

Energy Security and Net Zero Committee

Oral evidence: [UK refineries and the role of oil and gas](#), HC 1206

Wednesday 29 October 2025

Ordered by the House of Commons to be published on 29 October 2025.

[Watch the meeting](#)

Members present: Bill Esterson (Chair); Ms Polly Billington; Torcuil Crichton; Wera Hobhouse; Bradley Thomas; Claire Young.

Questions 1 - 129

Witnesses

[I](#): Elizabeth de Jong, CEO, Fuels Industry UK; Paul Greenwood, UK Chair, ExxonMobil; and Benj Sykes, Head, Ørsted UK.

[II](#): Stuart Payne, Chief Executive, North Sea Transition Authority; Katy Heidenreich, Supply Chain & People Director, Offshore Energies UK; and Harriet Eisner, Regional Co-ordinating Officer, Unite.

Examination of witnesses

Witnesses: Elizabeth de Jong, Paul Greenwood and Benj Sykes.

Q1 Chair: Welcome to this afternoon's one-off session of the Energy Security and Net Zero Committee on the future of oil and gas refineries. I ask our first panel to introduce yourselves.

Elizabeth de Jong: I am Elizabeth de Jong, and I am chief executive of Fuels Industry UK. We are a trade association, and our members manufacture and supply over 85% of transport fuels in the UK. Our membership includes the four remaining refineries.

Paul Greenwood: Good afternoon. My name is Paul Greenwood, and I am the UK chair of ExxonMobil.

Benj Sykes: Good afternoon. I am Benj Sykes, the UK country manager for Ørsted. We are the world's leading offshore wind developer.

Q2 Chair: Thank you all very much. You are most welcome. I will start with some questions on decarbonisation and the future of fossil fuels. Starting with Paul Greenwood, what do you see as the role for oil and gas companies in supporting the global energy transition?

Paul Greenwood: It is a good question. I will start by talking about what a refinery is and what it does, if that makes sense, as I think that is a good level-setter so that we know what we are talking about. I will talk about our refinery, which is the Fawley refinery down near Southampton. It is the UK's largest refinery and petrochemical complex. I will talk about three things very quickly. One is what we make and what we supply, the activity, the people and the nature of the business that goes on down there, and then I will perhaps talk about the future, which will answer your question more directly.

We supply about 20% of the UK's fuels. That is clearly petrol, diesel, jet fuel, marine fuel, propane and butane—any hydrocarbon you can imagine in liquid form that basically powers something. The refinery is extremely well connected through its infrastructure into five terminals in Birmingham, east London, west London, out in Avonmouth near Bristol, and down in the Southampton area. We have a direct line that goes into Heathrow airport so we are extremely well connected to the country's key infrastructure, and we supply not just to cars and trucks but also to the military, aviation and all those sectors. We supply fuels for lots of critical things, but it is not just about fuels.

It is very important to say that we also supply lubricants, for cars, yes, but also for wind turbines and lots of other things as well. We supply chemicals for pharmaceuticals, for defence, for automotive. One little data point that I think is worth sharing is that, if you recall back to the pandemic when we were all being jabbed and inoculated with the vaccine, about half of the global supply of the rubber that made the little vial stoppers came from Fawley refinery. That gives you an idea of the niche,



HOUSE OF COMMONS

high-tech, very valuable products that we make outside of fuels. Effectively, you can see that, and then there are feedstocks for solvents, for shampoo, for packaging and all sorts of different things.

I would like you to take away one key fact, which is that this is not just about fuels. It is about a whole range of different products, all of which are critical for the way in which the country functions.

If you stand back and look at the site, it is over 3,000 acres. We employ about 2,000 employees and about 1,000 permanent contractors. Another important point is that perhaps 2,000 companies supply our activities. We have an operating and capex budget every year of around £500 million, so you get an idea of the sheer activity level of the people employed, the value that is being generated and the activity that goes on. It is an incredibly important site, and one that drives the local and regional economy.

You mentioned the future, and that is something I would like to focus on. What does Fawley refinery have? It has Europe's largest private jetty, which is about 1 mile long. It has tanks, it has pipelines, it has grid connections. It has all the capability to provide low-emission fuels, sustainable aviation fuels and other products for the future. It is really important when we are thinking about that. No doubt we will touch on the fact that the refining sector is now in an existential crisis. All that kit will help us to power a potential transition in the future, and it is vital that we keep our refining sector working through that period.

In direct answer to your question, yes, we spend money effectively on decarbonising, and we are doing everything we can to make our processes emit less carbon and become more efficient in how we process energy.

Q3 Chair: Thank you. My colleagues will have questions on some of the detail of what that looks like. Benj Sykes, your company used to be called Danish Oil and Natural Gas before the name changed. You have moved away from that. What is your answer to the question?

Benj Sykes: If the question is what we are doing to drive the energy transition, I suppose we have pivoted 100% from a hydrocarbon-based business to a renewables-based business. We were, indeed, DONG Energy—Danish Oil and Natural Gas—before pivoting to Ørsted in 2017. The reason for that was because we saw a big business opportunity. It did not happen overnight, though. It is worth pointing out that we had been getting into the renewables space, and specifically offshore wind, for 20 years. We were the pioneers of that technology. In the mid-2010s we could see that this was a technology that offered a great business growth opportunity for our company. That is what drove the pivot from fossil fuels to clean energy, and we have been growing since then.

Q4 Chair: Elizabeth de Jong, how important for our energy security is it that the UK is producing its own oil and gas?



Elizabeth de Jong: It is essential. Refineries are vital for energy security, for jobs, for decarbonising well and for growth. On energy security, refineries are strategic national assets. The fuel sector supplies 47% of final energy demand. It supplies 100% of aviation transport fuel, 97% of road fuel and 61% of rail fuel. They all need liquid fuels, and there will be demand from those sectors for years to come, whatever forecast we look at. We have talked about being essential to other sectors as well. Without home production, we as a country would become dangerously exposed to instabilities abroad, and we would be relying on imports from countries where we have geopolitical concerns, such as in the Middle East. It is vital to energy security, delivering the now and delivering the future.

Q5 **Chair:** Just to confirm, though, most of the product that is refined in the UK is imported.

Elizabeth de Jong: We import crude to refine. There is a slight balance of imports now. There did not used to be.

Paul Greenwood: The vast majority of crude is now imported. The refineries will still take in a certain amount of UK-produced crude, but the vast majority is imported. The question is not really whether the individual crude molecules produced in the North Sea come to the UK; the point is that we will need crude oil and refined products, so the answer is yes. Every single forecast, including the Government's forecast, says that we will need crude oil and refined products well past 2050. Therefore the question around the North Sea, to my mind, is more a matter of do you wish to produce your own and have all the economic value from that, or do you wish to import from elsewhere. Fundamentally, that is the answer to your question around the oil and gas piece. Clearly, natural gas has a massive impact on energy security because it is right there, and it is piped straight into the UK.

Elizabeth de Jong: Yes, sorry. I now understand your question a little more. On how much of the North Sea crude that we use in the UK it is—

Q6 **Chair:** Yes, from an energy security point of view. You were quite rightly making the point about not getting our crude from the Middle East.

Elizabeth de Jong: That is our imports from the Middle East, so if we do not make it here, we would need to bring in diesel, we would need to bring in jet fuel, we would need to bring in products.

Q7 **Chair:** I see. You are talking about the finished products.

Elizabeth de Jong: It is the same if we do not have the option of North Sea crude for our future. Crude from the North Sea is a premium product, so it can go to lots of different refineries worldwide, but I think it would be a big mistake not to be able to have the crude so that we can own our energy security and the means of producing the products we use for transport and all the other purposes you have heard us mention. We talk a lot about not wanting to rely on fossil fuel imports for electricity



and gas, but for transport we seem happy to rely more and more on importing different products, such as diesel and jet fuel, from around the world, because our refining sector has reduced. Two refineries have closed this year, which is one third of the industry. I do not know why we would not want to make some policy changes to support our refineries.

Q8 Chair: Is there a way of opening extra refining capacity? Is that what you are suggesting?

Elizabeth de Jong: Once refinery capacity has gone, as we saw in New Zealand, it is gone. You cannot bring back a refinery, but it is possible to increase production at existing refineries, and ExxonMobil has recently invested to do so.

Paul Greenwood: We have spent about \$1 billion over the past few years on two projects. One was replacing the direct jet line that goes from our refinery into Heathrow. The second one was to increase our production of low-sulphur diesel. To be clear, nobody would build a refinery in the UK, and I would say that at the moment, with the current policy and fiscal frameworks, I imagine very few people will be investing in the refining sector at all.

Chair: Thank you. That was a good opening section.

Q9 Bradley Thomas: I have two questions. This was going to be my second one but, as Paul Greenwood has touched on it, I will ask it first. Given the pressure the sector is under, and given the value of the sector to UK plc—Elizabeth has pointed out that every facet of modern life is dependent somehow on the refining sector—how fertile is the current environment for refiners and asset owners to make serious long-term investment decisions? My fear is that, when a refinery faces its next turnaround, significant investment decisions may be taken along the lines of shuttering capacity rather than opening up the refinery. I want to understand how much of that is down to the fiscal operating environment, and how much is down to the regulatory environment, such as the path to net zero.

Paul Greenwood: That is exactly the right question. I would say the environment at the moment is absolutely not fertile—it is barren. We are facing existential threats. There are explicit reasons why two out of six refineries have shut in the past 12 months, which means that you have moved from 40% imports to significantly more than that. The refinery crack is not that bad at the moment, and that is effectively the difference between the price of crude and the price of the refined products, so it is the bit that the refinery makes. Globally, refinery crack is not that bad but we are massively penalised versus our international competition. Our refinery is in competition with all the refineries in the UK but also all the refineries in the world, and that is because refining is a completely global business. If I look at the UK, I suffer from things that I am sure Mr Sykes's business suffers from as well, which is high energy costs, high labour costs and lots of regulation.



If I take one example, CO₂ costs, the majority of fuel, so petrol and diesel imported into this country, is produced in the US, Saudi Arabia, Kuwait and India, as four key examples. They have lower energy costs, lower labour costs and zero CO₂ costs. Effectively, you have international competition that is massively advantaged versus us in the UK. How much is that? What numbers are we talking about? Is it a million here or there? Fawley refinery this year will spend between £70 million and £80 million on CO₂ costs alone. In the next four or five years that will increase to £150 million. You tell me of another industry where you can afford to have a £150 million cost burden on a single producing unit and expect it to remain competitive for the long term. It is an absolute catastrophe waiting to happen for the refining sector in the UK.

So then you look at what the mitigating factors are for that and there is one. It is called CBAM, which is the carbon border adjustment mechanism. CBAM will come in in early 2027 in the UK, but refining is not included. CBAM, to be clear, is the mechanism whereby if you have a high CO₂ cost in the UK, a tariff is put on imports to level the playing field again to make sure that we are not penalising our own business, but if refining is not in, when will it be put in? There is clearly a drive by the UK Government to harmonise with the EU. That sounds as if it could be reasonable. However, the EU does not have refining in its CBAM, and it is apparently nowhere close to working out what it will do. If you talk to the UK Government, they are very worried about how they will even calculate CBAM for refining. So you sit here thinking that the mitigating measure is not guaranteed. We do not know when and we do not know if, and even then we do not know at what rate. We are looking at a situation that will become even more burdensome over time and threaten refineries across the UK, and there is no recommendation or guarantee from the Government that they will do anything about it.

Q10 **Bradley Thomas:** For comparative purposes, are you able to put into perspective the situation we are talking about? As a multiple, how much more expensive does Fawley cost to run relative to a comparable ExxonMobil asset in a comparable economy such as the US or elsewhere in North America?

Paul Greenwood: I do not have that number off the top of my head, but I would say that, typically, natural gas will be about one third of the price. I do not know the comparison of labour costs, but I know they have greater access to skilled labour than we do—we struggle with pipefitters, welders and skilled workers. I am sure you have the same issues in your business, Mr Sykes. Clearly, the US has zero CO₂ costs so, with that, it is at a very significant advantage versus the UK.

Q11 **Bradley Thomas:** I put the same question to Elizabeth de Jong on the pressure facing the sector. How much is down to the net zero trajectory versus the general trading environment?

