled for decommissioning. Simply put, we need to keep the lights on, although there is clearly a much greater chance of the lights going out in England than there is in Scotland, which is hopefully helping to concentrate minds at DECC.

**The Deputy Presiding Officer:** Will you draw to a close, please, Mr MacDonald?

**Angus MacDonald:** Unfortunately, I had quite a bit still to say.

Another benefit is that coal also enables greater security of supply and price control.

With its existing infrastructure and skills in the North Sea, Scotland has a massive opportunity to demonstrate progress and export expertise abroad, accelerating decarbonisation on a global scale. I welcome the Scottish Government's commitment to carbon capture and storage and the acknowledgement that it is a critical component of the decarbonisation of Scotland's energy supplies. Let us get moving on this exciting technology without any further delay.

16:07

**Claudia Beamish (South Scotland) (Lab):** Members are in broad agreement that any measures that we can take to mitigate the effects of climate change by reducing carbon emissions are to be welcomed. That goes almost without saying in this chamber, although there still seem to be some climate change deniers, not least a small smattering in the Tory party. I see that the only Tory left in the debate is leaving the chamber, but never mind.

It is an unfortunate fact of life that, as things stand, a high proportion of our energy needs must be met by the burning of a variety of fossil fuels, meaning that CO<sub>2</sub> production is inevitable for now. As members have stressed, as we make the just transition to a low-carbon economy, it makes sense to prevent the release of CO<sub>2</sub> as best we can. The recent debate on opencast mining showed that the shift will be a slow, incremental process, with whole communities to consider as we progress.

Storing the CO<sub>2</sub> released from the utilisation of coal and gas seems like a viable short-term solution, especially considering that the most common fossil fuel used for industry in Scotland—coal—is obtained through opencast mines and is one of the dirtiest sources of energy available. Reports indicate that pre-combustion carbon

capture through the treatment of coal can reduce emissions by over 90 per cent, which I am sure members will agree is very encouraging. However, those benefits are tempered by the fact that carbon capture at a power plant requires 10 to 40 per cent more power to run, which raises questions over the efficiency of the technology. Greenpeace, among others, has raised concerns about that.

I was interested to hear today about methods of carbon capture that have been widely used in the oil and gas industries for many years, although primarily for the purpose of enhancing oil and gas recovery. Perhaps even my colleague Patrick Harvie would agree that their use might prevent us from going into further reserves, by extracting more from present reserves.

The use of existing technology, which can be used to retrofit existing power plants and allow companies to filter their emissions through post-combustion, is one option, as we have heard. However, I am more encouraged by the possibility of the pre-combustion option, as that is a closed system. The Scottish Environment Protection Agency raised concerns about air quality and post-combustion in respect of the failed Hunterston application, as the process results in the release of amines, as I understand—chemicals that could be harmful.

**Stewart Stevenson:** I, too, am quite attracted to pre-combustion. However, does Claudia Beamish take account of the substantial amount of oxygen that needs to be produced by chemical processes for the pre-combustion process, which in itself has its own set of problems? In other words, in any area of engineering—as in this area—there are pluses and minuses to almost any solution that one chooses to come up with.

**Claudia Beamish:** I absolutely agree that there are always pluses and minuses. I am not an engineer or a scientist, but I believe that in the production of hydrogen oxygen is produced as well, which is an issue to be discussed. That highlights the importance of research and careful monitoring of the first preferred bid, which I hope will be Peterhead.

According to the captain clean energy project, Scotland is ideally placed geologically to take advantage of CCS. As we have heard from others, the existing pipeline network in the North Sea can serve as ready-made infrastructure, although I stress the need to assess the risks of piping such a large amount of CO<sub>2</sub> through the sea—again, that is a research issue.

Although in theory I welcome the move towards CCS, I emphasise that any research into its widespread use should not be at the expense of developing sustainable renewable energy



production and the transferable skills that are essential for renewables and CCS. At this point, we should also recognise the support of the UK Government in the development of CCS and renewables.

The climate justice conference, which I attended yesterday, highlighted concerns about fossil fuels. Worldwide there will be opportunities to export our technology and expertise to countries in which fossil fuels are still a substantial part of the energy mix. To follow that note of optimism, although I completely agree with the remarks of Joan McAlpine and others about their concerns about fossil fuels in China, there are also substantial renewables developments in China, which are perhaps also cause for optimism.

The long-term effects of climate change are indeed very real; we must not be lulled into a false sense of security by measures such as CCS. The fact remains that continued use of fossil fuels is unsustainable in the long term and that a focus on capture-ready stations might be a step in the wrong direction, which is a view that RSPB echoed.

I was interested to hear of the CCS guidelines from the minister. I would argue that before carbon capture is fully embraced, a number of questions need to be answered. Perhaps the minister can provide some clarity on developments. The captain clean energy project has assured us that storage in rock formation would be safe, as there are many naturally occurring accumulations of CO<sub>2</sub> in rock, but I wonder how much research has been done on that. Secondly, could pumping into the sea bed have any detrimental impact on marine wildlife?

Of course, we must not forget that there are other forms of recapturing carbon from the atmosphere and research must go into those, too. Green and blue carbon sinks are an essential part of carbon capture and I know that the Minister for Environment and Climate Change has plans to look into their benefits.

I am concerned and stress a note of caution about the reliance on carbon capture in relation to clean energy in the RPP. I wonder whether the potential gains of the technology have informed the Government's predictions for emissions in the coming years.

**The Deputy Presiding Officer:** I am afraid that you must draw to a close, please.

**Claudia Beamish:** Although carbon capture certainly has the potential to allow us to hit our emissions targets, I would not like to think that it will be afforded undue significance in the transition to a low-carbon economy, which, in the long term, it could delay.

16:14

**Chic Brodie (South Scotland) (SNP):** If I may, I would like to follow Stewart Stevenson in quoting Professor Stuart Haszeldine, research director of Scottish carbon capture and storage. He said:

"Experience worldwide, and throughout history in developing new technologies shows that rapid learning and cost-reduction comes from constructing and operating a series of medium-sized projects.

Bigger is not better ... The Central North Sea can produce multiple CCS projects more quickly than anywhere else in the UK."

He said that accessing the central North Sea was easiest from Scotland and the north-east of England, and that

"The CNS fulfils the UK's own needs, and also opens a gateway to Europe, to safeguard high value jobs ... and provide long-term taxable revenue."

I am sure that that will be welcomed by all in the chamber and, indeed, by everyone in the UK.

