

# Business, Energy and Industrial Strategy Committee

## Oral evidence: Net zero and UN climate summits, HC 144

Tuesday 12 January 2021

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Members present: Darren Jones (Chair); Alan Brown; Judith Cummins; Paul Howell; Mark Pawsey; Alexander Stafford.

Environmental Audit Committee members also present: Cherilyn Mackrory; Jerome Mayhew; John McNally; Alex Sobel.

Questions 136 - 184

### Witnesses

I: Chris Stark, Chief Executive Officer, Committee on Climate Change; Emma Pinchbeck, Chief Executive Officer, Energy UK; Nina Skorupska CBE, Chief Executive, Association for Renewable Energy and Clean Technology; Sam French, Interim Chair, Decarbonised Gas Alliance.

II: Richard Leese, Director of Cement, Industrial Policy, Energy and Climate Change, Mineral Products Association; Frank Aaskov, Energy and Climate Change Policy Manager, UK Steel; Richard Woolley, Head of Energy and Climate Change, Chemical Industries Association; Deirdre Michie OBE, Chief Executive Officer, Oil and Gas UK.

## Examination of witnesses

Witnesses: Chris Stark, Emma Pinchbeck, Nina Skorupska CBE and Sam French.

Q136 **Chair:** Welcome to this morning's session of the Business, Energy and Industrial Strategy Select Committee. Today we will be considering the recently published energy White Paper with an initial panel on the energy transition and a second panel on the industrial transition.

For the first panel today, I am delighted to welcome Chris Stark, chief executive of the Committee on Climate Change; Emma Pinchbeck, chief executive of Energy UK; Nina Skorupska, chief executive of the Association for Renewable Energy and Clean Technology; and Sam French, interim chair of the Decarbonised Gas Alliance. Welcome to all of you this morning.

As a starter for 10, I would like to open the questions today by asking what you think the strengths and weaknesses of the energy White Paper are. Then we will dive into some more detail with colleagues on the Committee. Chris Stark, what are the strengths and weaknesses of the energy White Paper?

**Chris Stark:** Good morning, everyone. Perhaps to begin with, it is worth saying that I am really impressed with this White Paper. It is genuinely ambitious. From the perspective of dealing with emissions reduction and climate change, a crucial thing for me is that it is leaving open the option of cutting emissions even further in the future. It strikes a good balance between planning for things we know we need to do now and keeping flexibility for options over the next 30 years. We will not know all the things that will play out over the next 30 years when it comes to decarbonisation.

When it comes to strengths, the primary strength is that it is framed largely as a strategy for net zero and for climate change. That is really remarkable. Just a few years ago, I suspect we would have seen a very different energy White Paper, if we had had one. We are not talking about zero-emission energy in the way we used to talk about it, as a future thing. It is now a destination we know we need to reach. Climate used to be one of the key drivers of the old energy trilemma. I remember that, but it did not get the prominence that it has in this White Paper.

We have come a long way. The energy White Paper fits very well with the Prime Minister's 10-point plan. In fact, if you read this energy White Paper, at times it almost looks like a new climate strategy. That is worth dwelling on. Between the energy White Paper and the Prime Minister's 10-point plan, we have actions now for most of the areas that we need to see covered for emissions reduction.

It is nice to see in this White Paper that the meaning of "energy" itself has really broadened. Transport is now an energy issue. We are talking about those industrial questions, what we do about energy efficiency and the built environment, as an energy topic. It is good to see that



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broadening of the discussion. Large parts of it, though, are still concerned with more traditional issues of energy supply, transmission and distribution. Because it is still rooted in those, it is a strategy that mainly discusses quite a centralised outlook on what to do about energy. Although we are getting into some interesting things with consumers and more flexible approaches to tariffs, for example, it is still an old-school centralised approach to many of the topics. That is something we in the CCC have been doing too. We have also been inhabiting that centralised view of the world.

For me, that perhaps speaks to one of the weaknesses here. It is really good on what must be done; it deals well with the big infrastructure questions, but it is opaquer on how those things should be delivered. Increasingly, I find in my own role that my interest is drawn more and more to those "how" questions: how we encourage all this private investment that we know we need each year and how, crucially, individuals and corporate consumers are going to pay for that. That is one of the weaknesses here.

In particular, we need to understand more about the commercial models that are going to lever in the private investment at scale. Much of that is promised in that document, but we have not yet seen how those commercial models will work. It seems we will have to wait a little longer for that. Crucially, we do not know how people themselves will be engaged in this challenge, which is something we in the CCC have been thinking a lot about. The climate assembly, which looked at many of these issues, has also spelled out a new approach to that engagement challenge. These are real questions that real people dealing with real issues need to consider. The changes that lie ahead are things that should concern us, and that we should be able to have a real and live discussion about, with people living in this country.

That is perhaps the last opening comment I would make. In many areas, we are going to have to wait for the detail. We are going to see further strategising to get to the detail we need. For me, it is a White Paper that creates a framework for more strategies and more White Papers. It is a White Paper that preludes more White Papers, sadly. The full detail that is promised is going to be in a raft of future consultations, plans and competitions. I counted 16 separate commitments to do those kinds of things in this report. As someone who has wrestled with the all-consuming complexity of this over the last few years, I can forgive that approach. Give the scale of the change that is envisaged, this is probably the right kind of framework document to put out there. It is a big beast.

As big as it is, it is still not all-encompassing. When we look across this and the 10-point plan, we do not see a strategy for behaviour change to the extent we will need for climate change. Emissions removal at scale does not feature quite as highly as it might; neither do aviation and shipping. I could go on. There is a list of things that are not fully covered



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even in the set of things that we see covered by this 10-point plan and the White Paper. That is understandable, but over the course of the next 12 months in particular, with the full net zero strategy that has been promised by the Government, we are going to have to cover all those issues off.

**Chair:** Thank you for that, Chris. It is a really good vision and progress, but more is needed on delivery detail, more decentralised approaches and a clearer view on leveraging private sector income.