Elizabeth de Jong: I absolutely agree that there are two areas of concern where we are not competitive. One is our high energy prices in



HOUSE OF COMMONS

the UK, and the other is the carbon prices. We have been unable as a sector to benefit from some of the energy price support schemes that are available to other sectors, such as the EII compensation scheme and the British Industry Supercharger. The top concern is the emissions trading scheme. We are competing internationally, as Paul said, with one arm behind our back. The sector is one of the most exposed to carbon leakage, and this is a real thing that is happening now. Because of the carbon prices that are paid in our country but not abroad, our output declines, our industry shuts and we bring in imports from other countries that do not have to pay a carbon tax. Those imports are higher carbon than the products we make in this country. We are beginning to achieve our climate targets, but global emissions are going up because of our decision. The route to net zero that we are embarking on seems unfair and not credible. We need to discuss this.

A CBAM for our sector would help massively. There are also other options for addressing those costs. We now meet the criteria for a CBAM. We are in the ETS. We are exposed to carbon leakage, and we have delivered a methodology to measure carbon intensity. It would be fantastic to have it announced at the Budget that we have made it into the CBAM and are not being disadvantaged globally. Energy security depends on it.

Q12 **Bradley Thomas:** This brings me to my final question. If you had an ask of Government, what would it be?

Elizabeth de Jong: My No. 1 ask would be a CBAM for the sector in January 2027, and with an export mechanism as well. We export £11 billion-worth, which is a great amount for this country, and we could be leaders in exporting all sorts of things. We could be able to invest in the future, and in all the net zero options available to the sector, if we can level that playing field internationally.

Paul Greenwood: I echo that, and I would be absolutely clear that this is not a subsidy. We are effectively asking for imports to bear the burden of CO₂ costs, just as we do. We are not asking for any money from the Government. The CO₂ costs that we pay are going to the Government, so they are a direct revenue that the Government are making. We are asking for some parity with the competitors that we are going face to face with every day. If that is not able to be done for whatever technical reasons, the Government need to think about an emergency cessation of CO₂ costs in the refining sector to mitigate the damage that has been caused.

Q13 **Bradley Thomas:** Benj, do you have anything you would like to add?

Benj Sykes: Not really, because at Ørsted we are well clear of the fossil side of the energy sector. We were lifting 100,000 barrels a day when we were an oil company, but we are a big, round zero now.

Q14 **Chair:** Thank you very much, and your recommendation on CBAM has been very well expressed by two of you. You were talking about how



HOUSE OF COMMONS

carbon-intensive imports compare with domestic production. If you consider the entire emissions, from production to use, what is the comparative figure?

Elizabeth de Jong: The number I have in front of me is that our carbon intensity is lower than 80% of the top 10 imports.

Chair: That is not quite the question I asked, is it?

Elizabeth de Jong: No, it is not.

Paul Greenwood: I think it will depend very much on the refinery, because every refinery is configured in a certain way. It will have a certain demand for energy, and it will have a certain efficiency ratio. It is hard to tell for each individual refinery, but I would stand by the idea that we are better than most. The bit that is absolutely fixed is transportation. If you are making diesel in the UK, you are not transporting it in. That is all incremental CO₂ emissions.

Chair: Yes. What a fascinating moment to finish our discussion before we go to vote.

Sitting suspended for a Division in the House.

On resuming—

Q15 **Chair:** Welcome back to the Energy Security and Net Zero Committee. We were in the middle of a very interesting discussion about emissions and the scale of them. The figure we have is 11 grams of CO₂ emissions per kilowatt hour of UK domestic offshore production, and for LNG it is 45 grams, so about four times as much. Do you recognise those figures?

Paul Greenwood: The previous question was on refined products. I think here you are talking about natural gas versus LNG. Clearly, the carbon emissions of domestic-produced natural gas are significantly lower because with LNG you have to cool it down, transport it and then reheat it, so it has a much higher carbon footprint.

Chair: Yes. This comes from the North Sea Transition Authority, who are giving evidence in the second panel.

Paul Greenwood: With a decreasing North Sea, LNG is a vital import that provides a source of energy that is required in the UK.

Q16 **Chair:** Yes. I was trying to confirm what you were both saying about the emissions from imports. Of course, compared with the emissions when you burn it—about 410 grams to 650 grams of CO₂ per kilowatt hour for gas—it is much smaller. How material is it, given that it is quite a small part of the overall lifecycle emissions?

Paul Greenwood: Are you talking about natural gas or LNG here?

Chair: Either.



HOUSE OF COMMONS

Paul Greenwood: Clearly there are emissions associated with it. Natural gas burns a lot cleaner than most other alternatives outside of renewables. Natural gas and LNG are both very important to balancing the grid and ensuring that you have power when the wind is not blowing and the sun is not shining. They emit CO₂, but they are playing an important role in keeping the lights on and keeping the UK warm in winter.

Q17 **Chair:** The question is more that, whatever you burn, burning two identical products produces the same emissions, and burning produces the vast majority of emissions. The question is how significant is the difference in production emissions from the imports you describe to local production in your business model?

Paul Greenwood: You have quoted the numbers for the UK, so it is about one third more for imported LNG, post-combustion, versus domestically produced natural gas. There are emissions. The emissions are higher for LNG than for natural gas, and that is significant, but also you are importing the LNG, and therefore that revenue stream is going abroad, whereas producing your own domestic gas in the North Sea allows the UK to recover some of that revenue in the form of taxes, jobs and wealth creation.

Q18 **Chair:** Okay, so the issue is financial rather than emissions?

Paul Greenwood: There is clearly a delta in emissions between LNG and natural gas, but there is an issue with revenue as well.

Q19 **Chair:** I want to come back to one other point following Bradley Thomas's questions. To what extent has the decline in the North Sea basin's reserves impacted your production?

Paul Greenwood: Our refinery production?

Chair: Refining and fuel, more to the point.

Paul Greenwood: We consume natural gas, and therefore if we are importing more natural gas, such as LNG, in that setting, we are paying a higher price for our energy. We are a significant consumer of natural gas in the refinery, so that has an impact to us. We suffer from high energy costs, just like everybody in the industrial sector in the UK suffers from high energy costs.

Crude is a completely fungible international market, so if you were to have more crude produced in the North Sea, of the right grade to run through the refinery, you would be able to buy it at slightly lower cost because it would require less transportation, but we have been able to replace North Sea crude production with other grades coming from different parts of the world. We have done that seamlessly because we have access, just as every other refinery does, to world crude markets.

Q20 **Chair:** Is the market sufficiently sensitive so that those transport costs are materially impactful?



HOUSE OF COMMONS

Paul Greenwood: It is a very small-margin business, and therefore every little bit counts, but it is still a very small part of the overall price of crude.

Q21 **Chair:** Thank you for clearing that up. One final question to you, Paul Greenwood. With the closures that you mentioned, what steps have you taken to adapt your production?

Paul Greenwood: We have done a great deal. We have been investing in Fawley refinery and its associated infrastructure for a long time. I mentioned the \$1 billion we spent in the past few years. That is \$1 billion into a refinery that is significantly hampered by the economic policy framework in which it lives, so I think that is testament to our commitment. We have also been doing some significant restructuring, so we have unfortunately made around 200 people redundant. They will be leaving the organisation over the next 12 months or so. We have been moving people down to Fawley refinery from our office in Leatherhead so they can collaborate and work together to be more efficient and more effective. We have been taking some big investment decisions, some very hard decisions, to make sure that we are setting ourselves up for success. We would like the Government to reflect that in their policy, and to be a partner in lowering our costs and helping us to be more successful in the future.

Q22 **Chair:** I was trying to understand if you had been able to take advantage financially of the closures elsewhere.

Paul Greenwood: No. Refining is effectively a global market, and therefore, although there are refineries in the UK against which we compete, we are competing against refineries in the US, Saudi Arabia and so on.

Q23 **Torcuil Crichton:** I seek a simple clarification, because I did not know what it was, so I assume the public will not either. Can somebody explain what CBAM is?

Elizabeth de Jong: It is the carbon border adjustment mechanism. We have carbon costs that we pay in the UK, and imports from the Middle East, India and the US, for example, do not pay those carbon prices but, as they are imported, they would be paying an equivalent carbon price to level the playing field on where things are manufactured. CBAMs are already coming in for other sectors, so they have been analysed as a way of addressing carbon leakage. They are coming in for cement, steel and glass. It is our sector that has been left out again, and we want to be part of it.

Q24 **Torcuil Crichton:** Paul, did you estimate the cost of that?

Paul Greenwood: The numbers I mentioned before are that we are currently paying £70 million to £80 million a year in CO₂ costs. That will go up to £150 million in the next four or five years, and our competitors are not paying any. That is the cost delta that we are suffering versus our



HOUSE OF COMMONS

competition, and that is what is causing refineries to shutter in the UK. We have lost two recently. You are therefore effectively driving even more imports to come in, and they can compete against us because they are not paying the CO₂ costs. CBAM would level that playing field.

Elizabeth de Jong: This is why we have the unfairness and the global competition for investment. The irony is that we have lower-carbon products, but we are closing and higher-carbon imports are coming in.

Q25 Torcuil Crichton: What is the refinery sector as a proportion of carbon tax in the UK? Do you pay most of the carbon tax, 2% of it or 10% of it? Do you know?

Elizabeth de Jong: I do know this, but only relatively. We pay hundreds of millions, and it is second only to power, which can pass its costs on fully. That is the magnitude of how much we are paying. I do not have the exact figure, but we can provide that.

Torcuil Crichton: Thank you, just for clarity.

Chair: Thank you. As ever with these sessions, there will be follow-ups in writing, which is much appreciated.

Elizabeth de Jong: Yes, we will do that. We will provide as much information on the topics raised as we can to help you, because we would very much like a fuller inquiry into this. We think that what is happening in refining is important.

Chair: This is a one-off session, but it is a prelude to a longer inquiry in the new year.

Elizabeth de Jong: Excellent news.

Q26 Wera Hobhouse: You mentioned the international competition in refining, but that international competition is not so much in Europe. Lots of refineries have closed in Germany, and the refineries in France are diversifying into making products that help the transition to a zero fossil fuel future. Is it not slightly unfair to compare the UK with other countries that are on a different journey to zero carbon? Also CBAM, the carbon border adjustment mechanism, is in Europe now, whereas in Britain we are trying to measure in-built carbon. Products that are produced in the UK are therefore produced at a higher cost compared with international competition such as China. Countries that are committing to net zero are committing themselves to that world. How can we not recognise that we are on a different journey, and hopefully we want to be leaders, when you are making comparisons with countries such as Saudi Arabia, which is clearly further away from the transition?

Elizabeth de Jong: It is important to look at what is happening worldwide, because it is a global commodity traded all over the world. The reason we want to look at it in the UK is because of the impact of the decisions we might be making on energy security, jobs and decarbonisation. That all needs to take account of what is happening in



other countries to ensure it is fair and the right thing to do. There is also the impact on growth. If we do not get the investment, and if our investment is not competitive, we will lose out on so many opportunities to invest in biofuels, carbon capture, renewable hydrogen or sustainable aviation fuels. We would lose that future for ourselves and hand over the clean energy future to other countries if we do not keep an eye on what they are doing and ensure that we can attract investment to our country to deliver net zero, as well as keeping the country moving now.

Paul Greenwood: The reason we compare ourselves with Saudi Arabia, Kuwait and the US—and to be fair, there are also imports from the EU, which does have some costs—is that a very large majority of imports are from countries that do not have CO₂ costs. They are our competition, so we must compare ourselves with them because they are the ones who are competing against us and they have a lower cost base. That may be because they are at a different part of their journey, but the reality we face right now is that we are competing against an entity that has much lower costs.

Q27 **Wera Hobhouse:** If I may quickly come back to the CBAM issue, I know the UK is currently considering whether we should follow the EU's regulations or whether we should do our own. Before we can make a request to the UK Government to consider refining within carbon border adjustment mechanisms, should there not first be a discussion about how the European Union does it? Otherwise we are doing it twice, or we are doing it in an unco-ordinated way with our closest neighbours?

Elizabeth de Jong: Yes. We are speaking to FuelsEurope, which is our sister organisation, and we have designed a way of measuring carbon intensity ahead of the EU. They do not have their design. We have completed that work beforehand, but we will speak to them about it. There seems to be no reason why we should not be able to lead in this area. They have shown that they are interested in including refineries when they have a carbon methodology, so we are on the same page. We have managed to do ours beforehand, so we should be able to bring them along, I would suggest, or not have it as a reason not to do it.