Our goals and outcomes are quite clear: Scotland seeks to have a balanced, 100 per cent renewable range of power generation in the medium term, with one component—electricity—being fully generated from renewable sources by 2020. That is accepted as a sine qua non, but as Scotland plans major decarbonisation and reduction in all thermal generation capacity, that plan sits easily alongside CCS as a transitional and on-going supporting technology. Our aim is to secure that supporting technology.

As the minister pointed out, there is an overarching need for clarity on the policy and objectives of electricity market reform—and EMR's hoped-for audacity in seeking a better level of competition in securing such technology and in delivering CCS. We cannot sit like rabbits in the headlights of on-coming energy technology vehicles. We cannot be like Mr Micawber and hope that something will turn up—in this case, to marry our objectives in relation to the environment and economic growth. We must have a clear steer on where we want to go, and CCS is a key driver in the pursuit of that.

To return to my opening quotation, I applaud the leadership that has been shown by Professor Haszeldine, the British Geological Survey, the UK Government and our minister, who, at the SCCS conference in Edinburgh, issued a call to arms to delegates from Europe in which he asked them to recognise that decarbonisation will come not only from large projects, but from projects of a variety of sizes. It was, he said, in that way that the huge potential of the North Sea's storage capacity could be unlocked. We have not even talked about the potential that exists in Scottish fields off the west coast—the Ayrshire coast—and the lower Atlantic. That is for another day.

Although I accept the meaningful caveats of Mr Fraser and Mr Harvie on cost and the stage of development of CCS, the conference that I mentioned set down a marker that will support the vision and the technological approach that will be needed. That was mirrored by the recent signing of a memorandum of understanding between the CCS representatives of Scotland, the UK and the Guangdong province of China, which will pave the way for research on, development and demonstration of, and knowledge exchange on innovative carbon capture use and storage technologies. Hopefully, Scotland can then become an exporter of CCS coal and gas technology expertise. SCCS has internationally renowned researchers and state-of-the-art facilities but, as with any successful new technology, business or market, a limitation on competition may itself limit much-needed development.

We are talking about an energy resource in which we have a potentially positive pioneering advantage. We have the internationally respected research capability, the operational and technical skills that have been gained from our many years of involvement in the oil and gas industries, the physical infrastructure—particularly in the aforementioned central North Sea storage hub—and preferred bid status at Peterhead and Grangemouth. We have the capacity and the land to have more and smaller opportunities that can be moved along much more quickly.

However, we do not have an incentive or incentives through the meaningful application of an EMR-based contract for difference to the early development and crystallisation of this critical element of our energy plan and our energy future. I hope that such projects will be suitable for the €70 billion horizon 2020 fund, which aims to get major projects on the go quickly.

It is abhorrent nonsense that a technology that could transform how we generate power, how we target carbon emissions and how we secure power supply and storage is not proceeding quickly. It is sad to have a potential missed opportunity from a technology that could increase direct output from our Scottish economy by £11.3 billion, which would result in £2.7 billion of gross value added and would create and support 5,000 jobs, just because projects are not proceeding apace.

**The Deputy Presiding Officer:** You must conclude, please.

**Chic Brodie:** I am coming to the end.

The technology is a key ingredient in meeting our power and carbon emissions targets. More competition and smaller projects are key to its development. We will have a balanced energy

policy that promotes CCS alongside renewables technologies. I support the motion.

16:22

**Christian Allard (North East Scotland) (SNP):**

Carbon capture and storage is a critical technology for Scotland's energy future. As a North East Scotland MSP, I welcomed the announcement that the Peterhead power project is a preferred bidder. As many before me have said, we need to move forward. We know how slow people in Whitehall can be; they might get some encouragement from listening to us today.

I am delighted to take part in the debate and to add my voice to the voices of many before me who support the bloo toon project. As Professor Stuart Haszeldine said—I shall stop there, because we are running out of quotes from him so, unfortunately, I will not be able to quote him, but I back all the quotes that have been given.

Members will have heard me going on and on about north-east Scotland being the powerhouse of the UK. I repeat the fact that we are blessed with many natural resources, which attract many people from far and wide who add to the excellent, skilled and highly educated people who live in the north-east.

Last week, I was privileged to welcome to the north-east a delegation of French investors, led by the French ambassador from London. The investors were impressed with the quality of the people who work and live in the north-east, and particularly with the can-do attitude. That attitude did not originate from the energy sector; we did not discover a new can-do attitude when we discovered oil. We had the attitude before—we had it from the farming and fishing sectors. That is all about investment—it is about forecasting and having a vision of what needs to be invested to enable people to harvest from the sea and the land. That is important to understanding how the prosperity of north-east Scotland came about.

The delegation showed great excitement, with good reason. There are good examples of companies from abroad investing in the north-east. The French company Total has recently invested £3.3 billion. As Stewart Stevenson said, we are talking about needing only £1 billion. The north-east has a lot of potential and it has a lot of expertise and investments already.

We can accommodate carbon capture projects very easily. We have the Energetica project, which is an energy corridor starting in Aberdeen and finishing in Peterhead. The project aims to attract cutting-edge companies to Scotland, and to retain them as dynamic organisations. There is fierce competition around the world—we need to understand that and to secure our position as one

of the world's leading locations for a diverse modern energy industry.

Energetica is our response, consolidating and building on our energy technology capability, developing existing businesses and attracting inward investment to the north-east. We need to develop the initiative into a world-class business and recreational destination that will be an attractive place in which to live and work.

I will take members through the map from Aberdeen to Peterhead, starting at the Aberdeen Exhibition and Conference Centre, which, every two years, hosts offshore Europe. I recommend to members that they attend offshore Europe, if they have never been. It is a revelation to see how much investment comes to this country.

If one goes a little bit north, one sees the Blackdog project, which will have direct access to the Aberdeen western peripheral route that is to be built shortly, and will then be only 10 minutes from Aberdeen airport. Offshore, there will be another important EU-funded development project, the European offshore wind development centre.

Next on the map is a recreation project. We have heard a lot in the chamber about the completion of that project—the best golf course in the world, some might say. Oceanlab, north of Newburgh, is the University of Aberdeen's subsea research facility, where carbon capture and storage technology is on the agenda.

Next to the Peterhead energy hub and Peterhead Decommissioning there are projects such as the subsea transmission cable development project, the offshore floating turbine centre, the Energetica industry park, the carbon importation hub and, of course, the carbon capture and storage project.