**Chris Stark:** Yes.

Q137 **Chair:** Thank you for that. Emma Pinchbeck, from the energy sector's perspective, what was your take on the energy White Paper?

**Emma Pinchbeck:** It is always bad news to follow Chris, in my experience, because you tend to repeat much of what he has said, but I can offer you some perspective on the White Paper and how it developed. It is really important to note that we were first promised the White Paper in the summer of 2019. That is not a gripe about timelines; it has been busy in Government, but it speaks to the split personality at times between a White Paper that does a lot of traditional energy stuff, looking at retail markets, centralised kit and infrastructure, and one with an eye on the future.

To echo what Chris has said, its massive strength is that net zero is now the driver of all the thinking. As the chief executive of the energy trade body, that is what I see my job as too. The energy sector thinks of itself as the delivery vehicle for the 10-point plan and for this big vision on decarbonisation. That was not the case two years ago. It is an extraordinary representation of the progress we are making on decarbonisation and how Government see it institutionally.

The second strength I would pick up on is the breadth of it. As Chris said, it is not a plan for delivering net zero; it is an energy White Paper. Even so, the sense of how big energy will be as a sector in the 2030s, 2040s and 2050s, as we decarbonise, is there. The White Paper covers the power sector but also homes and transport. It covers heavy industry and decarbonisation there. It looks at markets and mechanisms for doing that like carbon pricing, the CFD and what happens with the capacity market post-2024. It covers upfront financing and R&D investment for new technologies, right from heat networks to carbon capture, utilisation and storage, BECCS or new nuclear. It nods to technologies that we thought were out of energy policy and now might be back in, like wave and tidal.

To pick up on Chris's point about how we deliver this, there is some thinking in there about the institutions that will be required: the role of the energy regulator, the role of the energy system operator and how our district network operators will operate in future. There are also some really interesting references to a very different energy world where we



look at energy as a service, not a commodity. All of that is absolutely right for where we need to go, and it is massive, as Chris says.

There is still a gap between what is in it versus what is in the sixth carbon budget, which I am sure we are going to come on to, but even so it is astonishingly broad. Again, that is certainly how the energy sector sees itself going forward. We do not just have big power stations and a straightforward relationship with customers; we are going to have a much more diverse, distributed and personal relationship with people going forward.

In terms of weaknesses, I agree with Chris. The focus is largely on infrastructure and on markets to enable that infrastructure. There is less on how it will feel for people to be changing their heating systems, getting EVs, what that does to their relationship with their energy suppliers and the energy system, how that will feel behaviourally and how we will bring people with us, thinking about communications and behaviour change. As we have seen, when big changes to public behaviour are required, it is critical that it feels like that is being done with people rather than to people.

To take Chris's comments a bit further with my trade body hat on, I would argue that the energy retailers and energy service providers are going to be critical to that change. The conversation about how we get price signals through the market that retailers can then use to build really interesting commercial propositions is key. There is not enough of that in this paper yet.

Lastly—maybe we will carve all of this out—I disagree with Chris: I counted about 20 consultations coming in 2021 and 2022. There is a lot of detail still to be worked out. That requires real pace. It is absolutely right to recognise the complexity of this and to burrow further into the detail, but we need to crack on.

**Q138 Chair:** Nina Skorupska from REA, renewable energy got a lot of attention in the energy White Paper, especially offshore wind. Were you happy with where the energy White Paper landed from your perspective?

**Nina Skorupska:** Again, it is difficult to follow Chris and Emma, who are looking at this whole opportunity, which the long awaited energy White Paper now allows us to work with Government and move forward on. I agree with Chris: if we had seen this paper 18 months ago, it would be really different. It would not have such a confident emphasis on net zero.

Over the last six months, in our conversations with him, Kwasi Kwarteng, now the Secretary of State, has trailed long and hard in saying that it is a framework, and it is a framework. We really think the strength is the overall direction and the continued impetus towards this energy transition.



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Darren, you made the point that there is some strong focus on renewables, but not all the renewables. Over the last two decades, renewable energy has been the disruptive force. It is why we can now be sat here today. The costs have come down. Therefore, it is a little disappointing that there is no recognition of the broad brush of technologies that can deliver across power, heat and transport. It is focusing an awful lot—sorry, Emma, in your previous role—on offshore wind, which we totally champion too, but there are further areas of focus.

This is where I agree with Chris: the decentralised ability to enable people in their homes and in industry to benefit from these technologies truly needs a framework that enables a route to market. In this paper at the moment, one of the weaknesses is that there is not a clear route to market or a real direction to say how we are going to challenge the failure of the current system.

Interestingly, in a meeting yesterday around a big project called ReCO2ST, we were trying to turn the emphasis on its head and put consumers at the heart of this, whether they are homes or businesses, and therefore what we need to do to deliver for them in a cost-effective, fair and net zero-carbon way. We have to break an old system, which was traditionally all about flow from big boxes in certain parts of the country. I used to run some of those big boxes. This tension is palpable. That is the reason why you have a whole chapter on energy systems about breaking some of the rules that are inculcated to stop us moving forward. There is an opportunity to use the infrastructure and framework to ensure the UK can be a world leader.

I know we have a whole conversation, so I will finish. I do not want people to get too excited about where we are with renewable energy. At the end of 2019, renewable power was 37.1%. That is fantastic. In the third quarter of last year it sat at 40.2%. It is not insurmountable that we will shortly be going past 50% and pushing fossil fuel well out of the equation. But at 7.2% for heat, and with a measly position on transport at 2.4%, there is a lot to do.

While it is great to show the connected nature of power and transport in this report, we are not emphasising how much more we need to do on heat. We are missing out on seeing some of the incredible technologies that can be delivered now, in the first half of this decade, rather than putting all our eggs in the basket of hoping that hydrogen will become economically viable. It will, but we need to be doing stuff in the first five years.