The other point I wanted to make, reflecting the earlier question, is that we import a lot of products from the US—diesel, petrol and jet fuel—and they are investing in a lot of different renewable fuel types because they have a different incentive mechanism based on tax credits. There are a lot of things to learn from other countries, and the US is doing it very well but they also do not have a carbon tax. The two are not mutually exclusive in relation to the question you asked.

Paul Greenwood: I have nothing at all against alignment and harmonisation with the EU in any way whatsoever, but it is important that we do not move at the speed of the slowest. This is a critical issue, and it has already shuttered two refineries, so we should not prioritise harmonisation over urgency and action.



Q28 Wera Hobhouse: Fair enough. It was a question of how it would ultimately work if we were to follow the EU carbon border adjustment mechanisms. My question is about how the UK producing less crude oil and gas has impacted you, but you have already answered quite a lot of questions on that. It is ultimately a global market, and imports, exports and transport costs are not a particular additional factor to your operation financing that. One thing that I still want to know is how have changes in the UK policy landscape in recent years affected the refineries' ability to shape the transition? You have been talking about important products that help us with the transition. How can UK refineries play a role in that, and what is currently making it difficult?

Paul Greenwood: We had a very significant project called the Solent cluster for several years in the Southampton area. This was a world-scale hydrogen project plus carbon capture and storage in the Solent, plus a low-emission fuel project based on waste. That was a project that we shuttered; we effectively put it down at the beginning of this year, end of last year on the basis that there was no foreseeable pathway for the Government to subsidise and support it.

A couple of projects had moved forward under track 1. They received some funding from the Government, and this project was clearly not considered for track 2 and there is no vision at all as to what track 3 will be. We reached the point where we were going to have to shoot seismic and drill some wells. This was going to run into the hundreds of millions of dollars. We decided that we were not prepared to spend that amount of money when there was no foreseeable pathway to success for the project or for the Government support that was needed. That was what we were trying to do in terms of a large-scale project. Clearly, we do incremental things the whole time to reduce our CO₂ where it makes sense to do that, but I would say that you will not be able to have Grangemouth or the Lindsey refinery be part of that transition because they have shut. The critical factor is that if you want refining to play a role in the transition, it must still be there. I think that is the crisis we face now.

Elizabeth de Jong: We have spoken a bit about the energy price support schemes on the policy landscape that we are not party to. We have spoken about the impact of the emissions trading scheme, and CBAM is one solution to that. There are also things that can be done with the design of the scheme, with allocations to help us. There is an area that I also think I should raise, which is around lower-carbon fuels. They already take the equivalent of 3 million cars off the road. It would be fantastic for them to have a bigger part to play in the much faster decarbonisation of our road transport, yet they are barely mentioned. That is an important softer signal to the market, talking about the role they could play for the future. Those soft signals from Government are so important for investment. Having a strategy for the sector is important because people can make investment decisions around that strategy,



which shows that we are wanted in the future and we can invest in those things too.

Other softer signals are around the words that Ministers and others use when speaking about the sector. We were not even in the industrial strategy, even though you heard my numbers showing that liquid fuel accounts for 100% of aviation fuel and 97% of road fuel. We did not even make it on to the list of foundation sectors that underpin the economy. There are many soft and big policy decisions that could make a difference, and they are not just about giving money to the sector. It is about unlocking investment potential. People would love to invest, but they cannot make a rational decision to do so.

Q29 Wera Hobhouse: Are you particularly talking about a hydrogen market, for example, which you know is currently very low? Is that something where you could play an important role?

Elizabeth de Jong: Carbon capture, and hydrogen is possible. Different types of fuel with different feedstocks. There are many different options for investing. You could decide to invest more in the fuel that we do now and get more exports from it. There are lots of things that the refineries could decide to invest in if the conditions were right.

Q30 Claire Young: Should UK refineries invest in hydrogen and in carbon capture and storage?

Benj Sykes: That is a difficult one for me to answer because I do not know much about running refineries. I do know that the hydrogen economy, as Mrs Hobhouse said, is coming. It is coming slowly, but we know hydrogen will play some role in a zero-carbon economy. We do a little bit of CCUS in Denmark on a net negative scheme. Again, we know CCUS will be a fundamentally important part of a zero-emissions economy, so we need to invest in that. I cannot speak to whether that is relevant specifically to refineries, but there are many industries that will be relying on CCUS as part of their zero-carbon future.

Paul Greenwood: At ExxonMobil, we are working very hard on a hydrogen project on the Gulf coast of the US, and we are now moving forward with, I believe, six separate carbon capture and storage projects. We spent about \$4 billion buying a company called Denbury on the Gulf coast, which has the world's only real CO₂ header. That has enabled us to have bilateral negotiations with chemical plants, gas producers and fertiliser plants where we have agreed that CO₂ will be captured from their stack, taken into our header and effectively sequestered offshore on Gulf coast. They are real projects that will sequester in excess of 10 million tonnes per year. They have been done very rapidly because the environmental and fiscal frameworks that they have set up, on a tax credit basis, are highly incentivised, so effectively that will happen.

I compare that with the UK, where we were very interested in looking at carbon capture and storage and hydrogen in Fawley, because a refinery is



the right place to do that as it has a high level of emissions to sequester. It is an industrial plant, so putting in a hydrogen plant makes sense. We already have hydrogen plants at Fawley. We make hydrogen, so it is the right place to do it. We have the people, the expertise, the kit and the know-how. The question is not whether we should; the question is what the incentive structure is to do it, and at the moment the Government have effectively said that there is no money, no capability for those projects to progress, no track 3, and no guarantee of any success. On that basis, the framework to support that moving forward is not there.

Q31 Claire Young: Can I press you on that? What can refineries that are not in the Government's track process do about it? Are there locational factors at play that make those refineries unsuitable?

Paul Greenwood: It is not economic. Quite simply, if you wish to sequester carbon, if you think about it, you are taking a by-product and spending a great deal of money to put it in the ground. Now, effectively, that does not make any sense. These are multibillion-dollar projects that do not make sense unless you have some Government support for that kind of development.

It is the same with hydrogen. As Mrs Hobhouse rightly said, it is a very small market. It is effectively not supporting that market mechanism, so it is also very difficult to see the market pathway to invest in those things. In the right climate and with the right investment capability, it is the kind of thing that could be of interest, but at the moment it is not there in the UK. Also, if you are being undermined in the base case by so many other factors, you are the last place a large corporation will look to make incremental investment because it does not like the base activity, let alone putting in billions of dollars of significant investment.

Q32 Claire Young: Elizabeth, go back to the original question about whether UK refineries should invest in hydrogen and in carbon capture and storage.

Elizabeth de Jong: The point I would like to make is around carbon capture. Two of our refineries are part of the track 1 and track 2 CCUS clusters, and they therefore have an additional path to reduce their emissions and ETS costs. I am very concerned that we have two that do not have that same path to do that. There is the hope, in future, of something called non-pipeline transport, whereby you can capture CO₂, put it in a ship and take it to the storage, but that is quite some time away. It is being explored at the moment, and the ETS costs are rising. I have a lot of concern over what the options are for the refineries that, by want of competition between clusters at some point in time, have found themselves not part of this option for the future. The US approach, in which there are clear criteria for support, seems fairer, as you are not there because of geography or a competition run by the Government.

Q33 Claire Young: Talking of competition, what impact do you think the track process has had on competitiveness in the refining industry?



Elizabeth de Jong: You will be able to talk about the impact. Exxon is not in that track process.

Paul Greenwood: To be clear, nobody making hydrogen at the moment, even in the track process, is sequestering carbon, so the impact of being successful in that track process has not yet materialised. I would say from our point of view—and you might say that I would say this—that we believe our Solent cluster project was the most effective. It was one of the most effective stores. It was a project that was very largely invested by ExxonMobil, and therefore we had the advantage of being almost its sole sponsor, and it had an enormous amount of value. What worked against us in the track process was that the Government were deciding, based on some criteria, what would go forward and what would not, and then the door was shut rather than allowing all the projects to move forward at their own pace. We found that the mechanism stopped us progressing what we are pretty convinced was the most interesting and most economic project of them all.

Q34 **Claire Young:** How would you have liked the project to have progressed instead?

Paul Greenwood: We are now looking in hindsight, as we have been and gone, but certainly what we would have liked is that, instead of there being a single criterion—which seemed to be, “Do you have a store that you have already licensed?”—I think we would have liked to have been able to progress and engage directly with the Government on moving our project forward, and on how the Government would support us to do that. However, there seems to have been this red light, green light process in the previous Government’s approach, which said, “You have a store, and you don’t have a store, so you have a green light, and you have a red.” That was the decision-making process. I am not sure that was the right criterion.

Q35 **Claire Young:** Is there anything that the current Government could do to change that, or has the ship sailed and it is too late?

Paul Greenwood: If you want to look at track processes and incremental ways in which finance can be reached, that would be very interesting. It is worth bearing in mind—I hate to do the UK-US comparison, but I think it is pertinent—that the projects that are successful and moving forward in track 1 probably started in 2007 and 2008. They have yet to put any kit in the ground, and they have yet to sequester any CO₂. That is a very long time. In the US, once the investment tax credit introduced through the Inflation Reduction Act came into effect, we were effectively able to engage directly with counterparties, and it was a very short period, three or four years, between getting in touch with our counterparty and sequestering the CO₂. It is a much more rapid approach because Government are not involved.

Now, what the Government must do is work out value, but how do they do that? It is painful to negotiate between multiple entities, and these



HOUSE OF COMMONS

things are very susceptible to change. If I look at the Scottish cluster, Grangemouth would have been a big part of that as a refinery, but it is now shut. Things happen in the meantime when you take a very long time to make these decisions.

Q36 **Chair:** Is the only way of achieving carbon capture and storage at scale to have very large public subsidies, whether in the US or the UK? I take your point about the different systems.

Paul Greenwood: It is an expensive way to dispose of a product. If you think about developing oil and gas, you must shoot seismic, you must drill wells, you must build infrastructure and then you get a very valuable product from which you get a revenue stream. If you think of carbon capture and storage, I must shoot seismic, drill wells and build infrastructure to put something in the ground that I do not get any revenue from. That delta is absolutely enormous, and it is difficult to imagine that working.

Q37 **Chair:** That was a yes, okay. Just to clarify, are you already capturing carbon in your US business?

Paul Greenwood: I do not think the first project is online yet, but I will get back to you. It is imminent, I think.

Q38 **Chair:** Yes, but you are a lot further ahead than HyNet or the Humber?

Paul Greenwood: These are real commitments with real contracts in place.

Q39 **Chair:** Benj, I want to come back very quickly to what you said about your carbon capture project, which I know is not refinery-related. My understanding is that you had a pilot scheme at a waste-to-energy plant in Copenhagen, but you are not quite there at large scale. How far away are you from that?

Benj Sykes: We are now finishing off the projects that we have live, but we are doubling down on fixed-bottom offshore wind. As a business we have made the decision over the last few months to focus our strategy on pushing the deployment of offshore wind right now, so we will not be taking on more CCS projects at the moment. In time we may well come back to it, but not for now.

Q40 **Chair:** So you are not turning that pilot project into a full-scale one?

Benj Sykes: That is not the plan at the moment. We must wait and see, but for now our focus is on power generation.

Chair: Thank you for confirming that.

Q41 **Torcuil Crichton:** Thank you all for coming in. I appreciate your time and expertise. You paint a grim picture. We once had 18 refineries. In 2022 we were down to six. Now we are down to four. How many will we have in 2032 or 2035?



Elizabeth de Jong: I would like not to lose another one. There will be demand for fuel in the future. We could make the right policy decisions over the next few months. We would also lose the ability to export if we had fewer. We would lose energy security options if we had fewer. There is no need for us to have fewer. We could have investment. We could have a different future if we look at the policy landscape now and decide we want a different outcome.

Q42 **Torcuil Crichton:** You almost seem sceptical about it, but is sustainable aviation fuel the saviour of the refining sector?