When the idea of recovering North Sea oil was first discussed, there were those who argued that it would be far too expensive. We would not have North Sea oil today if we had not had the positive vision that was needed to attract the required level of public and private investment. Let us not miss another opportunity to capitalise on the assets that we have in our natural resources and the skills and expertise of our people in universities and across the energy sector.

The Scottish Government has set the bar very high for the level of renewable energy that we can achieve. Let us encourage the UK Government today to follow our good example north of the border and act swiftly. This huge opportunity cannot be allowed to pass us by. The north-east of Scotland is a land of opportunity; it is the powerhouse of the UK. The energy sector is booming. Let us put carbon capture at the heart of our energy policy—in Peterhead.

**The Deputy Presiding Officer:** We now turn to closing speeches. I call Patrick Harvie, who has six minutes.

16:28

**Patrick Harvie:** I rarely come into the chamber with a pre-written speech. When I have the opportunity to open and close on an amendment, I tend to start to write the notes for my closing speech once I have sat down after making my opening speech. This time, I decided to draw two columns, one headed "potential" and the other "assumptions", because I wanted to get a flavour of how much of the debate was expressed in terms of the potential of CCS, and how much was expressed in terms of assumptions about what CCS will do. When we have debated CCS technology in the past, our debates have often been riddled with fairly grandiose assumptions, about the value in economic terms of all that lovely extra oil that will be pumped out through enhanced oil recovery, the number of jobs, or the value to the economy.

My columns are not a comprehensive record—I ran out of space quite early on—but I think that there has been a fair balance between those different forms of expression—between recognising theoretical potential and claiming absolute certainty. If anything that I said in the opening part of the debate has helped to move us in the direction of being honest about potential, I will be happy.

Iain Gray, who was, I think, the first member to speak in the open debate, talked about the potential of CCS and contrasted that well with the very real, immediate and current impact of climate change. We can be sure of the one, but we cannot necessarily be sure of the other. Lewis Macdonald asked "if" the offshore industry gives us an edge on CCS. If that is the case, he said, there will still be a need to demonstrate the technology on a commercial scale. He was still talking about potential.

**Fergus Ewing:** I appreciate Patrick Harvie's method of debating, which is to address the topic in the debate and not to prepare a speech in advance. I put it to him that each of the components of carbon capture, storage and transportation are generally settled technologies and that what needs to be demonstrated is the application of all those technologies together.

**Patrick Harvie:** Professor Frankenstein had a pretty clear understanding of how each of the components of the beast that he was putting together worked. Putting the thing together is as much of a challenge—although not an insurmountable one—as understanding any one component.

Some assumptions were expressed. Nigel Don was pretty clear and, I think, happy to admit that he makes an assumption that the efficiency and energy balance sums have been done by others. I say to him that I would not agree to vote for a Scottish Government budget on that basis, and I will not agree to a Scottish Government energy policy on that basis either.

Mike MacKenzie said that there is “no doubt” that Scotland has a “competitive advantage”. I think that he used the phrase “the perfect opportunity”. He said:

“We can have world-leading carbon capture and storage”.

Well, a great big dose of “maybe” needs to be included in such statements.

Kenny Gibson was one of those who talked about the potential, as did Liam McArthur, who said that CCS should be part of our effort to reduce emissions. I agree with that statement very much.

**Mike MacKenzie:** Does Mr Harvie agree that the whole point of the debate is about the need to get a demonstration project such as the proposed project at Peterhead up and running so that we understand the area much more closely and take any remaining uncertainties—I believe that there are very few—out of the equation?

**Patrick Harvie:** For the avoidance of doubt, I say one more time that I support the work on exploring the viability and efficiency of the technology and seeing a demonstration project in practice. I caution against using that potential as an excuse for increasing fossil fuel extraction or its use in the meantime.

The question is not just whether the potential exists, but at what cost—in terms of money, energy and carbon—it can be realised and, crucially, when. If we can deploy the technology on an industrial scale around 2030, we will be able to use it to help to meet the targets. If we can deploy it on an industrial scale only years or perhaps even a decade after that, or on a timescale that we invent or hope for, we cannot rely on it.

I do not have a strong objection to the Conservative amendment, but whether or not it is agreed to, I am afraid that I will not support the Government motion, principally because of the reference to “enhanced oil recovery”.

I return to the issue that I raised about unburnable carbon. Fundamentally, that affects not only the SNP Government’s energy policy but its economic policy. Viewing oil always as a positive economic resource is unsustainable. It has a positive economic value if we use it within the limits that the challenge of climate change sets

for us. If we use it beyond those limits, it has a negative economic value. It will destroy or contribute to the destruction of the environmental conditions on which our economy depends.

In closing, I stress that CCS has potential, but we must not see it as a get-out-of-jail-free card. Even if it works reliably, safely and efficiently, it will do so only for a finite time. It might give us a bit more time for the fundamental and challenging changes that are needed in our lives, our expectations of energy use and the nature of our economy, but it can never give us an excuse to defer those changes or hide from the need to begin them. They have not yet begun to take place.

16:35

**Murdo Fraser:** I started my opening speech by welcoming the positive tone of the debate, so I am pleased that the positive tone has generally continued throughout the two and a half hours of debate.

I think that we have perhaps broken a record in a debate in this parliamentary session—we had to wait more than an hour before independence was mentioned, and then it was Margaret McDougall who mentioned it. I think that she was the only member who mentioned the constitutional question. That is very unusual, as we all know.

Stewart Stevenson welcomed the UK Government investment in the project at Peterhead, and even Mike MacKenzie abandoned his partisanship at the door and encouraged us all to work together.

From Nigel Don, we had a physics lesson—or a chemistry lesson; maybe it was both—in a typically thoughtful speech about the cost and necessity of experimental schemes.

I will pick up on two or three points that have come up in the debate. First, Iain Gray picked up a point from the motion and the minister’s opening speech. The motion notes that there should be

“more than the two preferred bidders”

in the CCS competition. It is not clear to me whether the minister is calling for more money from the UK Government or wants the cash to be spread more thinly. Perhaps he will clarify that when he winds up.

Secondly, reliance on CCS, which I mentioned in my opening speech, has been a bit of a running theme. Patrick Harvie, Claudia Beamish, Liam McArthur and other members made reference to the issue—it is Patrick Harvie’s Frankenstein’s monster. We know that CCS is technically possible. The minister was right when he intervened to say that during Patrick Harvie’s

speech. We know that all the elements are technically possible. The question is not so much whether we can do it as it is whether we can do it economically. That is why the experimental projects are going ahead.