Q139 **Chair:** Sam from the Decarbonised Gas Alliance, there was a big emphasis on decarbonising heat, looking at the role gas plays alongside power and the debate around hydrogen. Briefly, what was your take on the energy White Paper in that context?

**Sam French:** I have the short straw in going last on this one. The best thing here is that it makes it feel real. For the first time, this report



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covers the whole spectrum, as mentioned earlier. It talks about energy in a much broader sense. As you have mentioned, we are now talking about heat and routes to decarbonising industry. Those are really important, and I agree with the other comments. We now need the next bit: what comes after this. This is a really good foundation. It turns it from something that felt a bit fuzzy to something that shows we can now do this, and we can do it in the context of achieving net zero.

Those are the strengths. The opportunities are for the UK to have a legacy in some of these industrial spaces in new areas of the energy sector. I am not sure that was brought through as strongly as it could have been. Maybe that was a missed opportunity in terms of new industries that we can take out globally. We can be world leaders, particularly in areas mentioned such as hydrogen. In terms of off-grid, it felt a little bit lacking in this space. There is a lot of focus on connectivity, electricity networks and gas networks, but there are houses off grid. There are opportunities for biomethane and BioLPG to play a part in moving away from high carbon intensity oil, for example.

The one element we would see as a weakness is, as Chris mentioned, that we are still viewing the energy system in the silos we are used to. As electricification pushes beyond where we have typically used it to transport and other areas, and the same for hydrogen, where we will potentially be looking at it for domestic industry and transport, there is a much broader remit for the energy system. Sticking within these traditional silos, we will miss benefits and synergies. For example, if we had an industrial cluster with a large volume of hydrogen production, why would we not use it in that locality for heating and transport?

While we are siloed into the structures we are used to, we are going to lose the benefit. We are not going to have the coherence of policy and investment to drive as quickly as possible. Whether that requires changing structure or a way of working is open to debate. Broadly, though, we are very supportive of both the White Paper and the 10-point plan.

**Chair:** We do not have a huge amount of time today. As ever with a topic like this, there are enormous numbers of questions and answers, so I would ask colleagues on the Committee to direct questions to the particular witnesses they would like to answer them. Unfortunately, we are not going to be able to call all our witnesses for every question.

I should have said as well that we are delighted to welcome some of our friends from the Environmental Audit Committee today. We have Alex Sobel, John McNally, Jerome Mayhew and Cherilyn Mackrory from the EAC, who will be asking questions alongside our BEIS colleagues today. I should declare my interest, in that my wife works for the Association for Decentralised Energy. If any colleagues have declarations of interest, if they could make them at the beginning of their remarks I would be grateful.



**Q140 Alex Sobel:** I will fold my declaration into my question. Chris, we discussed the challenges of reaching net zero in energy before the publication of the energy White Paper at the Net Zero APPG. In response to Darren, you spoke about areas of challenge in the energy White Paper and the lack of detail. Do you feel the White Paper presents an achievable pathway for the transition to achieve net zero? Will we get there with what is outlined in the White Paper? Do we need additional measures, or do we not know yet?

**Chris Stark:** As ever, there is a bit of everything in my answer. No, we will not get all the way to net zero with this White Paper, but the Government are not pretending that is the case. This takes us a lot further. It is an achievable pathway. Fundamentally, it is feasible and achievable. In many areas, we could expect policy to deliver even more, if the ambition were to be dialled up even further.

From my perspective, it is really good to see the extent of the alignment between the White Paper, the 10-point plan and the work we published shortly before Christmas advising on the sixth carbon budget for the UK, which is the path we are recommending to net zero. It is striking to see the extent of agreement on many of the energy issues between this paper and our own assessments for the sixth carbon budget.

It is worth saying, though, that we have pushed the envelope further in many areas. We see the next decade as being the critical decade for policy to drive investment. In our work on the sixth carbon budget, we are advising that, by 2030 or thereabouts, we need to be in the position where most new investments, particularly in the energy space, are zero-carbon. For some of those investments—think about a new gas generation plant, for example—the lifetime of the asset is such that we are close to having to scrap it early, if we do not get the right frameworks policy in place so that investors invest in the right things now and receive the right signals to do that.

It is not enough to say that net zero is the plan and expect that investors will know what to do. It is really important that we think about asset replacement cycles in the energy space and energy infrastructure, big and small. Zero-carbon replacements, as far as possible, are the aim from 2030 onwards, be that a new power station or a new boiler in the home. For me that is the key thing. It is entirely achievable. Many of the commitments in this document fit with the advice we offered before Christmas in the sixth carbon budget, but there are areas where we think we can go even further. I am very happy to talk about those.

**Q141 Alex Sobel:** Turning to Emma, because you have an overview of the energy sector as well, is this an achievable pathway? Do you want to comment on the fact that there are one or two technologies rolled out in the energy White Paper that are not at mass level? Does this make it less achievable or is it an achievable pathway for us?



**Emma Pinchbeck:** It is achievable. I am going to echo a bit of what Chris said. To pick up on Nina's point, I used to work for RenewableUK, which does a lot of work on wind. We have learned from offshore wind that you need a clear target for a new technology, you need research money to be put in and you need to have a market mechanism like a CFD that can get it to scale once it is at the point of readiness—a commercial model. Then you have to tackle the non-market barriers like planning, consenting and having physical infrastructure in place, like roads for moving turbines, quays at big ports for wind or networks, in the case of solar and EV charging.

Once you have all that stuff together, the industry really flies. It goes more quickly than people expect. To remind everyone, we had a target of £100 per megawatt hour for offshore wind by 2020; we are below £40 per megawatt hour for some of the new projects. I am optimistic that technology and the market will go quickly if the price signals and the policy mechanisms are there. For things like CCUS, that is very much what the thinking is. They are talking about a new strategy coming forward, they are talking about consulting on the commercial model and they have put some cash in up front. That kind of end-to-end thinking is there. It depends on how the consultation delivers and how quickly they crack on with it, but you can see that replicating the model that is there.