Elizabeth de Jong: Aviation fuel is one of the products from crude, as are diesel, petrol, heating oil and bitumen. If you are producing sustainable aviation fuel from a sustainable feedstock, you will also produce the other products in a sustainable form. Your policy needs to think about what the demand is for those other products to be made in the UK, and at the moment we are not championing lower-carbon fuels per se in the UK. That makes us an odd place to invest, particularly with the decisions that have been made on CBAM, for example. However, we know that half the car fleet in 2040—16 million cars—will still want fuel, so we could do more there. There are other decisions we need to make about investment to enable us to produce more sustainable aviation fuel. It is about making the investment landscape attractive, which we have been speaking about quite a lot.

The other thing we need to think about with sustainable aviation fuel is the scale that is required. The UK requires 12 million tonnes of jet fuel per annum, and at the moment we have some Government funding for SAF projects, but they are very small. Even if they come to fruition, they will be just 4% to 5% of that amount. Again, the refineries could be leading this if the investment conditions were correct. Some of our members have not made it through that process. They have received money from the advanced fuels fund as a start-up, but they have not been able to make it to scale, and they have gone into administration. We have a lot to think about.

Q43 **Torcuil Crichton:** Paul Greenwood, from memory, sustainable aviation fuel will be a big part of Project Willow, the project that will save Grangemouth and Scotland's carbon cluster. How viable does that sound to you?

Paul Greenwood: The first question was about the projection of how many refineries there will be in the future, and it is very difficult to say exactly. What I can say with some certainty is that if you continue to have increased CO₂ costs and your competition does not, more refineries will shut. It is a matter of when, not if.

In answer to the second question, a refinery is a great place to make sustainable aviation fuel. There is no doubt about it. If you take Fawley refinery again, we have the people, the kit and the direct pipeline to Heathrow. It would make all the sense in the world. However, we are not



HOUSE OF COMMONS

incentivised to do that, because we still do not have demand. We do not have consumers who wish to pay more for their plane ticket to use sustainable aviation fuel. The demand is not there, and therefore the Government are trying to step in with other policy mechanisms to facilitate and incentivise the creation of SAF production.

The other great challenge, as I mentioned before, is that you have high energy costs, high labour costs and lots of regulation. All those things make it more difficult to do sustainable aviation fuel in the UK versus elsewhere. Effectively, the Government are saying, "Well, we will incentivise that through a revenue certainty mechanism." If that passes through and these projects go ahead, it will put the burden on the existing fuel suppliers to support those projects moving forward, thereby putting yet another regulatory burden and yet another cost on the existing refinery base. I do not know because I am not close to the latest interactions around Project Willow, but my understanding is that it has been extremely challenging to put forward a SAF project at Grangemouth.

Q44 Torcuil Crichton: Yes, but you say there is no incentive. There is £200 million of incentives around Project Willow from the UK and Scottish Governments for projects like carbon capture and storage and SAF.

Paul Greenwood: That has not been enough to make the difference.

Q45 Torcuil Crichton: Benj, they must transition to survive, and you have transitioned.

Benj Sykes: Yes, as I said, nearly 10 years ago, after 20 years of learning, our business pivoted into—

Q46 Torcuil Crichton: I guess you did not just wake up one morning and decide to do it. How difficult is it to transition from fuel, carbon and refineries to—

Benj Sykes: Yes, clearly it takes a lot of thought and planning. As I said at the beginning of this session, we spent 20 years building up our capability, particularly in offshore wind, and we saw that as a business opportunity, which is why we fully moved into that. It is probably worth mentioning that we had maybe 5,000 or 6,000 employees when we were an oil and gas company. I think around 450 of those went with our oil and gas assets when we sold them all. Everyone else carried on in the renewables business.

Q47 Torcuil Crichton: With the same wage?

Benj Sykes: With the same wage.

Paul Greenwood: I think the question, to my mind, is not necessarily about whether you should do what Mr Sykes's business has done in moving away from 100,000 barrels a day of hydrocarbons into the renewables business. You still have a need for petrol, diesel, marine fuel and jet fuel, and you will for a long time, and you need somebody to



HOUSE OF COMMONS

make that. If that is not your indigenous refiners, it will be somebody else.

- Q48 **Torcuil Crichton:** Can I take advantage of your being here and ask you about Petrofac? Without commenting on the company itself, Petrofac went into administration this week, which of course raises concerns about the oil and gas jobs in the North Sea. The reason they went into administration is because they lost a deal with the Dutch transmission system for a big offshore project. Does it raise questions about the viability of offshore wind when things like that are happening?

Benj Sykes: No, I do not think so. I am not aware of the details of Petrofac's administration or the reasons why that contract did not go through. There is no doubt a lot to do in building transmission, not just in the Netherlands and Germany but in the UK. A big part of the energy transition for our business is building out the grid, and that is thousands of jobs and billions of investment. From what I know, I do not see that as a basis to question offshore wind as a viable product. We are building Hornsea Project 3 right now, and we have already invested around £15 billion in offshore wind in the UK. Hornsea Project 3 is another £8 billion or £9 billion. That will be delivering electricity for around half the price of Hinkley C, or something like that.

- Q49 **Torcuil Crichton:** But Hornsea 4 has stalled.

Benj Sykes: Hornsea 4 is back in development, and we are confident that will come through in the coming few years. On the jobs, which may be one of the points that you were alluding to, Hornsea 3 alone will be employing, through its contracts as well as in Ørsted, around 5,000 people over the next two years, and there are many other projects to come. We know there is a big allocation round coming up, and that will spin more projects into construction.

Torcuil Crichton: [Click or tap here to enter text.](#) Sorry for going slightly off subject.

- Q50 **Chair:** No, those are important questions. When you say Hornsea 4 is back on, how much delay will there have been from your original plan?

Benj Sykes: Originally we were, I think, building it in the late 2020s, so it would have been up and running in two or three years' time. It is probably delayed by three years, or something like that, so it is very much still on the cards to come forward and contribute.

- Q51 **Chair:** What is the reason for the delay?

Benj Sykes: We made the decision to discontinue it in the form that we had it, so we have now had to put it back into our development pipeline. We are reworking it, we are re-engineering the project, we are looking at all the opportunities to bring it forward as a more viable project, and that takes some time. We also know that because the contract for difference that we won in allocation round 6 was terminated, we have to sit out two



HOUSE OF COMMONS

rounds—this one and the next one. We can come back in allocation round 9.

Q52 **Chair:** To ask the question again, why was it not viable?

Benj Sykes: Sorry, I thought you were asking about the timeframe. There are a number of factors. A lot of it was about where the project's costs ended up and the risk profile for the construction of the project. It did not make it through our investment decision process.

Q53 **Chair:** The Committee has heard that the cost of materials and shortages of workers have been serious across energy.

Benj Sykes: Yes, and offshore wind is absolutely not immune to the pressures on the infrastructure sector. Every sector is seeing pressures, and offshore wind is also seeing the impact of the technology's success. Because the costs have come down, it can out-compete with fossil fuels in power generation. The UK is not the only country that wants to build lots of offshore wind, so the supply chain is under a big squeeze at the moment. That will level out, and the UK is doing some good things through the industrial growth plan for offshore wind, for example. That will enable us to build the supply chains and create the jobs that will balance it again.

Q54 **Chair:** Paul Greenwood, you talked about the ongoing need for petrol, diesel, jet fuel, gas and fossil fuels more widely for decades to come. How do we manage the transition? At some point we have to reduce emissions.

Paul Greenwood: It is a very big question. The way that we and many others would recommend is that you need to have a market-based, technology-neutral answer. One of the challenges that we have seen in Governments around the world—

Q55 **Chair:** What does "technology-neutral" mean?

Paul Greenwood: "Technology-neutral" means that you do not care how the CO₂ emissions are reduced. Instead, you are saying that we want to have a market-based mechanism whereby they can be reduced. For example, banning internal combustion engines is the opposite of that. That is saying, "We're going to decide that internal combustion engines are a bad thing, and we've made the technology choice that everyone is going to move to EV." That is not technology-neutral; it is technologically very pointed. Our logic would say, "You shouldn't care how you reduce emissions as long as they are reduced. What are the mechanisms whereby you can incentivise organisations to reduce emissions by doing that?"

One of the things we are talking about at the moment is the carbon intensity for different products, and how we can effectively set a standard so that companies are incentivised to go away and reduce the carbon



inherent in each product they provide. A technology-neutral approach is certainly the one we would recommend as the right way to do it.

Q56 **Chair:** Given how time-sensitive this is, is it your view that the market can deliver?

Paul Greenwood: Clearly, the power of the market and the power of innovation that companies bring is what you need to enhance, and you need to encapsulate that in order to drive it forward. Does it need to work hand in hand with Government to incentivise the right things to help create markets to develop that? Absolutely, it does. That is very different from making individual technology-dependent decisions that distort markets and make people do things in very inefficient and ineffective ways. I can say with offshore wind—and I am not an expert, as Mr Sykes certainly is—that it would appear to be a collaboration with the Government where they found a mechanism to incentivise something. That is one way in which this worked relatively well in the UK.

Q57 **Chair:** Give us an example of an incentive that would work for your industry.

Paul Greenwood: It is a complicated thing, but as I said, one is the by-product—the carbon intensity standards. If we look at green hydrogen and blue hydrogen, for example, green hydrogen is made through electrolysis, and blue hydrogen is made through carbon capture and storage and natural gas. Those are two ways of making hydrogen. We see lots of times in EU legislation where they favour green hydrogen to the detriment of blue hydrogen. Our view would be that you do not care what colour it is or what technology you use to make it, you should be incentivising based on the amount of carbon that is reduced. At that point, if we know that we can do blue hydrogen and are incentivised to reduce the carbon emissions associated with that, I have a whole playing field that I can work in. If you say, “No, we like green hydrogen, but we do not like blue hydrogen”, at that point we end up stalled and you have selected one technology. What you then find is that you do not have enough electrolyzers in the world and the costs of green hydrogen become very high because a decision has been made on a relatively arbitrary basis to choose one technology above another.

Chair: Both of them are very expensive.

Paul Greenwood: They are both expensive.

Q58 **Ms Billington:** You have talked a bit about the decline of refineries in the UK. I apologise for not being here right at the beginning, so I might be asking questions that you have already answered. If so, I will move on. Do you think there are lessons that UK refineries can learn from refineries in other nations, when you are talking about increasing their sustainability in the long term, in France or Germany and other parts of the world?



Elizabeth de Jong: A lot of the themes that we have discussed are about how to get investment. If you are looking at where investment is happening, the place I would turn to is the US. For example, £44 billion from the public and private sectors is being committed to sustainable aviation fuel in the US, and they use a tax incentive system. I know that businesses like incentives. We love incentives, but in the UK we are making changes through controlling mandates. Instead of having a free-market approach to it through incentives, we are saying what people must produce. That is an example of where you should look to the US.

However, that is a big change in our whole approach to net zero. I think it is the right one, but we have to deal with what we have now for the refineries to be able to keep going. That means dealing with how our emissions trading system is working, the impacts at the moment. We have talked about a carbon border adjustment mechanism, we have talked about carbon leakage, which is a big issue that needs looking at now with our current system. I would not want to put off those discussions while we design a better system for delivering the future.

Q59 **Ms Billington:** I would like to talk about markets closer to home than the US, such as France and Germany.

Elizabeth de Jong: Yes, you can speak very well about French refineries.

Ms Billington: French refineries have adapted by producing biofuels. Obviously, there are some sustainability issues around biofuels, which we could further explore, but could we adapt to that market?

Paul Greenwood: Yes, if you look at European refineries—and we operate refineries in Europe, the US, Singapore and the UK—I would say that as you look at a large corporate that operates multiple refining assets, we continue to look at best practice, we continue to look at what makes sense, and we will continue to invest in wherever makes the most returns and reduces the most emissions. That is absolutely clear. We have no preference for where that is in the world, because effectively the CO₂ emissions are all global, when it comes down to it.

Q60 **Ms Billington:** What are the French doing that we are not?

Paul Greenwood: If I look at our activities in France, for example, we have sold out of a refinery in southern France, we have sold out of our entire business in France, and we shut a cracker in Port Jérôme, Gravenchon. Yes, there have been some investments—I do not know the details in great deal—in some biofuels, but the refining sector in France is not a very healthy place either. We have taken steps to sell out of a refinery in Italy, and we converted a refinery in Norway into a terminal. So I would say there is wholesale restructuring going on in the refining sector in Europe and the UK.