CCS is not here yet; it is an opportunity and it is a prospect. We should be optimistic about that—we are always optimistic and looking forward—but our being optimistic does not mean that CCS is going to happen, so we need to be a little cautious about it. There is no plan B in RPP2 from the Scottish Government in the event that CCS does not work.

**Mike MacKenzie:** Mr Fraser, like Mr Harvie, seems to be suggesting that we should have multiple plans and look at various scenarios. Does he agree that if John F Kennedy, instead of saying that we would go to the moon, had said that we might go to the moon, Mars, Jupiter, Pluto or wherever, nothing might have happened at all and Neil Armstrong might not have landed on the moon in 1969?

**Murdo Fraser:** I have the perfect answer for Mr MacKenzie, because I was about to quote from the Committee on Climate Change's report in 2008, which addressed that very issue. Patrick Harvie should love this, and Mr MacKenzie will love it even more. The CCC said:

"CCS is currently not a proven technology at full commercial scale. If it were unavailable at reasonable cost, the MARKAL model suggests that a huge expansion of nuclear power would be the least-cost option".

That is not a prospect that concerns me, but perhaps Mr Harvie—and Mr MacKenzie, on the SNP benches—might find it a bit too much to stomach. The minister had better hope that CCS works.

The emissions performance standard for new fossil fuel burning power stations is mentioned in the briefing from RSPB Scotland. It says that the UK-wide standard that is being set, which the Scottish Government has accepted, is not high enough, and argues for a higher Scottish standard. That reminded me of an interesting exchange between Fergus Ewing and Rhoda Grant at the Economy, Energy and Tourism Committee a few months ago, when we had the rather surreal experience of watching the SNP minister argue vehemently for keeping to a UK standard, while Rhoda Grant, a Labour Party member, argued that we need a separate Scottish standard. In that case, I think, the minister was correct.

As we heard in evidence, the difficulty that people from the industry have with a higher standard is that they would simply not invest in new plant in Scotland if they could build it cheaper south of the border, so we would still end up using

the same power but would be importing it from down south. The jobs would be there instead of in Scotland, and we would get no economic benefit. The minister was right about that, although it might seem to be counterintuitive.

Three principles should underlie a modern energy policy: affordability, security of supply and decarbonisation. It is always difficult to achieve a balance between those three principles. Also, as we are seeing at the moment, there is a conflict between affordability and decarbonisation because decarbonised forms of energy are more expensive. CCS gives us the opportunity to bridge that gap, if it can be done economically.

Joan McAlpine mentioned that China is building one new coal-fired power station per week. This year, Germany is opening three new coal-burning power stations as a result of its Government's deeply mistaken decision to stop relying on nuclear power and to move instead to a high-carbon supply using coal. If we are going to burn more coal, we need to deal with the carbon, which is why commercialisation of CCS is so important and why the UK Government's stance, which is complementary to and supportive of that of the Scottish Government, has been so warmly welcomed.

I am pleased to be able to finish my remarks by saying how positive the debate has been. It has been good to see pretty much all members on the same page.

16:41

**Iain Gray:** The debate has been interesting and wide-ranging. It has ranged from the depleted reservoirs and saline aquifers of the North Sea to the algal feedstock plants in Australia, via China, Germany, Poland and one or two other places in between. That has been an interesting aspect of the debate because it reflects the global importance of the technology, and shows that we are not the only ones who are debating what needs to be done to turn the technology into something that is commercially available and viable. The issue is being considered right across the world.

Many members reflected correctly on Scotland's particular potential for developing carbon capture and storage technology with our depleted reservoirs and the pipelines that are already in place. Others referred to the potential that is connected to that for using fossil fuels because of our coal and, potentially, our gas reserves. We have been discussing a global issue, but it is right that a lot of the debate has focused on Scotland's particular place in that.

Other members used the opportunity to give us a lesson in chemistry. Mr Don's lesson was

certainly chemistry and not physics. Ms McAlpine also gave us a short lesson in the history of chemistry, which was of some interest.

A number of members, particularly Lewis Macdonald and Kenneth Gibson, quite rightly went into some detail about the extremely important proposal in Peterhead. One of the key points that they both mentioned was that success in Peterhead would mean that it would be the first example of carbon capture retrofitted to a gas-fired power station. That is important for Scotland. I have a constituency interest in that because my constituency includes the power station at Cockenzie, which closed earlier this year with existing consent for it to be replaced with a combined cycle gas power station. Unlike at Hunterston, there is widespread local support for the project. The community at Cockenzie has produced electricity and power for Scotland for more than 40 years and those who have been involved with that—some of them for the whole 40 years—would very much like to see their sons and daughters involved in doing so again in the future. If they are to do so without damaging the environment, we need investment in the new plant and carbon capture technology that will be applicable to that kind of power generation. I am therefore interested in seeing Peterhead demonstrate that that is possible.

There has been some discussion about whether this is the first debate that we have had on CCS. Whether it is the first debate or not, it is good that we had it today because, to paraphrase the title of the book and film, we need to talk about CCS. This is a critical point for the technology. Patrick Harvie has made the point strongly on a number of occasions that it is a technology that has not yet been demonstrated at a viable commercial level. That is a statement of fact. The projects that have been mentioned—there are others closer to home, for example in Wales—that have demonstrated that bits of the technology work, have been small scale.

If we look at bigger projects, we see that there is a mixed picture. Margaret McDougall referred to the decision in Norway to close down the project at Mongstad. Quite an interesting aside to that—given an intervention that was made in the debate—was that the previous Prime Minister of Norway described getting Mongstad working as being Norway's equivalent of performing a moon landing. However, Norway has now pulled back from that project. Mr Stevenson gave us working examples of China pushing forward with the technology. There are examples from Canada, too; the Boundary Dam power station is a significant project that is already under construction.

The truth is that what is needed is the will to push forward and support the technology. That is why the importance of the current competition in the UK and the contract for difference with reference to the captain clean energy project have featured in the debate.

I will just say in passing that there were a couple of references to the first Peterhead project. We should be clear that the first Peterhead project was of course a pre-ignition gasification proposal—not a retrofit, but an experimental project, which never met the parameters of the competition that existed at that time. What is interesting, however, is that it bore similarities to the captain clean energy project, which I think shows how things have moved on in the intervening years.