They have talked previously about including onshore wind and solar back in the CFD again, but, as Nina said, there is a lack of detail on that in the document. They are consulting on bioenergy with CCS in 2021. Again, we are waiting for clarity there. On nuclear, there is a commitment to bring a new nuclear power station to final investment decision by the end of the Parliament, but not much detail beyond that.

In short, on the power sector and in fact for some downstream technologies like electric vehicles, there is now that thinking in place. For others, there is nascent thinking or not enough. The consultations that come out this year will spell out whether we are right to be optimistic or whether we should temper our enthusiasm. At the moment, there is every reason to believe the market can do this, if Government get it right.

Q142 **Alex Sobel:** Turning to Nina and Sam, your sectors—renewables in particular, now and going forward, and then decarbonised gas a bit later—will have to do a lot of the heavy lifting to get us to net zero in the energy sector. What do you see as the barriers and risks to your sectors in the proposal? Is there enough clarity to drive enough investment into your sectors—particularly, Sam, with decarbonised gas, as that would appear to be a more high-risk proposal at the moment—so we can achieve the 2050 target?

**Nina Skorupska:** The barrier facing this energy transition—it is a hackneyed phrase now—is the route to market. We still have complexities in the market instruments. When we talk to our finance forum members, the big investor pension funds and others, they are really keen and raring



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to go to invest in our sector. They have been waiting to see this energy White Paper and to see, almost as importantly, the Treasury's net zero review, which also came out just before Christmas.

It is still lacking that clarity. Once we understand that the Government are serious about wanting to work through the route to market, we need to see, from the other Departments, as Emma mentioned, the non-market-oriented barriers, such as planning, and understand how we could then reduce the cost of capital for larger-scale projects. Fundamentally, it is the need to accelerate distribution, grid connection and use-of-system costs, and to help make sense of this for people. When you combine the opportunities, as Sam mentioned, around industrial hubs, how do you not keep things in those silos? How do we accelerate and move past that?

What we also need in some of the barriers, which is not touched upon here, is consistent standards and best practice guidance. Two-thirds of REA's members are small to medium enterprises, and they have views on how they want to deliver the whole raft of renewable energy technologies across power, heat and transport. We need to see some consistency of the guidance and the frameworks, so that they can grow their businesses and be there not in 10 years' time but in the next two to three years, in the critical period. We just need some further acceleration.

In terms of the consultations, as we have seen with the decision-making that has been done to address the awful situation we are in with COVID-19, we cannot be waiting a year, two years or three years to plough through the series of consultations. We need to be bold but not reckless in getting on with it. It is heartening to hear that the regulators are upping their game and that net zero is at the heart of it, as well as protecting consumers, but it needs to be not just talking about it and listening. The listening has to stop now; action needs to follow.

We are playing catch-up with this paper, I have to point out. As I mentioned earlier, 12 to 18 months ago, the renewable energy and clean technology sector had suffered a period known as the bonfire of the policies. All the fantastic work in setting up market mechanisms like CFDs a few years earlier had been completely unravelled. We are now at a new starting point, with the will behind it to address this. My advice is that we need to just get on with it now.

**Q143 Alex Sobel:** Sam, could you address the issue of barriers for decarbonised gas and whether the energy White Paper is going to give enough clarity to drive investment into the sector?

**Sam French:** You mentioned high risk. One important point here is that the technologies are well known and well understood; it is the deployment. To echo what Chris said earlier, the 2020s is a decade in which we need to be deploying at scale to learn.



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The key element that is going to slow down some of our world-leading projects in this area is the lack of business models today, which will stop private investment. We have some of the most advanced large-scale projects, which, as mentioned, are world-leading, but they will slow and stop their momentum because there is no business model to take them forward. Government are aware of that, and they are looking, for example in the hydrogen space, to be consulting this year on business models for next year. Whether that is January next year or December next year will make a big difference as to the momentum of those projects.

I support how BEIS has focused on the areas where it knows decarbonised gas, for example hydrogen, will be required in the industrial area, where it is one of the few solutions we have. We now need to catch up in other policy areas, for example what we are going to do around domestic heating, to bring them all together. It is not the technology; it is the business models and that market element that we need.

**Chair:** As a reminder of my recent reminder, we need to pick up the pace; otherwise we will not get through everybody. If we could be more directive, I would be very grateful.

Q144 **Mark Pawsey:** We have heard a very positive response to the White Paper from all our witnesses, but I want to explore the costs of the many measures contained within it. Chris reminded us that this does not get us to net zero, but it gets us well on the way. I saw a report at the weekend suggesting that it would cost £160 billion over the next three decades to get to net zero.

Chris, how do we get there? Who bears the cost? What are the implications going to be for consumers, whether that is householders or business, in particular the manufacturing industry and energy intensive industries? How are they going to be affected by what is contained here?

**Chris Stark:** This is the critical question now. It is not overall a question of what the costs should be; what really matters is how the cost is allocated across the economy. I am going to answer that in a few different ways.

I might start by saying that this brings into the frame the importance of the work the Treasury has begun on looking at the challenge of how we pay for net zero. Way back in 2019, when we gave the advice that the UK should set a net zero target, one thing that we said was critical was that the Treasury picked up the mantle of considering how costs should be allocated across the economy. Since then, we have done our work on net zero, looking more and more at that question of costs, most obviously in the most recent work we published before Christmas and the sixth carbon budget advice we produced. We saw that there is a major investment challenge across the economy.



The energy White Paper picks up a lot of that investment challenge. A lot of the big steps that need to be taken are energy steps, and there is a major capital investment challenge across every sector of the economy, which involves a scaling-up of investment by the order of £50 billion per year of extra investment. If you think about it, pre-pandemic we were investing across the economy about £400 billion per year in capital expenditure in the UK, so we are adding about an eighth to that. We need to scale that up over the next 10 years. Much of that is investment that would be covered by the steps and proposals in this energy White Paper, crucially in transport, the electricity sector and industry.