Q61 **Ms Billington:** There is no doubt that there is some restructuring in France in that production is declining and five refineries have closed, but



HOUSE OF COMMONS

seven are still in operation and some of those have adapted to the biofuels market. Is there opportunity for refineries in this country to do something similar?

Paul Greenwood: If the proper incentives were in place.

Q62 **Ms Billington:** What would the incentives be?

Paul Greenwood: I do not have those numbers off the top of my head, but you would have to incentivise it because it is still an expensive thing to do, and it will be a change in the refinery configuration in order to do it.

Q63 **Ms Billington:** What about the regulation in Germany to support or incentivise the repurposing of refineries there?

Paul Greenwood: I am not familiar with German policy.

Elizabeth de Jong: I think that in order to incentivise investment in things such as biofuels, we need to be looking at the energy prices over here. We have our emissions trading scheme, which impacts on affordability and the amount of money to invest. We also need to be looking at our permitting and our approach to regulation. We have a tendency to goldplate here. I can give you some examples. The one for new and different feedstocks that we are dealing with at the moment has a huge amount of required information about new processes and solvents, which has led to stalemates and things not moving forward for 18 months. We need a good look at that. We are working with the Environment Agency at the moment to try to unlock some of those things, which would help.

Q64 **Ms Billington:** Both of you have spoken about the importance of market mechanisms to be able to drive increased sustainability, continue to produce stuff that people can use and reduce emissions. Where might the market mechanisms be that facilitate refineries to adapt to different kinds of production, such as biofuels, that would help all the things you have been talking about? If we stop the ICE ban—I am not suggesting we do—but instead say, “We want decarbonised transport, go for your life”, biofuels might come up as one of those things, notwithstanding some of the risks around that. What would be the mechanisms that would enable people like ExxonMobil and others to say, “Okay, we will go for that, we are going to help, we are going to be helpful”?

Elizabeth de Jong: If you wanted more low-carbon fuels, we could look at making those more attractive price-wise for consumers, and that is one of our policies.

Q65 **Ms Billington:** Bearing in mind that we have also been talking about the importance of refineries overall as nationally strategically important infrastructure, if we want to retain those refineries and are looking for future adaptations to maintain their viability in a future where we want to keep fuels going but we want emissions down, what might the lessons be



HOUSE OF COMMONS

from some of our nearest neighbours on regulations and incentives that have helped sustain refineries?

Elizabeth de Jong: If we think of our nearest neighbours, there is not masses for us to learn from them.

Q66 **Ms Billington:** You would not learn anything from the French or the Germans?

Elizabeth de Jong: I am not saying that we would not learn anything at all.

Q67 **Ms Billington:** What would you learn from them?

Elizabeth de Jong: They are not so different that we could learn lots from them. It is the basics for business. The regulation needs to be right, the feedstocks that we are allowed to use need to be right, there needs to be demand for the products. Talking about demand and lower-carbon fuels, the investment price needs to be right so that people can make a return on their investments.

Q68 **Ms Billington:** Forgive me, Chair—this will sound like a little detour, but I am interested in it. You are basically saying that the French and Germans are not that different from us. Previously, you referred to the US. Under the previous US Administration, there was a significant amount of investment in decarbonisation and clean energy. What were the measures—such as the Inflation Reduction Act, which we cannot, of course, call the IRA in this country—that helped to maintain the sustainability of refineries as the US moved towards a decarbonised energy market?

Elizabeth de Jong: That was a tax incentive system for various criteria that were met, and anybody was eligible for it. It gave a lot more freedom for companies to work out their own business cases rather than go through the competition routes that we use to access carbon capture.

Q69 **Ms Billington:** If that had been sustained, what would have been—

Paul Greenwood: Those have been sustained. The Inflation Reduction Act is still in place and is still functioning to a great extent. It has been modified and changed in different ways, from what I understand. But I bear in mind that the Gulf coast refineries in the US are significantly advantaged versus refineries in the UK. The Inflation Reduction Act is not the main driver. The main driver is low energy costs, low labour cost and a massive market, those kind of things.

Q70 **Ms Billington:** That does not make it comparable, does it?

Paul Greenwood: They are the advantages that they have. The Inflation Reduction Act, as Elizabeth rightly said, provided an incremental incentive tax credit to go away and do other things. Carbon capture and storage in particular has worked very well, and that is what people are doing, looking at hydrogen projects and various other things in order to stimulate it. Fundamentally, it is like all markets—you either have



demand or you do not. I do not know what they put in place in Germany and France, as that is not my area of expertise, but I very much doubt that there was massive demand or that the consumer was prepared to pay for it, so I can only imagine that it was massively subsidised by the Government or effectively mandated. If you want to go down the subsidy route, the incentivisation route or the mandation route, that is something you can do, but unless you have demand, the country will always have the burden of paying for that. That is fine if the country wants to do it, but at some point you have to be competitive as well.

What is happening in our refineries right now is that we are having an increasing burden of CO₂ costs, done for very logical reasons that they want to incentivise moving away from CO₂ production, but effectively all that is doing, because it is not applied to our competitors, is making us less competitive and we have seen two refineries shut. Getting that balance around how you do that is what is critical.

Q71 **Ms Billington:** This would go back to CBAMs?

Elizabeth de Jong: It goes back to the basics of running a business. Are we competitive, are energy costs competitive, is our carbon pricing making us uncompetitive, what are our business rates like, what is our labour market, what is our regulation? It is the basics of running a business. It allows you then to invest in the future. That is what we would like our refineries to be able to do.

Chair: Thank you very much. That brings us to the end of our first panel's evidence. Thank you all for your contributions.

Examination of witnesses

Witnesses: Stuart Payne, Katy Heidenreich and Harriet Eisner.

[This evidence was taken by video conference]

Q72 **Chair:** Welcome back to this afternoon's session of the Energy Security and Net Zero Committee, where we are looking at the future of oil and gas refineries and, with our second panel, the workforce in transition in the North Sea. I will ask our panel to introduce yourselves.

Harriet Eisner: Hello, I am Harriet Eisner. I am an official from Unite the union. I am based in the Humber and, as you are probably aware, Unite represents workers across all industries, including the oil and gas sector and the renewable energy sector.

Katy Heidenreich: Good afternoon. My name is Katy Heidenreich. I am the supply chain and people director at Offshore Energies UK. We are the leading trade association for the integrated offshore energy sector, with over 400 members, most of them supply chain companies. Our members



HOUSE OF COMMONS

employ over 200,000 people, and 90% of the people working in the oil and gas sector work for supply chain companies.

Stuart Payne: Good afternoon, everybody. I am Stuart Payne. I am the chief executive of the North Sea Transition Authority based here in Aberdeen. I apologise that I could not be in London today. We regulate the oil and gas, offshore carbon storage and offshore hydrogen transportation and storage industries in the UK.

Q73 **Chair:** Thank you all very much for joining us this afternoon. Stuart Payne, I will start with you. How does the maturity of the North Sea basin impact the long-term energy security of the UK?

Stuart Payne: I have often said, including at previous Committee hearings, that the North Sea is the crown jewel of the UK's energy mix. You have a basin that can do it all. It can do oil and gas, it can do carbon storage, it could do hydrogen production and, of course, it can do vast amounts of wind production. The oil and gas part is, as you say, a mature province. That is a geological reality.

The UK is a net importer of oil and gas, which still accounts for a very significant portion—three quarters, I think—of the energy we use. We now import more than half of our oil and gas. If you go back to 2009, we produced about 4.5 million barrels equivalent a day of oil and gas.¹ Last year, the country produced just over 1.09 million barrels a day, which is a really significant change. What has happened in that period is that the energy mix has transformed in terms of electricity. You see the Government's targets for Clean Power 2030 continue that trajectory. What it means is that the UK has a balanced diet. We are used to importing the energy sources that we need, as well as generating our own domestically. The UK has a good, balanced model of doing that, and that need to balance will increase over time as the basin's maturity plays out right the way through to 2050, when we will see very low production.

Q74 **Chair:** I asked the previous panel how that process should be managed—I know that is very much your responsibility—so that we are maintaining the supply of fossil fuels we need for decades to come while we are managing the transition in a way that works for industry, for workers and for communities. What is the answer to that question?

Stuart Payne: It is phenomenally hard. I genuinely think that is one of the challenges of our age, as a society and for the UK as a country. The problem is that its hugeness is sometimes matched with the ease of having slogans. Lots of us, myself included, would have used phrases like "just transition", which is incredibly easy to say but belies just how complicated it is. It is on multiple levels—technical, commercial, economic, human, societal—because in all of that, there is also a climate

¹ Note from witness: During the session I said the UK produced 4.5 million barrels of oil equivalent per day in 2009. I should have said 1999.



HOUSE OF COMMONS

crisis that we have to respond to and we have to play our part in addressing globally.

I would pick a couple of very brief points, and I will do it very, very briefly because I am conscious this is just the introduction. There is a piece around what we mean by transitioning. What is it that we will transition? One of the things that I like to keep in mind is kit, capability and capital. We need to take the money, the people, the expertise and the physical infrastructure, lots of it, from an oil and gas industry that we will continue to need for decades to come, and move that increasingly into not only modern, cleaner oil and gas activity but also into lots of other, particularly offshore, energy activity. It is about how we skilfully move the people, the stuff and the investment from one into the other. Doing that in a way that sustains jobs, sustains investment in communities around the country and supports economic growth is hugely difficult.

One of the things I am sure you will hear and will have heard from the Minister and others, is that the Government are committed to publishing their plan, coming out of the recent consultations, for precisely that reason, to try to have a long-term framework for what this will look like in practice and for the next steps. What that will help to do, hopefully, is drive investor confidence. I am sure you will hear from all of us today that we need investor confidence in all the energy systems moving forward to be able to get not only energy security but also the jobs and the investment in the communities that you mentioned. It is a huge topic. I do not want to take up all the time.

Q75 Chair: I am sure you will spend a great deal of time on it in our longer inquiry in the new year. Ørsted made the point that it planned its transition away from oil and gas into renewables over a great many years. Is that a good model to follow?

Stuart Payne: I am very careful to recognise that I am privileged to be here because of the organisation I lead. We do not have a role in wind, so I will declare that we are not wind experts at all. On a very personal level, I attended a session about nine years ago in the US, where Ørsted presented its story as it was then. The thing that stuck with me was that the people who presented were the senior leadership of the global company, talking about the strategy. They had, I think, the then Crown Princess, who presented as part of the societal investment, involvement and buy-in, and spoke about how the community had been listened to and brought alongside. Then they had people from their biggest markets—the US was the example—saying, “We are not only going to do this in our domestic business, but we are going to have it as an export opportunity”. Then the marketing point that they made—I have no idea whether it is true then or now—was, “We have ended up being a more profitable business by doing this. We have not had to sacrifice that to move from A to B”.



The bit I took from that, Chair, was that they engaged the whole system, or they looked like they had engaged the whole system. It was a really powerful way of doing it, because what I remember them talking about was the workforce and trade unions being involved. They talked about the investment community being involved early on, and they talked about the broader society being engaged. It was an incredibly powerful story. I am not suggesting that it is the right model, but that breadth of thinking is aligned with what the Government are trying to do on having that consolidated structural plan, and it is not a bad one to aim at and to try to compete with.

Q76 **Chair:** Thank you very much for your opening comments. Katy, this comment about engaging the whole system, is that how your organisation sees things for the transition?

Katy Heidenreich: Yes. I would like to build on and perhaps clarify a point Stuart made about the maturity of the basin and the role that the oil and gas sector has in the UK's energy security going forward. Yes, we are a mature basin, but we will need 13 billion to 15 billion barrels of oil between now and 2050. We can produce up to half of that at home, with the right supportive policies in place.

The language around the transition and the public debate is putting forward false choices. We are being told that we need to choose between economic growth or climate ambition, between oil and gas or renewables, between clean jobs or dirty jobs, but these are false choices. We are, as a sector, at a critical fork in the road. We are, on our current path, set to import 80% of the energy we need by 2030. We are set to continue to lose 1,000 jobs a month. But we have put forward a plan for a very different path, a path of economic growth, a path of achieving our climate ambition, a path of protecting and securing jobs. We need to be talking about expansion and growth rather than transition.

Q77 **Chair:** Tell us a bit about your plan and how you see it. You are talking about expanding production. How do you see that happening?