We need to talk about CCS because this is a critical point for our targets. A number of members referred to our Climate Change Act targets and the 2030 decarbonisation target for the power industry. It is absolutely true that any examination of the RPP2, which describes how the Government believes we will move towards the targets, shows that it is highly dependent on significant and rapid progress on CCS technology. In fact, it requires us to have 500MW in operation by 2020 and another 500MW in operation by 2025, and it assumes over 1.5GW of gas-generation carbon capture being operational by 2027. Those are extremely challenging targets. In all honesty, from where we stand now, it is quite difficult to see how we are going to achieve them.

Mr Allard said that we have set the bar high; we have set the bar high on decarbonisation and on climate change targets, and the Government has set the bar high on renewable energy targets. The danger is that we will end up celebrating the height of the bar while ignoring our failure to reach it. That is what Mr Harvie has said we must try to avoid.

Mr MacKenzie was eloquent in saying that we have the skills, the academics and the infrastructure. I think we have to ask ourselves why, therefore, we are not further ahead. That is a serious conversation that we need to have. That does not mean that I think we should turn our backs on CCS, but that we should redouble our efforts.

I have a lot of sympathy for some of the arguments that Mr Harvie has made, but I have to say that I believe that oil and gas are assets and resources. They are not intrinsically bad; it is down to how we use them. Therefore, we support the possibility of enhanced recovery of oil using CCS technology. For that reason, we will not be able to support the Green amendment.

As for the Tory amendment, I understand Mr Fraser's caution about picking out one project, but given that the captain project was mentioned in the motion, to remove it might look a little strange and could be misinterpreted.

I have also expressed—quite gently, I think—concerns about the timescale of the current competition. For those reasons, we will not support the Tory amendment tonight, either.

16:50

**Fergus Ewing:** I begin by pointing out that I omitted to mention earlier that Shell, too, was represented in the gallery today. Belinda Perriman, who provided an excellent briefing to MSPs earlier, was here for part of the debate. We greatly appreciate the support that she and her colleagues at Shell—a team of 56, I believe—are providing. I should also have made it clear that Shell is being supported by SSE in connection with this project. That should be placed on the record as I am not sure that it was mentioned earlier, which may have been my fault.

This has been an interesting, informative and, at times, impassioned debate. Like Mr Fraser—though he may have put it slightly differently—I think that it has been one of the most constructive debates that I can remember taking place here in Parliament. That is very welcome. I cannot remember previously having led a debate in which Mr Harvie expressed the view that it was a balanced debate. We should accept that that is some form of progress, although I was surprised when Frankenstein made a somewhat unexpected appearance in the debate.

**Patrick Harvie:** The creature had been much maligned over the years. I hope that I would not be accused of calling either it or CCS a monster, but there is no doubt that it was not a healthy creature.

**Fergus Ewing:** Even Frankenstein can be rehabilitated.

The contributions from throughout the chamber have been extremely useful. I know that Angus MacDonald, as the local MSP, has been assiduous in pursuing the issue and acquainting himself with the facts by meeting the company that wishes to invest a huge amount of money in his constituency. I welcome that and his continuing strong interest in the matter.

Joan McAlpine rightly put her finger on the importance of the academic side of the debate. It is not just pure research. Professor Haszeldine, who is in the gallery, and many others are working directly with companies and assisting them in presenting complex information to potential investors. That is an extremely useful combination of academe and industry working together,

particularly in technologies that, as has been pointed out, have not yet proved themselves in economic terms.

I was pleased that Mr Harvie emphasised that he has concerns not objections. In the spirit in which he made his contributions, I say that that is something that we should welcome.

I want to address some of the main points of the debate, which is what I should be doing. First, there is the extent to which CCS is an untried, unviable or unproven technology, or one that has not yet been proven to be economically viable. It is always useful to set out a few facts in order that we can go on from those facts to come to conclusions. Capture by separation of CO<sub>2</sub> gas has been undertaken since 1929. I am informed by Professor Haszeldine that the process is widely used worldwide and will be used by Shell at the Peterhead power plant.

The Summit Power project at Grangemouth will use heating to gasify the coal—not burn it—to capture CO<sub>2</sub> and then burn hydrogen. As one of the Labour members—I think that it was Margaret McDougall—mentioned, the overall percentage efficiency of the plant is expected to be in the high 30s and low 40s, even with capture operating. By contrast, Longannet, with no capture, has an efficiency of around 32 per cent. I am informed that the gasification process itself is very well established and used globally in refineries and chemical plant. In other words, the essential pre-combustion element of the process is not a nascent technology; it is an established technology.

Indeed, when Summit Power and Shell were presenting this morning to MSPs, they were anxious to put across the message that we are dealing here not with new, untried technologies but with settled technologies. To do them justice—in the sense of being fair to them given their investment of time in seeking to educate us as non-experts—I stress that they put across the argument that we are dealing with a series of tested, settled technologies. Those technologies are not to be compared with tidal and wave energy, for example, which of course Mr Harvie and I support absolutely as playing an increasing and very important part in providing electricity for Scotland and indeed the world. However, tidal and wave energy are nascent technologies and CCS is not a nascent technology. It is important to get that on the record because, at times, I felt that we were veering off and moving backwards slightly—I am not making any individual criticisms here—to suggest that somehow CCS is at an earlier stage than in fact it is.

Of course, transportation of CO<sub>2</sub>—

**Patrick Harvie:** Will the minister take an intervention?

**Fergus Ewing:** I think that I will move on, with respect to Mr Harvie—I will perhaps take an intervention from him later.

Claudia Beamish made the point that we need to be absolutely sure that the transportation of the CO<sub>2</sub> along the pipelines and into the depleted basins will be done correctly. She is absolutely right, but then again, transportation and storage are technologies that have been deployed all over the world with success and efficacy. Therefore my point again is that we are not leaping into the dark here. We are not travelling to the moon. We are doing things that have been done for a long time all over the world. I just wanted to make that point.

**Claudia Beamish:** Will the minister clarify whether that point about the pipelines relates to what we are talking about now or to oil pipelines? My concern was the same concern as that raised by the RSPB about the possibilities of leakage of CO<sub>2</sub> into the marine environment.

**Fergus Ewing:** My understanding as a non-scientist is that both projects are absolutely confident that we have an existing pipeline structure that, with the appropriate analysis and checks, can be safely used; that the storage is a process that has been shown to work; that leakage is not an issue that they cannot deal with; and that these are—this is the point—fairly settled technologies, not new ones.

I will move on to deal with the points that Mr Fraser raised. The fundamental point that we want to make about this is that we cannot really expect just to have two demonstration projects and that is it. We must all recognise that, if we are to see the benefits flow from CCS, there must be more than two projects. The motion does not prescribe that the third must be the Summit Power project. The motion refers to projects

“such as the Captain Clean Energy Project”,

so it does not commit the Conservatives and the Liberals, if they vote for the motion today—which I hope they will—to unconditional support. The motion says that we want to travel in that direction and that we want to do so in a practical manner.