It is £50 billion of extra investment each year. Someone has to be repaid for that. Where does the consumer aspect come into this? In the work we have done, we have seen that, yes, there is a major investment challenge, but there is also a big payoff for that investment. We are saving lots of annual expenditure each year on fossil fuels as we invest in low and zero-carbon alternatives. That grows over time, and eventually that investment cost is cancelled out by the fossil fuel saving that comes with that, which is a really positive development overall for the cost of net zero. The costs to the economy in aggregate are less than 1%, probably closer to 0%, but that masks this question of who pays for it beneath that. That may be the case on an aggregate level, in particular because of the saving we see from decarbonised transport.

The crucial challenge is for the Treasury to consider how it will use that saving from transport to offset where there are real costs, in particular the cost of industry decarbonisation and heat decarbonisation. It is not a good strategy for us to lump new costs on to industry. That will impact on British industry's competitiveness. It is not a good strategy to lump heat transition costs on to consumers, who cannot afford that.

This energy White Paper covers some of that. It is quite good on some of the energy industry issues; it is less good on the consumer issues when it comes to the straightforward cost questions. We need to see from the Treasury what it is planning in the spring when it comes to those cross-economy measures and, crucially, the fiscal measures. The aggregate challenge is no longer cost overall; it is the allocation of costs, so we get a fair distribution of the costs and benefits that come with this transition, which are cost-benefits overall in the transport sector.

I am afraid I do not have an easy answer to your question, because we need to see what the Chancellor thinks, and that is the crucial bit that we do not have in this energy White Paper.

**Q145 Mark Pawsey:** How up front can we be about that? I am reminded of the smart meter programme. We told consumers, "You will not have to pay for the smart meter programme", but we know it has cost an awful lot of money and every consumer has paid a little extra on their bill. How do we know that some of these measures are not going to find their way to be distributed to businesses and households in the same way as they have



been with that programme?

**Chris Stark:** I would put that back firmly on Ministers. To go back to my earlier point, yes, there is a cost and an investment challenge, but the aggregate impact is actually quite low over the long term. That is a good thing, but within that there is this challenge of the sectoral distribution of these costs, and there are some big costs in some sectors. The industry decarbonisation costs and the heat decarbonisation costs are the two biggies. Then there are these big benefits in the end, especially from the decarbonisation of the power sector and, crucially, the surface transport transition, which we think is a cost-saving step for the economy overall.

Ministers need to be clear about how they intend to allocate those costs, and from that we need to understand what the various tools, regulations and consumer measures will deliver. It is entirely possible for us to protect consumers, be they private citizens or corporates, from some of the costs of decarbonisation in an equal and equitable way, but we do not yet have that information from, crucially, the Chancellor.

For me, this is part one. This is spelling out very well what the Government intend to do in terms of energy infrastructure to decarbonise. What we do not have is the “how” question I talked about in my introduction, which is really where we need those fiscal policies and clarity from the Chancellor.

Q146 **Mark Pawsey:** Emma, how might your members pick up and deal with the cost burdens that are implied for them within the White Paper?

**Emma Pinchbeck:** I have a similar message. It depends on the political decisions and where we choose to allocate costs across the economy. There is some welcome language in the detail of the White Paper that talks about looking at fairness and cost allocation, including whether it is right thing to do to fund so much of this through electricity bills and how to do that for consumers. We need something directly on bills, but also the bigger picture thinking that Chris described, where we are looking right across the economy on this.

Moving on from that, coming back to what I said at the beginning, my members welcome being part of the net zero challenge and, more importantly, they see it as vital for their business models and for the services we are going to be offering customers on the other end. We have all talked about this huge energy transition that is underway that goes beyond net zero, which is about a more decentralised and much broader energy offering to people. In the subtext of every single one of these policy interventions, there are benefits as well as costs to both industry and domestic consumers.

There are direct policy interventions that will benefit people, like having EV charging, warmer homes from the energy efficiency grants and the targeted support for vulnerable consumers. On the business side, there are specific interventions for industrial customers, like including them in



carbon pricing, looking at an industrial decarbonisation strategy and looking at the North Sea oil and gas basin. There are specific interventions that will impact and benefit customers there, but there is a much broader case for the benefits of net zero, which is not detailed in this document. It is missing.

On your point about the costs, there is no total costing for this White Paper, but we have done some numbers and the spending announcements in it come to roughly £12 billion. They are also expecting three times that in terms of private capital coming forward, which gets you towards the £50 billion per year that Chris and the CCC say we need to do this.

What is important about that is, therefore, making it possible for energy retailers and industries to bring forward the private capital to deliver the transition. This is not just about taking money off consumer bills to do net zero or to change things; it is about what benefits we can offer consumers and their homes, and how we can make it commercially attractive to them to do this anyway. For some customers, it is not about funding a heat pump; it is about making agile tariffs and interesting energy services work so effectively that you want one rather than having a gas boiler in your home. That thinking about a smart, flexible, data-driven and decentralised system and what it means as a customer proposition is missing.

Lastly, on the big picture stuff, this is so much about HMT, fiscal policy and how we value decarbonisation and the energy transition across the economy. We learned our lessons from offshore wind: this is not just an energy revolution; it is an industrial one. We need that cross-economy thinking on how it all fits together and what the benefits are from air quality through to jobs. There are bits of that in the energy White Paper, but, to be fair to BEIS, that is not its job; it is Treasury's. This net zero review really needs to go into the questions on how we are funding this, in taxation or right across the economy.

**Q147 Mark Pawsey:** To keep things simple, your members want to attract new capital in and those who are providing that capital want a return. If that return is not provided through bills to consumers, where does it come from?