Katy Heidenreich: We are talking about an integrated energy sector expanding into new energy sectors. The supply chain companies that are servicing the oil and gas sector today are the very same supply chain companies that we will need to build the new energy projects of the future. The majority of the companies that are members of OEUK have already expanded into wind, CCS and hydrogen. Independent research has shown that they have a high degree of transferability into those new sectors. However, those new energy sectors are not yet self-sustaining. These supply chain companies rely on oil and gas to sustain that expansion into those new energy sectors, so it is important that we continue to support the energy that we need today to sustain our expansion into the new energy opportunities of the future.

Q78 **Chair:** Thank you. Harriet, we heard Stuart talk about a "just transition". I know that for many of your members that is not how it feels.



Harriet Eisner: No.

Chair: How do you respond to what we have heard so far and to my questions? What do you think is the answer to this?

Harriet Eisner: Our members are seeing devastation over the last couple of years, with the closure of Grangemouth. I have to mention, of course, the Lindsey oil refinery. This week alone, 125 people are being made redundant in the first tranche of redundancies there. The rest are expected to go by the end of the year, and they know that the plant is viable. They know that if there were proper support and proper intervention, they could make a go of that oil refinery.

There is still demand for oil, of course, as has been mentioned already. Unite recognises that we need to get to net zero. You can call it a just transition, but it needs to be a properly managed transition that gives people hope. Those oil refinery workers who are currently losing their jobs are in high-value, highly skilled and highly paid jobs. They need to be able to move into other jobs. Whether that is in the clean energy sector, who knows, but the problem for us is that we are not seeing those jobs yet. I know that the Department has produced a clean energy jobs plan, but we need to see and have hope that those jobs will be more immediate and that we will not have to wait 10 years.

Carbon capture has been brought up already. I had a tour of the site where they were talking about the Viking project being based. We know there are estimates that will be 2030, 2032 or who knows when. We need something more immediate, and we need support for the workers who are providing our fuel and energy here and now to be able to have confidence that there will be the same decent, highly skilled and high-value jobs for the future.

Q79 **Chair:** We heard from Ørsted in the previous panel that the workforce was able to move into jobs in offshore wind, in their case, and the pay was the same. Do you think that is possible for the UK?

Harriet Eisner: It would be fantastic if it were the case, if those people who are paid £65,000 now can be paid the same in equally skilled jobs elsewhere. That should be the destination for them, but I am not confident, and I do not think Unite is confident, that that is available at the moment.

Q80 **Chair:** Katy, do you think it is possible?

Katy Heidenreich: We have done some independent work to look at pay, terms and conditions across oil and gas and the adjacent energy sectors so that we can understand what work needs to be done, led together with employers and the trade unions, to make sure that we are lowering the barriers, if you like, and ensuring that workers can enjoy good jobs, whichever sector they work in. It is a good example of where there needs to be more learning between sectors. The oil and gas sector has decades of experience in the supply chain, engineering, construction,



design and operations, through to the experience that we have on workforce engagement and industrial relations. We facilitate a collective bargaining agreement. The more that we can learn across sectors, the smoother the journey will be for us as we expand into our new energy future.

Q81 Chair: Harriet, you mentioned Grangemouth and Lindsey. What are the lessons from both of those?

Harriet Eisner: Lindsey, in particular, has seen financial mismanagement. That should not be allowed to happen, not in a plant that is a national strategic asset. It is part of the industry, and we should be supporting that. It is a complete failure that that has been allowed to happen, where the owners can skip off into the sunset and the taxpayer is left footing the bill for those workers. Those workers have terms and conditions that give them very decent redundancy rights, but those do not play out in insolvency.

Sorry, this is a slight detour because it is not quite the remit of this Committee, but it should be understood across all Departments that it is a failure in company law and corporate governance that employees can be let go in this way and not retain their proper terms and conditions. As I said, the taxpayer has to foot the bill. That is wrong. Companies should be expected, whatever the circumstances, to be able to afford and hold the money securely to provide proper redundancy terms to people. But never mind that, they should not be made redundant in the first place. That was and is a viable business. Incidentally, the administrator is still looking at bids, so we still hope that something can be rescued from that plant. But wherever they end up, they will not necessarily end up in a unionised workplace. Everybody knows it is a fact that where you have a recognised union, you have better terms and conditions and better adherence to health and safety. I might not have answered your question fully enough.

Q82 Ms Billington: Katy, I am interested in what you said about the expertise in the oil and gas sector. How can those lessons be learned and that know-how transferred? Isn't the ultimate problem at the moment that the oil and gas sector does not have any incentive to share its know-how with other sectors, and specifically the renewables sector? If it does not have any barriers to doing it, why isn't it doing it?

Katy Heidenreich: Most of our members, as I mentioned, are already expanding into wind, CCS and hydrogen.

Q83 Ms Billington: What is preventing the oil and gas sector from sharing its know-how and expertise about supply chains and skills with the other developing sectors?

Katy Heidenreich: We are doing our best to do that. We are the most collaborative trade association, I would like to say. There is an opportunity for the Government to help accelerate that transfer of experience and good practice at the moment.



HOUSE OF COMMONS

Q84 Ms Billington: I want to understand what the barriers are. Rather than saying that the Government could do something—the Government could always do something—what are the sectors themselves doing about understanding each other better and tackling these issues to do with supply chains and skills themselves?

Katy Heidenreich: The sectors are coming together proactively, but at the moment there is some important government-led work being done through, for example, the Offshore Wind Industry Council, the CCS Council, the Hydrogen Council and the North Sea Transition Deal. All are excellent examples of the Government working in partnership with industry, but that represents an entirely siloed approach. We say that there is an opportunity, when the Government respond to the Building the North Sea's Energy Future consultation to take that opportunity to create a more co-ordinated and connected approach to how we build out these new energy sectors, and to accelerate that transfer of learning between the sectors.

Q85 Ms Billington: Is it the governance structures that are preventing the oil and gas sector from collaborating with the emerging energy sectors?

Katy Heidenreich: They are not preventing it, but they are certainly not helping it.

Q86 Ms Billington: If the Government were not involved, what would be happening?

Katy Heidenreich: We are, as much as we can, bringing companies together to learn across sectors. For example, we are currently doing some work to look at how offshore wind can get to a more cost-sustainable place, and that involves bringing developers, operators and supply chain companies together to understand the challenges facing offshore wind, particularly floating offshore wind, and to look at what we can do together to address cost barriers. We are not waiting for Government intervention. We are getting on with it, but we can accelerate that with greater Government support.

Q87 Ms Billington: Stuart, I would like to ask you the same question.

Stuart Payne: From my perspective, it is about separating the operators, in oil and gas language, or developers, as they are called in wind, from the supply chain. If we look at the supply chain as 80% of the people, they are doing this a lot. For example, carbon capture and storage, carbon storage and oil and gas all require drilling, seismic and geoscience. It is the same supply chain companies that are doing both, so that naturally happens anyway. One of the best things that we have in our industry in the UK is the subsea element. The UK is home to some of the world's best subsea energy companies, engineering, design, manufacture, installation, fabrication of subsea control systems. You need them in wind, floating wind, oil and gas, and CCS. That is happening all the time. I would not want to give a certain impression that there is a



HOUSE OF COMMONS

complete barrier between those things. I do not think there is. That is happening where it makes market sense.

There are then other examples where things can be done to help. There are practical examples in Aberdeen. About three weeks ago, the First Minister opened the energy transition skills hub. This is funded by an oil company and a local development agency called the Energy Transition Zone, along with the Scottish and UK Governments, to ask how we make sure that we are reinvesting in local fabrication and welding capability, including apprenticeships for the next generation—about 1,000 over the next five years—to develop the high-end, high-tech engineering and design skills needed to make certain turbine and fin components

There are lots of examples where the market works on its own because the supply chain wants to work anyway, so that naturally happens. There are structural connections where Government, industry and development partners like ETZ are making that stuff happen. I agree with Katy that where there is a further opportunity is for Government—and I would say Governments here, respectfully, because I think that this needs to involve the devolved Administrations as well—to buy into that one coherent plan of how we take the energy system in the North Sea for the next chapter, the next 20 or 30 years, and be relatively agnostic about the sources in terms of jobs. What we care about is understanding two things—that there is enough demand to keep jobs in the UK and, crucially, that it does not go the other way and that we end up having a crunch of demand at the same time where the costs have all exploded because of supply chain. How do we get that balance right? Having a coherent, co-ordinated plan, which is not siloed, is something the Government can do. The way that I describe it is the convening power. I do not think that the Government should have to do it. I think industry should do it. I think the Government can convene and set those expectations, but it is happening in lots of places.

Q88 Ms Billington: Just one thing that I am sure will come up again. What we have explored quite a lot when we have been doing workforce planning is the fact that people with similar skills and competencies in oil and gas get paid significantly more than those in renewables. No one has satisfactorily explained to us how or why that is the case. Can anybody on this panel explain to us why somebody who has exactly the same skills and competencies in oil and gas gets paid more than in renewables, if we say that we want to shift to renewables? The market incentive for a worker is to stick with being “dirty”.

Katy Heidenreich: I would first of all like to emphasise how important it is—and I will keep doing this till the day I die—to stop talking about clean jobs and dirty jobs, because it is so demoralising to the people who are working across our integrated supply chain to have their job termed as dirty, because they are the same jobs. We have companies, for example, installing subsea cables.

Q89 Ms Billington: That would be fine if they were being paid the same. But



HOUSE OF COMMONS

they are being paid differently in different sectors, even if they have the same skills and competencies. That, I am afraid, is a really strong market mechanism for workers, whether you like the language I use or not.

Katy Heidenreich: Absolutely. I completely agree with you. The gap is closing. There is a 30% differential, for example, between oil and gas and wind. That gap is closing.

Ms Billington: It is a lot.

Katy Heidenreich: It is a lot, yes, but one of the things that we need to look at is the approach that we are taking to looking at the overall cost of projects to make sure that we are not driving to the lowest common denominator on how much supply chain companies are paid, how much risk is passed on to supply chain companies and how much individuals are paid. I go back to the work we are doing at OEUK to look at how we can take a much more holistic approach to a project and its costs to understand where the cost challenges are and how we can ensure that supply chain companies have sustainable contracts and that people are paid properly.

Q90 **Ms Billington:** You do not know why they are being paid differently, either.

Katy Heidenreich: At the end of the day, the market will pay individuals what it needs to pay.

Harriet Eisner: I think the answer is simple: we need better unionisation and organisation.

Q91 **Ms Billington:** Clean jobs are not necessarily unionised, are they?

Harriet Eisner: We need to get there. We need to improve it, for sure.

Q92 **Ms Billington:** Stuart, do you have more to add?

Stuart Payne: It is not my area of expertise. The only thing I would add, in the spirit of being candid, is that it is a great example of why this is so genuinely complicated. One of the massive challenges for any Government at any point in this topic will be not to see an increase in people's bills, with electricity bills being a great example. Managing the cost of that will always be a major challenge, not just during a cost of living crisis but at all times.

Q93 **Ms Billington:** Forgive me, Stuart, but we have just had three contributors, two of whom were quite clearly from the oil and gas sector, who wanted more incentives and arguably more costs added to oil and gas prices. So I am not entirely convinced that will be—

Stuart Payne: I take your point. Respectfully, the straight answer to your question, in purely academic terms, will be that one is a utility industry and one is a commodity industry. I am not saying that it is right or wrong. That is just the premise of why that happens. There is the reality of market forces. The UK oil and gas sector risks losing talent



overseas, first. Also, if the industry continues to decline at the rate that it is declining, those jobs will become more and more scarce. There will be market pressures, which are not market pressures any of us would like, but they will surely have an impact at some point on the numbers that Katy quoted—that 30% figure.

Q94 Chair: I am looking at PwC's findings, which are in the clean energy jobs plan, and they suggest that entry-level jobs had a 23% premium in 60% of occupations. Do you recognise those figures, Katy?

Katy Heidenreich: I would have to look at the detail of that report and come back to you. We would be happy to share our own independent research.

Q95 Chair: Is there something familiar in that?