I understand that it is argued that, within the levy control framework, there may be the possibility of funding more than the two preferred bidders as a result of the competition, so we are not asking for the DECC competition to be widened. That would slow things down. It is possible that the reserve bidders, of which Summit Power is one, may move forward were either the white rose project or Shell to drop off. Were that to happen—we hope that it will not, because we want to see England succeed with this technology as well—I hope that, in that

spirit, we can persuade the Conservatives that we are working together on this and that we can unite later on in Parliament towards that end.

Plainly, this has been a debate that will disappoint some. It will disappoint those who relish confrontation. It will disappoint those who savour the gratuitous trading of casual insults. It will disappoint those who seek from their politicians a sort of peacetime warfare—a warfare of words or a barracking battle—or those who want harangue, hubris and hot air. I will not give people that. Not today, anyway. *[Laughter.]* I think that I just beat Mr Fraser to that comment.

We want Scotland to give broad support today for carbon capture and storage technology, which has moved way beyond the talking stage to a situation in which the Shell and SSE Peterhead project will, it is hoped, be going ahead and there is a real possibility that a second project at Grangemouth—the Summit Power Group captain clean energy project—will also go ahead. In my view, that second project offers Scotland tremendous opportunities.

We have world-leading decarbonisation targets; a large and mature hydrocarbon sector; a strong engineering sector; the pipeline infrastructure; extensive opportunities for geological CO<sub>2</sub> storage; and academic excellence. I do not think that any other country in the world has all six of those extraordinary assets. Scotland is quite simply the best place in the world for carbon capture and storage.



## Decision Time

17:00

**The Presiding Officer (Tricia Marwick):** There are three questions to be put as a result of today's business. The first question is, that amendment S4M-07974.2, in the name of Murdo Fraser, which seeks to amend motion S4M-07974, in the name of Fergus Ewing, on carbon capture and storage, be agreed to. Are we agreed?

**Members:** No.

**The Presiding Officer:** There will be a division.

### For

Brown, Gavin (Lothian) (Con)  
Fraser, Murdo (Mid Scotland and Fife) (Con)  
Hume, Jim (South Scotland) (LD)  
Johnstone, Alex (North East Scotland) (Con)  
McArthur, Liam (Orkney Islands) (LD)  
McGrigor, Jamie (Highlands and Islands) (Con)  
McInnes, Alison (North East Scotland) (LD)  
Milne, Nanette (North East Scotland) (Con)  
Scanlon, Mary (Highlands and Islands) (Con)  
Scott, John (Ayr) (Con)  
Scott, Tavish (Shetland Islands) (LD)  
Smith, Liz (Mid Scotland and Fife) (Con)

### Against

Adamson, Clare (Central Scotland) (SNP)  
Allan, Dr Alasdair (Na h-Eileanan an Iar) (SNP)  
Allard, Christian (North East Scotland) (SNP)  
Beamish, Claudia (South Scotland) (Lab)  
Beattie, Colin (Midlothian North and Musselburgh) (SNP)  
Biagi, Marco (Edinburgh Central) (SNP)  
Brodie, Chic (South Scotland) (SNP)  
Brown, Keith (Clackmannanshire and Dunblane) (SNP)  
Burgess, Margaret (Cunninghame South) (SNP)  
Campbell, Aileen (Clydesdale) (SNP)  
Campbell, Roderick (North East Fife) (SNP)  
Chisholm, Malcolm (Edinburgh Northern and Leith) (Lab)  
Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)  
Constance, Angela (Almond Valley) (SNP)  
Crawford, Bruce (Stirling) (SNP)  
Cunningham, Roseanna (Perthshire South and Kinross-shire) (SNP)  
Dey, Graeme (Angus South) (SNP)  
Don, Nigel (Angus North and Mearns) (SNP)  
Dugdale, Kezia (Lothian) (Lab)  
Ewing, Fergus (Inverness and Nairn) (SNP)  
Fabiani, Linda (East Kilbride) (SNP)  
Fee, Mary (West Scotland) (Lab)  
Findlay, Neil (Lothian) (Lab)  
Finnie, John (Highlands and Islands) (Ind)  
FitzPatrick, Joe (Dundee City West) (SNP)  
Gibson, Kenneth (Cunninghame North) (SNP)  
Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)  
Gray, Iain (East Lothian) (Lab)  
Hyslop, Fiona (Linlithgow) (SNP)  
Ingram, Adam (Carrick, Cumnock and Doon Valley) (SNP)  
Keir, Colin (Edinburgh Western) (SNP)  
Kidd, Bill (Glasgow Anniesland) (SNP)  
Lamont, Johann (Glasgow Pollok) (Lab)  
Lyle, Richard (Central Scotland) (SNP)  
MacAskill, Kenny (Edinburgh Eastern) (SNP)  
MacDonald, Angus (Falkirk East) (SNP)  
MacDonald, Gordon (Edinburgh Pentlands) (SNP)

Macdonald, Lewis (North East Scotland) (Lab)  
Macintosh, Ken (Eastwood) (Lab)  
Mackay, Derek (Renfrewshire North and West) (SNP)  
MacKenzie, Mike (Highlands and Islands) (SNP)  
Malik, Hanzala (Glasgow) (Lab)  
Martin, Paul (Glasgow Provan) (Lab)  
Mason, John (Glasgow Shettleston) (SNP)  
Maxwell, Stewart (West Scotland) (SNP)  
McAlpine, Joan (South Scotland) (SNP)  
McCulloch, Margaret (Central Scotland) (Lab)  
McDonald, Mark (Aberdeen Donside) (SNP)  
McDougall, Margaret (West Scotland) (Lab)  
McKelvie, Christina (Hamilton, Larkhall and Stonehouse) (SNP)  
McLeod, Aileen (South Scotland) (SNP)  
McLeod, Fiona (Strathkelvin and Bearsden) (SNP)  
McMahon, Siobhan (Central Scotland) (Lab)  
McMillan, Stuart (West Scotland) (SNP)  
McNeil, Duncan (Greenock and Inverclyde) (Lab)  
Neil, Alex (Airdrie and Shotts) (SNP)  
Paterson, Gil (Clydebank and Milngavie) (SNP)  
Pentland, John (Motherwell and Wishaw) (Lab)  
Robertson, Dennis (Aberdeenshire West) (SNP)  
Robison, Shona (Dundee City East) (SNP)  
Russell, Michael (Argyll and Bute) (SNP)  
Salmond, Alex (Aberdeenshire East) (SNP)  
Smith, Elaine (Coatbridge and Chryston) (Lab)  
Stevenson, Stewart (Banffshire and Buchan Coast) (SNP)  
Stewart, Kevin (Aberdeen Central) (SNP)  
Swinney, John (Perthshire North) (SNP)  
Wheelhouse, Paul (South Scotland) (SNP)  
White, Sandra (Glasgow Kelvin) (SNP)