**Emma Pinchbeck:** Think about some of the new services we are offering. You have to broaden what you think of as the service we are providing customers. If you are an energy supplier and you offer your customer an electric vehicle and an agile tariff that is automated, you are doing two things. You are providing a service to your customer: you are helping them potentially purchase an electric vehicle or put in a charger. You are helping them with their mobility. They get that service. They may also, as a customer, want to flex when they charge their electric vehicle, and you can pay them for doing that. You as an energy supplier can then offer that service back to the grid and get payment for doing that, because you are helping to balance the system.



When we talk about clear price signals, we are talking about an ability to see that value in the system, right from offshore wind farms through all our networks to the customer in the home, so we can work out where we are offering value and then properly reflect that in what we offer customers. It is a more complex relationship, but it is one that should offer big benefits back to people in their homes that my members are interested in being part of. They can then get payment for benefiting the system. We are asking for a much more flexible, agile and reflective energy system by 2030.

This is necessarily complex, but the important thing is that, by 2030, for the customer it should feel much more personal, reflective and beneficial in the way we feel about our energy and the people providing it.

**Q148 Judith Cummins:** My questions build on the last question, and they are around consumers and the industry, whether the White Paper's consumer proposals are enough to keep household bills affordable, and the extent to which they will shield customers from the costs of net zero. Emma, are the Government doing enough to engage the public on the impacts of the White Paper? Do your members and their customers understand how the net zero energy transition will affect them? We know the Government will launch a strategic dialogue between Government, consumers and industry on affordability and fairness in April. If the dialogue is to be successful in terms of public engagement, what does it need to deliver?

**Emma Pinchbeck:** That is a big question. The very short answer is that we do not know yet, because we do not have that detail on what that dialogue is going to deliver. We can start with the outcome we want, which is a policy and regulatory landscape that allows us to innovate and to provide customers with cheap and reliable energy that is green. The current market framework is not the most efficient way of doing that, so we welcome a lot of the changes we are seeing in the White Paper. Some of the really interesting stuff around energy services does not go far enough yet, and we want to have more of a conversation about costs across the economy. Perhaps that is what can be done in this dialogue, but we do not know yet.

In terms of where the public are versus where industry is, industry fully gets the challenge. In many ways, as we talked about for offshore wind, we are ahead of Government policy, pushing at the boundaries of regulation and asking for change in that way. That is a really good thing, because, as we have seen from what happened in telecoms and other industries, if you get the customer proposition right, a lot of this will just be done as an interesting service for people.

It is important, though, to remember vulnerable customers and customers who will not be in the first wave of decarbonisation, who are not able to pay or who have complex needs. Those are the ones who are focused on in the White Paper with the warm homes discount and ECO being looked at. As an industry, we welcome that. We think it is right to focus on vulnerable customers.



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Do the public generally understand the big change coming from net zero? No, not in my experience. I have had 10 years working as a climate change campaigner and in the energy sector. The biggest challenge—this is the reason I am at Energy UK now—is that we are moving into decarbonising heat and transport. These areas of the economy, as we have said, are necessarily more decentralised and more diverse. They require more ordinary people to be part of the change.

There are two ways we can do that, and we must get both right. We must invest in the customers, the businesses, the industries and the technologies that need that extra support, but we also must make sure we have a vibrant and flourishing commercial retail sector that can offer interesting things to consumers like agile tariffs, which we know they are interested in, so they come with us.

Lastly, I have always thought that Government do not spend nearly enough time thinking about communications and behaviour change in decarbonisation and other big transitions. We are seeing that a little in the response to the pandemic. I would encourage that we get that right now when we are thinking about instituting much more personal things for people, but I am very confident—it is why I took the job—that the energy industry can do a lot of this and can help Government talk to customers.

**Q149 Judith Cummins:** You mentioned price transparency and pricing. Can I ask you about the ongoing situation and the loyalty penalty problem? There is always a lot of talk about this, but suppliers are still able to entice customers with a low-cost deal and let them then roll over into far more expensive out-of-contract tariffs when the deal expires. Indeed, over 50% of consumers remain on default tariffs. The Government set out a number of switching proposals in the White Paper. Do you support these? Do they go far enough?

**Emma Pinchbeck:** It is quite difficult to tell yet what the overall picture looks like for customers and how the shorter-term interventions Government are talking about join up with this longer-term change for the sector. In the long run—by “long run” I mean the 2030s, so it is not that long run—we are talking about a sector where more customers are going to have a much clearer dialogue with their suppliers, because we will be doing more services in their homes, things like EVs, heating and so on.

There is this big change coming. The suppliers are investing in flexible technologies and different ways of running their businesses. There is a huge shift going on. Some of that is recognised in the White Paper, but then we have much shorter-term proposals on things like switching, on smart meters and how we do those, and on retail market reform. We do not know yet how those two worlds join up, so it is hard to say at this point.



We will see what happens in the consultation process. Generally, as an industry, we are in a process of transition. The game is to offer the best possible value for our customers in a competitive market and to deliver net zero. We welcome the ongoing dialogue and we will see where we get to. If you ask me back in a year, maybe I can tell you then.

**Q150 Alexander Stafford:** Chris, what is your assessment of the Government's estimate that the policies in the energy White Paper and the 10-point plan could reduce carbon emissions by 230 million tonnes? Is that correct?

**Chris Stark:** I would love to be able to give you an answer to that question, but I am afraid I do not have the detail to do it. We do not have the information that would allow us to make that kind of full assessment. We are going to try to work with the officials at BEIS to understand the assessments that are in the 10-point plan and the energy White Paper better—the analytical team there is really first-rate—but we do not have that information yet.

I plan to build a decent assessment for the annual progress report we publish each year for Parliament, and we are going to try to develop a new suite of tools to improve our scrutiny more generally over progress, as the Climate Change Act requires us to do.

**Q151 Alexander Stafford:** I appreciate you cannot give an accurate assessment but, finger in the air, is that roughly right or, just from the first read, which I am sure you have had, is it not correct? Is it out of the ballpark? You must have a gut feeling.