Katy Heidenreich: There is. I want to come back to the point you were making, Polly. If I take our own collective bargaining agreement, the energy services agreement—you have made a point about the extent to which jobs are unionised or not in the wind sector—our experience is that it was essentially put in place to address a race to the bottom on base rates of pay. It guards against that. What we also need to avoid is an unhelpful clash between employers, trade unions and workers, which is what we are starting to see come about in the wind sector. We need employers and trade unions to come together to understand how we can ensure that people are in good, well-paid jobs. I go back to where there is a good example of a lesson to be learned from oil and gas for the wind sector to get to a sustainable place.

Ms Billington: I would be interested to know what those lessons are that the oil and gas sector could share with the wind sector so that we do not have this 35% differential in jobs of equivalent value. If it were done by gender, they would be up in court. I am interested to know why it is that people with the same capabilities are paid such a huge differential between sectors.

Q96 Chair: We heard in the previous session about being technology-agnostic. You have made similar points about leaving it to the market. How will this transition happen without significant intervention?

Katy Heidenreich: First and foremost, the UK needs to be a good place to invest. Investment is challenging in any project, in any sector across the UK. Our sector, the integrated offshore energy sector, is committed to the UK's ambition to reach net zero. We have an important role to play, which was recognised in the North Sea Transition Deal that was signed over four years ago, but right now the UK is not a good place to invest. We have published work recently and submitted to—

Q97 Chair: When you say that it is not a good place to invest, do you mean in oil and gas?



Katy Heidenreich: In oil and gas, in wind, in CCS, in hydrogen. There is so much uncertainty around the regulatory and fiscal regime. There is concern among the offshore wind sector about how the Government are working with the sector to ensure good jobs for people in the wind sector. We need collaboration and working together in harmony between the Government and industry, rather than confrontation, if you like. For the oil and gas sector, we need urgent and immediate reform to the energy profits levy. Without that, we will not see the investment that is needed in oil and gas or in wind, CCS and hydrogen.

Q98 **Chair:** What other countries are attracting more investment than the UK at the moment?

Katy Heidenreich: Pretty much every other country is attracting investment over the UK, including Norway and the Middle East.

Q99 **Chair:** In oil and gas?

Katy Heidenreich: In oil and gas and in other sectors, yes. A survey that we published in our supply chain report this year showed that nine out of 10 supply chain companies—those companies that I have talked about that are expanding into these new energy sectors—are looking elsewhere to fill their order books. The operators and developers who are looking to invest in these new energy projects are looking everywhere else but the UK to invest in capital projects, and we need to turn that around.

Q100 **Chair:** The evidence from Ørsted in the last session was rather different from that, wasn't it? Ørsted said that in wind it is now going ahead with Hornsea 4, for example. That sounds rather different from what you have said.

Katy Heidenreich: The point that I have made about the extent to which investment is challenged?

Chair: Yes. It seems to have confidence in the UK.

Katy Heidenreich: I am not here to speak for Ørsted; I am here to speak on behalf of our members.

Q101 **Claire Young:** I would like to switch to emissions reductions for a moment. Stuart, what progress has been made on that so far?

Stuart Payne: I am talking about what we call scope 1 and scope 2 production emissions, recognising that they are the smaller part of the emissions profile. There has been good, strong and consistent progress, and it is a meaningful amount. I think that 3.5% or 3.3% of the UK's emissions come from the production of oil and gas. That is more than just about every major city apart from London. It is a huge amount, about 12.5 megatonnes a year of CO₂. The industry has clear targets to reduce them by 50% by 2030, from a 2018 benchmark; by 90% by 2040; and to zero by 2050. To date, since 2018, those overall emissions are down by a third, 34%.



HOUSE OF COMMONS

They are made up of three things. They are made up of power generation on the platform. Imagine running a factory, essentially, offshore. That is often a diesel or gas generator. Then routine flaring and venting of gas as part of the process of production. The flaring reduction is 51% in that window since 2018. They are on track to hit the 2030 50% target. What we are doing is pushing industry very hard to work with us, as they have done to get to that point, to say that the next big hurdle is to make sure that we can hit the second two targets. That will require further work, particularly around electrification of power, where that is technically and economically reasonable.

We might get into the differences between the UK versus other countries for emissions. The poster child is always Norway. Gas piped in from Norway has a much lower CO₂ footprint than production here in the UK or almost anywhere else. One of the biggest single reasons is that Norway has, for a very long time, had electrified production. So it is a good story and the industry has done good stuff. It has worked well with us and with Government to do that. We have to now do the next hard yards to continue to hit the next set of targets. I can go into any bits of those, but I am conscious of time, so I do not want to take up more time.

Q102 **Claire Young:** Would it be fair to say that the lower-hanging fruit has been dealt with and the next steps will be considerably harder?

Stuart Payne: I think that if I was being uncharitable to industry, I would say that, but it would be unfair. It is true to say the bigger block is the electrification piece. It is 80% of the total, so it is the biggest block. But the engineering and investment needed to get to the place that they have got to—again, it talks to the great supply chain that we have around the UK that has been able to do this innovation. It has been some really hard yards. So it would be unfair and a bit churlish of me to say it was low-hanging fruit. It is the smaller amount, that is fair, but a lot of it has come at a significant financial cost—many, many tens of millions of pounds—and some really good engineering. We want to see that spirit carried forward into the next phase.

Q103 **Claire Young:** But if Norway is already getting there with electrification, it does not require innovation; it requires us to learn from somewhere else.

Stuart Payne: There are two different pieces. Yes, that is true for something that we build today, a new thing, I totally agree. The innovation is retrofitting. The innovation equivalent for buying an electric car would be learning from someone who has an electric car. If your car has an internal combustion engine, trying to convert that car to something else is significant engineering. It is always described to me as being the engineering equivalent of open-heart surgery. The innovation is taking a platform that is 20, 30 or 40 years old and changing how it fundamentally works while keeping it safe, which is always the most important thing. There has been some impressive work, because to do that is no mean feat.



Katy Heidenreich: Stuart has talked really well about the complexity and cost associated with electrification. The other challenge that operators face is the uncertainty around the life of their infrastructure. At the moment there is a huge amount of uncertainty because we need clarity on the licensing regime and we need the energy profits levy to be reformed. A healthy sector is much better placed to invest, decarbonise and transition. Without clarity on licensing and without reform of the energy profits levy, the next big bit that Stuart has talked about with electrification is incredibly challenging.

Q104 **Claire Young:** What is the Government's role in that? What more could the Government be doing?

Katy Heidenreich: There are three key factors to a healthy sector. The EIA guidance has been published. We need to see the Rosebank and Jackdaw projects come forward. The sector will be able to then see that the process is working and that projects are flowing. Secondly, we need the licensing regime to be reformed. We used to have annual licence rounds. Those have done their job and we need to move to a different regime. Once the Government respond to the Building the North Sea's Energy Future consultation, they have the opportunity to set out a licensing regime that enables operators, as and when they need, to pursue opportunities in existing infrastructure and to take those forward. We then need the energy profits levy to be reformed urgently.

Harriet Eisner: Our concern is that not only are we importing an awful lot of oil, when we have the capability to supply it ourselves, but with carbon capture we are in danger of not importing the know-how because the Norwegians and others are so far ahead of us. I would like to see carbon capture and all those skilled jobs expedited, and to see a clear plan of how we will get that in time for the people of today. Otherwise, the employment gap that is occurring here and the skills gap will be—these are workers falling off a cliff now. I cannot emphasise that more.

Q105 **Claire Young:** Stuart, do you have anything else to add on what the Government could do to help support emissions reductions?

Stuart Payne: I would say two things. I apologise because you have probably heard this a lot already. I think everyone would agree that the certainty and clarity of a clear, consolidated plan is hugely important. I know that is what the Government are working towards doing in the near future. That is very important, for all the reasons we have talked about.

Carbon capture and storage is a great example where the UK has a phenomenal opportunity, as we can store vast amounts of carbon. I agree entirely with Harriet that it would be a crying shame if we took what would be a very good example of a transition that should be doable for us. Taking exactly the skills and capabilities that we have worked with for the last 60 years, we should be using them domestically and then exporting those skills and using those people to work overseas, as we did



HOUSE OF COMMONS

with oil and gas for generations. That is about having a clear plan that people can invest in.

The competitive person in me would say that we are catching up. We have permitted both the HyNet and the Northern Endurance projects that you will all be familiar with. That has set in train over £3 billion-worth of contracts for work already set by the companies. Because we have the ability through the North Sea Transition Deal to track the UK content, we know that 67% of that £3 billion has already gone to UK firms. So it is happening. I would love it all to happen quicker. I respect that it is complicated, but I would love it all to be moving forward quicker. I want to be clear with the Committee that it is moving, and we are not just watching Norway, Denmark and others wistfully. The system is moving forward.

Q106 Chair: Coming back to the question about electrified production, are there lessons from Norway? Are there lessons on the retrofit of older production equipment that we can learn?

Stuart Payne: Yes. Being candid, I get the opportunity to talk to my opposite numbers in different jurisdictions who do similar roles. It would be fair to say that every country that is trying to retrofit faces similar challenges, and you have to get to a place where it is lawful and reasonable to say to a company, "There is a big enough prize for you in longevity and additional production to warrant a policy decision that you would not otherwise choose to make in decarbonising a facility." It is much easier to say, "You now want a big, new project—a big, new facility—and the only way that you will be given it is if it is electrified from day one." Norway's benefit is that it did this 20 years ago. With a time machine, I wish we had done it 20 years ago.

Retrofitting is something that everyone finds quite hard, but it is not impossible. It is doable, and we are determined to stick with it, but it is more complicated than for the greenfield fresh start.

Q107 Chair: We keep hearing that other countries started doing things a very long time ago and we are a long way behind.

Stuart Payne: Again, forgive me, but we have the world's best supply chain in offshore energy. We have the best people to do this stuff. Yes, it is a great big challenge and it involves politics, economics and all sorts of challenging things, but the men and women who do this are the best in the world, and if any place can do it, the UK can do it. I have absolute confidence.

Chair: I shall abuse my position as Chair to sing the praises of the HyNet project and the progress that is being made there, because I have been to see it.

Q108 Torcuil Crichton: Thank you all for coming. Stuart, thanks for joining us. I cannot see the granite any more as it is getting dark, so I will keep it brief.



HOUSE OF COMMONS

To wind back to your opening statement, Stuart, when you talked about the language around a just transition, and to reflect on what Polly was asking about the pay difference between oil and gas and renewables, clearly anyone who has been aboard a helicopter in the North Sea will tell you why they are paid more. It is far more dangerous to get black gold than it is to get free wind from renewables.

Should we not change the language and admit that it is an uneven transition and that we will not get the same number of jobs and the same pay from renewables?

Stuart Payne: I am very lucky to have an interesting and sometimes quite difficult job, but I get to work a lot with politicians, and I do not envy them their job. I understand the need to put labels on things to communicate to constituents and the public, but with things like this the label is almost irrelevant because the challenge ahead—

Q109 **Torcuil Crichton:** Let me put the question another way. Should we not be honest and say that this will be an uneven transition?

Stuart Payne: No, I do not think we should admit defeat. We should be bold and brave, and I think we should say that we have the geological advantages and the human capability we need, and if we can get the right frameworks in place and all the things that we need to do, this is what we could achieve. We should be bold. The oil and gas industry, from which all these other industries have emerged, exists only because men and women did things that were hugely challenging—technically, commercially and economically—and got on and found a way of doing them, and doing them safely.

One of the realities is that in lots of the companies that are working in both sectors now, their employees do not get a different paycheque if they are on a different assignment. If you are working for a subsea engineering company working in wind and CCS, and in oil and gas, you are paid what you are paid. There is a group of particular skills, I know, which is probably what drives the data that was discussed earlier by people on the Committee who know more about this than I do, but those worlds will come closer and closer together over time, not further and further apart.

Crucially, though, we have to be honest that one of the challenges that both the CCS sector and the oil and gas sector face is people being put off studying and working in those sectors because they are perceived to be bad, old or not part of a positive future. People like Professor John Underhill at Aberdeen University and Professor Paul de Leeuw at Robert Gordon University are very articulate about the need to ensure that we have that pipeline of people doing things like geosciences and engineering.

The risk is disparity and inequity, I agree. There is an equally big risk that we simply have a vacuum of talent because people do not want to come and take part in the sector, and that is why I think we have to be bold about how positive it can be. We should be realistic but we should not



HOUSE OF COMMONS

accept that we cannot fix these things. I apologise if that sounds a little evangelical.