### Abstentions

Harvie, Patrick (Glasgow) (Green)  
Johnstone, Alison (Lothian) (Green)

**The Presiding Officer:** The result of the division is: For 12, Against 68, Abstentions 2.

*Amendment disagreed to.*

**The Presiding Officer:** The next question is, that amendment S4M-07974.1, in the name of Patrick Harvie, which seeks to amend motion S4M-07974, in the name of Fergus Ewing, on carbon capture and storage, be agreed to. Are we agreed?

**Members:** No.

**The Presiding Officer:** There will be a division.

### For

Finnie, John (Highlands and Islands) (Ind)  
Harvie, Patrick (Glasgow) (Green)  
Johnstone, Alison (Lothian) (Green)

### Against

Adamson, Clare (Central Scotland) (SNP)  
Allan, Dr Alasdair (Na h-Eileanan an Iar) (SNP)  
Allard, Christian (North East Scotland) (SNP)  
Beamish, Claudia (South Scotland) (Lab)  
Beattie, Colin (Midlothian North and Musselburgh) (SNP)  
Biagi, Marco (Edinburgh Central) (SNP)  
Brodie, Chic (South Scotland) (SNP)  
Brown, Gavin (Lothian) (Con)  
Brown, Keith (Clackmannanshire and Dunblane) (SNP)  
Burgess, Margaret (Cunninghame South) (SNP)  
Campbell, Aileen (Clydesdale) (SNP)  
Campbell, Roderick (North East Fife) (SNP)  
Chisholm, Malcolm (Edinburgh Northern and Leith) (Lab)

Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)  
 Constance, Angela (Almond Valley) (SNP)  
 Crawford, Bruce (Stirling) (SNP)  
 Cunningham, Roseanna (Perthshire South and Kinross-shire) (SNP)  
 Dey, Graeme (Angus South) (SNP)  
 Don, Nigel (Angus North and Mearns) (SNP)  
 Dugdale, Kezia (Lothian) (Lab)  
 Ewing, Fergus (Inverness and Nairn) (SNP)  
 Fabiani, Linda (East Kilbride) (SNP)  
 Fee, Mary (West Scotland) (Lab)  
 Findlay, Neil (Lothian) (Lab)  
 FitzPatrick, Joe (Dundee City West) (SNP)  
 Fraser, Murdo (Mid Scotland and Fife) (Con)  
 Gibson, Kenneth (Cunninghame North) (SNP)  
 Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)  
 Gray, Iain (East Lothian) (Lab)  
 Hume, Jim (South Scotland) (LD)  
 Hyslop, Fiona (Linlithgow) (SNP)  
 Ingram, Adam (Carrick, Cumnock and Doon Valley) (SNP)  
 Johnstone, Alex (North East Scotland) (Con)  
 Keir, Colin (Edinburgh Western) (SNP)  
 Kidd, Bill (Glasgow Anniesland) (SNP)  
 Lamont, Johann (Glasgow Pollok) (Lab)  
 Lyle, Richard (Central Scotland) (SNP)  
 MacAskill, Kenny (Edinburgh Eastern) (SNP)  
 MacDonald, Angus (Falkirk East) (SNP)  
 MacDonald, Gordon (Edinburgh Pentlands) (SNP)  
 Macdonald, Lewis (North East Scotland) (Lab)  
 Macintosh, Ken (Eastwood) (Lab)  
 Mackay, Derek (Renfrewshire North and West) (SNP)  
 MacKenzie, Mike (Highlands and Islands) (SNP)  
 Malik, Hanzala (Glasgow) (Lab)  
 Martin, Paul (Glasgow Provan) (Lab)  
 Mason, John (Glasgow Shettleston) (SNP)  
 Maxwell, Stewart (West Scotland) (SNP)  
 McAlpine, Joan (South Scotland) (SNP)  
 McArthur, Liam (Orkney Islands) (LD)  
 McCulloch, Margaret (Central Scotland) (Lab)  
 McDonald, Mark (Aberdeen Donside) (SNP)  
 McDougall, Margaret (West Scotland) (Lab)  
 McGrigor, Jamie (Highlands and Islands) (Con)  
 McInnes, Alison (North East Scotland) (LD)  
 McKelvie, Christina (Hamilton, Larkhall and Stonehouse) (SNP)  
 McLeod, Aileen (South Scotland) (SNP)  
 McLeod, Fiona (Strathkelvin and Bearsden) (SNP)  
 McMahon, Siobhan (Central Scotland) (Lab)  
 McMillan, Stuart (West Scotland) (SNP)  
 McNeil, Duncan (Greenock and Inverclyde) (Lab)  
 Milne, Nanette (North East Scotland) (Con)  
 Neil, Alex (Airdrie and Shotts) (SNP)  
 Paterson, Gil (Clydebank and Milngavie) (SNP)  
 Pentland, John (Motherwell and Wishaw) (Lab)  
 Robertson, Dennis (Aberdeenshire West) (SNP)  
 Robison, Shona (Dundee City East) (SNP)  
 Russell, Michael (Argyll and Bute) (SNP)  
 Salmond, Alex (Aberdeenshire East) (SNP)  
 Scanlon, Mary (Highlands and Islands) (Con)  
 Scott, John (Ayr) (Con)  
 Scott, Tavish (Shetland Islands) (LD)  
 Smith, Elaine (Coatbridge and Chryston) (Lab)  
 Smith, Liz (Mid Scotland and Fife) (Con)  
 Stevenson, Stewart (Banffshire and Buchan Coast) (SNP)  
 Stewart, Kevin (Aberdeen Central) (SNP)  
 Swinney, John (Perthshire North) (SNP)  
 Wheelhouse, Paul (South Scotland) (SNP)  
 White, Sandra (Glasgow Kelvin) (SNP)

**The Presiding Officer:** The result of the division is: For 3, Against 79, Abstentions 0.

*Amendment disagreed to.*

**The Presiding Officer:** The next question is, that motion S4M-07974, in the name of Fergus Ewing, on carbon capture and storage, be agreed to. Are we agreed?