**Chris Stark:** Let me try to give you that kind of assessment. This is without the benefit of having the numbers in front of me. This package of commitments is pretty substantial when it comes to emissions reduction. The Government acknowledge that there is more to come, but I would expect this to make a pretty sizable dent in the gap between the existing legislative targets in carbon budgets 4 and 5 and where we need to be.

We are going to have to wait to see a bit more than that. I do not know whether 230 million is right, and in particular I do not know what the savings are compared to. There is an important point here: I do not know what the baseline is for that number. For example, is it 2019 emissions? Is it the Government's prior emissions projections? It is not spelled out in this paper or in the 10-point plan.

I also do not know what the split of saving is between the periods of carbon budgets 4 and 5. People I respect at Carbon Brief and Aurora Energy Research have looked at those commitments. They conclude that they fall short of carbon budgets 4 and 5, so I suspect that is correct. Despite the size of it, I suspect it will not take us all the way.

I would add my personal reflection to that. I would note that the kinds of savings that have been quoted by the Government to me look quite conservative. That is unusual for the Government. All things considered, I



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would have expected an even bigger number for some of those changes, in particular the transport changes that are included in the 10-point plan. It is quite possible that we are going to see final assessments for the policies to deliver these outcomes that actually increase the carbon savings. When we get those more detailed policies costed and assessed, there will be a bigger number.

I sense that there has been quite a hotly contested debate behind the doors between the policymakers and the analysts, because the transport savings in the 10-point plan look particularly conservative to me. Road transport is the biggest contributor to UK emissions at the moment. Phasing out new sales of petrol and diesel cars early by 2030 should have a bigger impact than the one they are claiming. The 10-point plan claims quite a modest saving of five megatonnes by 2032.

Although I cannot make a full assessment yet, I can say that the number is going to be a big one. Although we cannot make a full assessment of the savings in megatonnes, as I have mentioned already, many of the commitments that are in this energy White Paper and the 10-point plan match the kind of advice we have been advising in the sixth carbon budget. We have areas where we are well aligned in policy terms. That points to a substantial closing of the gap, albeit we have not closed the full gap that is there at present.

**Q152 Alexander Stafford:** That is an interesting point. They have done well, but the numbers are in some ways too conservative and do not go far enough. Is there a bit of confusion in what the Government are saying? You seem a little unsure. Are we still waiting for a bit more clarity? Is what the Government are doing at the moment good enough for the time being?

**Chris Stark:** It is important to say this. It is really good to have these big strategic commitments in place. It matters immensely that the Prime Minister's 10-point plan sets the ambition at an appropriate level. There are officials across Whitehall, across the country, in the devolved Administrations and in local councils, who, when they see these ambitious commitments, will all understand what needs to be done now. This has set the ambition in the right place.

You are absolutely right. The premise of your question is correct: we do not have the full detail that would allow us to make the proper assessment. That is what I was hinting at. I suspect that, behind the scenes, the analysts have said, "Unless there is a detailed policy here that we can cost and assess, we cannot tell you what the emissions savings are yet for that kind of commitment". What we probably have is a set of big strategic commitments. We now need to fill in, with more detail, the policy that will deliver that outcome. From my perspective, that is a good development. We are ratcheting through the gears here. The commitment is in the right place; now the policy needs to come. Then we will understand in detail what the saving is in terms of UK emissions.



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I will go back to my earlier point. The extent of alignment between what is committed to in these two major statements from the Government and what we have been advising in the recent carbon budget tells me that we are going to close a big part of this gap, if those commitments are delivered.

**Q153 Alexander Stafford:** You are saying that we will close a big part of the gap, but there will still be a gap. In your view, what additional policies will be needed to close that gap? Is there anything else on which the Government have not taken your advice?

**Chris Stark:** In outline, the areas where we are well aligned, and where we think we will see the emissions savings, are in the power sector. We are really well aligned on offshore wind, in the CCC's assessment of what the Government have committed to, as well as on power CCS projects, nuclear and bioenergy with CCS, networks, hydrogen production, the energy system changes and the UK emissions trading scheme. These are all really solid and positive developments.

There are areas where we might expect more emissions savings in the future, or where there is a lack of commitment and the Government could go further. Back to the power sector, in our assessment we are seeing full power sector decarbonisation taking place by 2035. That is not in this report. It talks about 2050 as a date for full power decarbonisation; 2035 is our advice. That is in line with Joe Biden's commitment as the incoming President of the US. That is going to be a date that we are talking about a lot.

Buildings is another area where there is more to do. Great as it is to see in an energy White Paper a set of commitments on building standards and energy performance for buildings, this feels a bit sluggish to me. When it comes to the buildings commitments, it feels a bit more like the previous statements the Government have made at a different time. That is an area where we could do more. Related to that are heat pump installations and decarbonising heat for buildings. The big commitment from the Government is that by 2030 we will be installing 600,000 heat pumps per year. That is a huge step forward, and I want to congratulate the Government for making that kind of commitment. In our assessment, we need to be hitting 1 million installations a year by 2030, so there is more to do there.

Going back to a point I made in my introduction, we see more opportunity generally to do emissions savings through changing of behaviour: changing diet, for example, or travelling less by plane. Those kinds of things can make a big impact on emissions and do not have big costs attached to them when it comes to infrastructure, for example. We see greater opportunity there to do those kinds of things. You do not find that in the 10-point plan or the energy White Paper so much.

**Q154 Paul Howell:** I would like to move the discussion on to jobs, levelling up and the green jobs agenda. To warn you, Sam, I am coming to you first



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once I have explained the question, and then I am going to do a follow-up with you, Nina, in terms of where this is at and where we go. It is about whether the White Paper's proposals are sufficient to create 220,000 green jobs; it is about what proposals affect businesses across the different regions of the UK and whether the Government understand the scale of change that businesses and workers are being asked to undertake.