- Q110 **Torcuil Crichton:** I will come back to that in a minute. Katy, you also talked about the language around transition presenting false choices, and you had a very articulate vision for economic growth with Rosebank and Jackdaw being licensed, a new licensing round, and getting rid of the energy profits levy. In my language that is “burn, baby, burn”, is it not?

Katy Heidenreich: No, it is not at all. To clarify our point, our vision is one of economic growth and achieving climate ambition. It is meeting our own energy needs. We have an opportunity to make the most of our energy resources, our industrial resources and our brilliant supply chain, and achieve our climate ambition. It is not one or the other.

- Q111 **Torcuil Crichton:** How can I put Rosebank and Jackdaw against Hurricane Melissa in Jamaica, say, or rising tides or wet climate change?

Katy Heidenreich: We absolutely recognise that we face a climate challenge. We are proud of the work our members are doing in new energy projects, and of the investment that has happened and that we want to continue to make. It is not one or the other.

In answer to your earlier question, “Should we not just be honest that it is not going to be an even transition?” we do not know enough yet. We do not yet have real honesty around how long this will take. Headline job numbers of 400,000, I think, were mentioned when the clean energy jobs plan was published. Those are huge numbers. They need to be grounded in reality. It is important that we do not just talk about vision and the opportunity, but the reality of what will happen.

The work that we have done looking at the new energy project pipeline shows that when you take a risked view, taking into consideration all of the challenges that every project must overcome in order to reach a final investment decision, the real pipeline, the one that the supply chain desperately needs to see, is half of the one that we are publishing. Without that credible pipeline, without that honesty and pragmatism, we will end up losing the supply chain, literally, if we do not act now. We will end up importing everything that we need.

- Q112 **Chair:** Just to interrupt you—sorry, I am abusing my position again—do we need to see the expansion in projected production that David Whitehouse called for, which is a 50% to 75% increase on current projections by 2050, in order to retain that supply chain?

Katy Heidenreich: Yes.

- Q113 **Chair:** Could you elaborate?

Katy Heidenreich: The supply chain is at a critical juncture right now. Without reform to the energy profits levy, which is the single biggest factor influencing them to choose to go overseas to fill their order books, we will lose them. I go back to the point that I was making about the nature of the economics of supply chain companies that are expanding their portfolio from one energy sector into another. They are relying on



HOUSE OF COMMONS

oil and gas to sustain that expansion because they are not yet making enough money.

Chair: Thank you. You gave that evidence to the Scottish Affairs Committee as well, did you not? It was in the report.

Q114 **Torcuil Crichton:** You had some figures there, Katy, and you said we could be losing 1,000 jobs a month. We have lost 77,000 jobs in the last decade. Where have you guys been? Where have we all been in that time? Why were we not planning for this years ago? Stuart, you talked about the First Minister opening an energy transition skills hub this year. We have known about this problem for a decade. Why are we so slow in the UK?

Katy Heidenreich: That is a great question.

Torcuil Crichton: We have been dancing with this for such a long time now.

Katy Heidenreich: You are right, we as a country have been talking about the energy transition for a long time. Pace is needed. The supply chain companies that we are at risk of losing are turning overseas to fill their order books, and those order books are being filled with energy projects in oil, gas, CCS, wind and hydrogen in other countries, not the UK. We need projects to come forward more quickly. We need to stop talking about visions, targets and big job numbers, which are all important, and we need to ground things in credible delivery plans.

Q115 **Chair:** Were you saying that to Government 10 years ago? Was your predecessor organisation? It had a previous name, I think, rather than being a different organisation. Were you saying these things at the time, or the equivalent of these things at the time?

Katy Heidenreich: Now I am having total memory failure. I have been at Offshore Energies for nine years. We signed the North Sea Transition Deal four years ago. We were absolutely talking about the energy transition before then, but I would need to come back to you on exactly what we might have been saying specifically 10 years ago.

Q116 **Torcuil Crichton:** One more question to Harriet. It is not just the workers who have been left behind. Trade unions have been left behind. The sector has been left behind here. To get that just transition, if we want to get that just transition, what do the UK Government have to do for workers? No one has mentioned it yet but we have things like the skills passport, which is meant to transition people and bring people across.

Harriet Eisner: Skills passports are great.

Q117 **Torcuil Crichton:** Does that work, or is it just a slogan?

Harriet Eisner: You asked what needs to happen. I think there needs to be Government intervention to support the oil and gas industry to make



sure that while there is demand, we can continue to meet it. I think the Government need to play a role.

You talked about why this has not happened until now. The lesson from Grangemouth is that we are very good at sitting around talking about these things but we need strategy and direct action, in fact. That is not happening. The lessons learned from manufacturing in the UK are playing out in this industry now, are they not? There is a role for Government to play with all the stakeholders and all the partners to make sure that they support the industries, and that way you can support the arc from where we are now to the future.

Q118 Torcuil Crichton: We have defined the problem. Can you give me the answers in a few short sentences? How do we make this transition for the workforce and the industry into renewables?

Stuart Payne: I probably cannot, but I can try. It is about having absolute clarity on what the country wants from its different energy sectors, having absolute clarity about how it wishes to get it, and having a framework into which investors can then come and people can then train, be employed, work and be deployed. It is doing that with a long-term plan.

One thing none of us has mentioned is that, whether you are talking about oil and gas, CCS, wind or hydrogen, these are things that probably pay you back over decades, plural. That is Parliaments, plural. Therefore, if there is a sense that we may change our mind along with our Government, that will not help long-term investors, and those investors have, frustratingly, all the markets that I know you have talked about earlier to pick from.

Absolute clarity on what the country wants is needed, absolute clarity on how it wants it, and to say to industry, "Now go and do it, and here is a plan of what we expect you to deliver". I know the Government are working very hard on that planning piece, but I want to be honest that for it to be a perfect solution, you would need those first two things. In a democracy, I do not know how we do that in a way that is authentic. It is very difficult.

Q119 Torcuil Crichton: Katy, what is your elevator pitch to the UK Government?

Katy Heidenreich: My elevator pitch is that we need to stop putting false choices forward. We need to move away from, "It has to be renewables or oil and gas", or clean jobs versus dirty jobs. It is an opportunity of a lifetime but we need to choose a different path. The workers who are employed in the sector now, the young people who are thinking about what career they want to choose in the future, need to see that continuity and certainty, recognising what a brilliant supply chain and workforce we have. Do not label them as dirty and a group of people who need to be taken from here and put over there.



HOUSE OF COMMONS

We need to support the brilliant supply chain that Stuart has talked about, and make sure that it stays and invests here in the UK, expanding its capability into the new energies. Otherwise, it will do that somewhere else.

Chair: Our last question is from Wera Hobhouse.

Q120 **Wera Hobhouse:** Jobs supported by the UK's oil and gas industry have significantly declined for a decade at least, long before there was a windfall tax and despite hundreds of new licences being issued. You are claiming that current Government policy is creating these concerning situations in the North Sea but is that not because it is a mature oil basin, as we hear it, and basically the supplies of gas and oil are declining? Couldn't these job losses that we are talking about, which we all deplore, have been avoided if there had been an earlier acknowledgement that we need to transition away from oil and gas, rather than always saying that the Government are not clear about it? I am not even a member of the Government party but the Government could not be clearer about clean power by 2030. Is it really the Government's fault?

Katy Heidenreich: The decline that you have talked about in the oil and gas sector is entirely policy-driven. The geology has not changed. The opportunity that was recognised at the inception of the Oil and Gas Authority, which was set up to maximise economic recovery, remains today. Yes, it is a mature and declining basin, but the extent of that decline has been policy-driven. The job losses we have seen have been a result of an incredibly difficult regulatory and business environment for the oil and gas sector.

We were the first sector to come out with a plan for net zero. We did not wait for the North Sea Transition Deal. We did not wait for it to be imposed on us. From the very beginning of the Government setting out an ambition around net zero, we put forward proactively a plan to help the UK achieve that.

Q121 **Wera Hobhouse:** You admit, you acknowledge, that we need the transition—

Katy Heidenreich: Yes.

Q122 **Wera Hobhouse:** But who should then be responsible? The oil and gas industry has lately cut 250 jobs at Harbour Energy, although it makes quite a lot of profit and has also given out quite a lot of dividends to its shareholders. Who should be responsible for the reskilling and transition that we are talking about, and making sure that oil and gas workers have jobs in the future? Whose responsibility is that?

Katy Heidenreich: It is the employers' responsibility. Our sector employs 154,000 people in direct and indirect roles. Ninety per cent of those jobs are in the supply chain that we have talked about, where independent research has shown that there is 80% transferability into



HOUSE OF COMMONS

CCS and hydrogen and 60% transferability into wind, but companies need projects to keep those people employed.

These energy sectors—wind, CCS and hydrogen—are relatively new. The volume of projects happening in wind, CCS and hydrogen is relatively low by comparison to oil and gas projects. Therefore, we need to support companies as they expand out and fill their order books with different projects. We need to make sure that they continue to thrive and that they stay here in the UK to keep their order books full.

Q123 Wera Hobhouse: We were hearing about projects in the previous panel through contracts for difference. We are getting many more offshore wind projects going. What prevents workers from the oil and gas industry from working in the supply chain to help ensure that new energy projects are constructed? What stops them? I am still not getting it.

Katy Heidenreich: The volume of jobs just is not there yet. The jobs that are needed, which require the same skills as the people who are unfortunately being made redundant today, are not there yet.

We are completely aligned on this. It is absolutely vital that we take a more integrated approach to how we build out an integrated energy sector for the UK.

Harriet Eisner: The research after Grangemouth closed showed that 15 people went from that group of redundant workers into offshore wind. That is not enough, is it?

Q124 Wera Hobhouse: If it is the responsibility of the oil and gas sector and employers to prepare their workforce for the jobs of the future, would only 15 workers have gone to work in the offshore wind or renewables industry? What is it? Who should be reskilling? You have just said that, yes, it should be the employer.

Harriet Eisner: The Government need to invest in the new, clean industries, do they not? I am sorry, but I would say that we have a history of successive Governments failing workers in this country, not protecting them and not investing enough.

Katy Heidenreich: I would like to make a positive point. Torcuil mentioned the skills passport, which is a brilliant example of sectors and Governments working together to make sure that we see people finding their way into new employment opportunities, and that employers can then make sure they train people appropriately.

Q125 Chair: I will finish with what I hope are two quick questions with quick answers, because I know you have to get away.

Harriet, you represent workers in nuclear as well.

Harriet Eisner: I do, yes.

Chair: It is a growing industry with a very big supply chain and a very



HOUSE OF COMMONS

significant demand for workers. Is there a decent opportunity there for offshore workers?

Harriet Eisner: I cannot answer that question.

Chair: Katy?

Katy Heidenreich: Yes, there is. That is why, for the second phase of the skills passport, we will be expanding it into nuclear.

Q126 **Chair:** Excellent, thank you very much. Finally, I hope: who should be paying for the transition? Should it be billpayers or should it be somebody else? If it is somebody else, who should it be? You can each have a go at this.

Stuart Payne: It will be everybody. It is an energy system. It will be paid for by industry, Government and consumers at some point, like any other energy system. The challenge for Governments across the United Kingdom is to work out the sequencing of that, who can tolerate it and when. In the very heavy capital phase, that might be Government, and over time it might be consumers, but I think it will have to be everybody.

Katy Heidenreich: I will build slightly on Stuart's excellent answer and it goes back to the competitiveness of the UK. The UK has the highest energy prices, and I go back to the point we made about self-reliance on gas having a big part to play in keeping energy costs down.

Q127 **Chair:** Even though it is traded on the international market?

Katy Heidenreich: History has shown that self-reliance on gas helps to keep costs down. Why would we send our money to enrich other countries and other supply chains, and to give other countries employment rather than our own?

Q128 **Torcuil Crichton:** Katy, I think your final words are Jackdaw and Rosebank, are they not?

Katy Heidenreich: Indeed.

Q129 **Chair:** Harriet, final word to you.

Harriet Eisner: I would say everybody, all the partners, should be involved. The question is: how do we get there? That is more important, is it not? We need to build the strategy and the structures to get there.

Chair: Well, panel two, thank you very much for your evidence. We will finish the session there.