**Members:** No.

**The Presiding Officer:** There will be a division.  
**For**

Adamson, Clare (Central Scotland) (SNP)  
 Allan, Dr Alasdair (Na h-Eileanan an Iar) (SNP)  
 Allard, Christian (North East Scotland) (SNP)  
 Beamish, Claudia (South Scotland) (Lab)  
 Beattie, Colin (Midlothian North and Musselburgh) (SNP)  
 Biagi, Marco (Edinburgh Central) (SNP)  
 Brodie, Chic (South Scotland) (SNP)  
 Brown, Keith (Clackmannanshire and Dunblane) (SNP)  
 Burgess, Margaret (Cunninghame South) (SNP)  
 Campbell, Aileen (Clydesdale) (SNP)  
 Campbell, Roderick (North East Fife) (SNP)  
 Chisholm, Malcolm (Edinburgh Northern and Leith) (Lab)  
 Coffey, Willie (Kilmarnock and Irvine Valley) (SNP)  
 Constance, Angela (Almond Valley) (SNP)  
 Crawford, Bruce (Stirling) (SNP)  
 Cunningham, Roseanna (Perthshire South and Kinross-shire) (SNP)  
 Dey, Graeme (Angus South) (SNP)  
 Don, Nigel (Angus North and Mearns) (SNP)  
 Dugdale, Kezia (Lothian) (Lab)  
 Ewing, Fergus (Inverness and Nairn) (SNP)  
 Fabiani, Linda (East Kilbride) (SNP)  
 Fee, Mary (West Scotland) (Lab)  
 Findlay, Neil (Lothian) (Lab)  
 FitzPatrick, Joe (Dundee City West) (SNP)  
 Gibson, Kenneth (Cunninghame North) (SNP)  
 Grahame, Christine (Midlothian South, Tweeddale and Lauderdale) (SNP)  
 Gray, Iain (East Lothian) (Lab)  
 Hyslop, Fiona (Linlithgow) (SNP)  
 Ingram, Adam (Carrick, Cumnock and Doon Valley) (SNP)  
 Keir, Colin (Edinburgh Western) (SNP)  
 Kidd, Bill (Glasgow Anniesland) (SNP)  
 Lamont, Johann (Glasgow Pollok) (Lab)  
 Lyle, Richard (Central Scotland) (SNP)  
 MacAskill, Kenny (Edinburgh Eastern) (SNP)  
 MacDonald, Angus (Falkirk East) (SNP)  
 MacDonald, Gordon (Edinburgh Pentlands) (SNP)  
 Macdonald, Lewis (North East Scotland) (Lab)  
 Macintosh, Ken (Eastwood) (Lab)  
 Mackay, Derek (Renfrewshire North and West) (SNP)  
 MacKenzie, Mike (Highlands and Islands) (SNP)  
 Malik, Hanzala (Glasgow) (Lab)  
 Martin, Paul (Glasgow Provan) (Lab)  
 Mason, John (Glasgow Shettleston) (SNP)  
 Maxwell, Stewart (West Scotland) (SNP)  
 McAlpine, Joan (South Scotland) (SNP)  
 McCulloch, Margaret (Central Scotland) (Lab)  
 McDonald, Mark (Aberdeen Donside) (SNP)  
 McDougall, Margaret (West Scotland) (Lab)  
 McKelvie, Christina (Hamilton, Larkhall and Stonehouse) (SNP)  
 McLeod, Aileen (South Scotland) (SNP)  
 McLeod, Fiona (Strathkelvin and Bearsden) (SNP)  
 McMahon, Siobhan (Central Scotland) (Lab)  
 McMillan, Stuart (West Scotland) (SNP)  
 McNeil, Duncan (Greenock and Inverclyde) (Lab)  
 Neil, Alex (Airdrie and Shotts) (SNP)  
 Paterson, Gil (Clydebank and Milngavie) (SNP)  
 Pentland, John (Motherwell and Wishaw) (Lab)  
 Robertson, Dennis (Aberdeenshire West) (SNP)

Robison, Shona (Dundee City East) (SNP)  
 Russell, Michael (Argyll and Bute) (SNP)  
 Salmond, Alex (Aberdeenshire East) (SNP)  
 Smith, Elaine (Coatbridge and Chryston) (Lab)  
 Stevenson, Stewart (Banffshire and Buchan Coast) (SNP)  
 Stewart, Kevin (Aberdeen Central) (SNP)  
 Swinney, John (Perthshire North) (SNP)  
 Wheelhouse, Paul (South Scotland) (SNP)  
 White, Sandra (Glasgow Kelvin) (SNP)

#### **Against**

Finnie, John (Highlands and Islands) (Ind)  
 Harvie, Patrick (Glasgow) (Green)  
 Johnstone, Alison (Lothian) (Green)

#### **Abstentions**

Brown, Gavin (Lothian) (Con)  
 Fraser, Murdo (Mid Scotland and Fife) (Con)  
 Hume, Jim (South Scotland) (LD)  
 Johnstone, Alex (North East Scotland) (Con)  
 McArthur, Liam (Orkney Islands) (LD)  
 McGrigor, Jamie (Highlands and Islands) (Con)  
 McInnes, Alison (North East Scotland) (LD)  
 Milne, Nanette (North East Scotland) (Con)  
 Scanlon, Mary (Highlands and Islands) (Con)  
 Scott, John (Ayr) (Con)  
 Scott, Tavish (Shetland Islands) (LD)  
 Smith, Liz (Mid Scotland and Fife) (Con)

**The Presiding Officer:** The result of the division is: For 67, Against 3, Abstentions 12.

*Motion agreed to,*

That the Parliament believes that carbon capture and storage (CCS) is a critical technology and component in the decarbonisation of Scotland's energy supplies; recognises that Scotland has strong comparative advantages to develop a CCS industry; further recognises the potential for jobs and enhanced oil recovery that CCS can bring to the country; supports the UK Government's CCS commercialisation competition but would like to see swifter progress through the next stages; considers that the announcement of the Peterhead Power Project as a preferred bidder is an important development of CCS on a commercial scale, but that, if a fully-developed CCS industry is to flourish, the UK's CCS competition must have more than the two preferred bidders, and understands the importance of the UK Government continuing to encourage and incentivise other highly-innovative CCS projects such as the Captain Clean Energy Project.

*Meeting closed at 17:04.*



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