Whether you are talking about regional developments like hydrogen or local energy systems like heat from old mine workings, which you can get in the north-east, for example, what local jobs can be created in this way? What sort of incentives should the Government be putting in place?

**Sam French:** That is a very good question and one that is of particular importance in the area of decarbonised gas. You mentioned hydrogen. Where we see these industrial clusters, whether it be in the north-west, up in Teesside, or in the Humber and up into Scotland, these areas typically have not seen as much investment. They are crying out for us to explore and develop these new industries.

I worked for six years up in Teesside, and I know the area very well. I know the people there have the right skillsets and abilities to deliver what we need. We have huge skills in the oil and gas sector that can be transferred into the likes of hydrogen and decarbonised gas. As we have mentioned, we need scale and we need deployment. We need to stop waiting.

What unlocks the private investment that makes these projects, at scale, happen? That is business models. Can we get the first plants on the ground in 2025 that are up and operating at scale. This also delivers wider economic impact, as you have said. It is the opportunity to employ people. We also will see costs down as we scale up the projects, which then ripples on to the consumer.

In some senses, there is a real opportunity for Government to invest in parts of the country that have not seen the level of investment recently, because they fit exactly the bill for the industrial clusters we mentioned earlier. That can be the driving force for massive reduction in emissions, giving us a resilient UK manufacturing base within a net zero environment that can compete globally, with the opportunity to export those technologies, skills and services globally.

Q155 **Paul Howell:** You have just built on very nicely, Sam, the second part of the question that I was going to throw in. That is about which sectors are missing. Is there any sector that is not getting enough focus, solar for example? Are there areas where we can use our investment in skills and technology to become exporters and world leaders? I know there is talk in the wind space and things like that that those opportunities are there. Nina, I wonder if you could develop that question in terms of the opportunities for job creation, in developing businesses for use in green energy to support our economy, but also to become more of a global



player in the supply of technology or products into that space.

**Nina Skorupska:** I would be happy to talk about this. At the REA, over the past years in our annual report we have tracked the number of jobs that are in renewable energy and clean technologies. This did not include the energy efficiency work and rollout. We are seeing a massive growth in that with the launch of the Government's green homes grant and efficiencies as part of the green economic recovery. To say where the position was at the end of 2018, we had close to 130,000 jobs across renewable energy and clean technology. Our modelling believes that, even before we saw the energy White Paper, we could raise the number of jobs to in excess of 240,000 across renewable energy and clean tech.

You are absolutely right. We tend to think the jobs in energy are your engineers, civil engineering and electrical engineering, but the gamut of jobs is multi-fold right across legal, tech services jobs and modelling, everything. I can quote from some early statistics that we have. With the right stimulus coming from Government, in our subsidiary, Renewable Energy Assurance Ltd, we have seen a number of installers looking to include and build clean technologies into people's homes. Never before have we seen such growth in the numbers signing up for this consumer code, which is a real indication that they want to deliver quality services. That is just because the Government are giving the right signals and direction.

That means electricians, plumbers, all the people looking at delivering services into our homes, need to understand what a quality system that needs to be installed is. They have to be skilled and learn. We have to keep an eye on that so that, when our consumers and industry receive and have those services installed into their homes, and those businesses, we do it right. There has to be a big push with the Government. It is great to see that the focus on skills is happening and there is a task force deliberately on that. It needs to be co-ordinated so it is right across the country. It can position us to be world leaders, particularly in the smart systems category, but also looking at how we can make the best use of our resources on land and bioenergy. I have to stop there because I could talk for about two hours on this topic alone, so I will shut up now.

Q156 **Paul Howell:** I really appreciate that, Nina. You talked earlier about messaging and getting public buy-in. If the public can see real jobs that are sustainable jobs for a long time coming to this sector, that itself gives us buy-in. Emma, if you could keep it as succinct as possible, it would be appreciated.

**Emma Pinchbeck:** It relates to both what Nina is saying and something Chris said earlier about where the analysis in the White Paper is missing insight. We have talked about heat and buildings being something we would like to see beefed up. The White Paper talks about only 40,000 jobs in buildings. I was looking at it again this morning, and that feels like a real under-punt, given what Nina is describing. In the sector, we certainly see plumbers, electricians and construction as part of what we



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think of as the energy industry to do this massive retrofit challenge. Perhaps that relates to the fact that the policies are not as ambitious as we were hoping. Some of the jobs numbers in the White Paper are conservative.

**Chris Stark:** We would firmly agree with that. In our assessment, we think there are 200,000 jobs alone in that buildings decarbonisation challenge.

**Chair:** We have about seven minutes left as an absolute maximum, I am afraid.

Q157 **Alan Brown:** Here is a challenge then. If I turn to nuclear, quoting Nina, you were just talking about how jobs could be created. With the launch of the White Paper, the Government made a big commitment to try to sign a deal for new nuclear. That is despite the fact that there has been market failure at some of the proposed sites already. Should the Government be pursuing nuclear policy as a priority?

**Nina Skorupska:** When I meet with the Ministers, I long argue that they need to have this whole broad church of opportunities to deliver net zero. The REA does not represent nuclear; we do not. We want to argue the case for renewable energy and clean technology. That is why we talk about the jobs it can create and how, if the platform is put very clearly, renewable energy and clean technology can rise to that challenge and plug any impending worry of a looming gap in the future supply of low-carbon energy.

Always, interestingly, we cite a location for new nuclear and the number of jobs that then go with it. It is usually located around a particular installation. Yet I just talked to you about how, right across the country, we can deliver all those different types of jobs. Because it is distributed and decentralised, it does not make such a splash in the news as saying, "We are going to build this and there are going to be this number thousand jobs". If it is an economic way of delivering it and brings value to the consumer, the Government have to have all the eggs available in their basket to deploy. I am getting my metaphors mixed up; I apologise.

Q158 **Alan Brown:** Sizewell is estimated to cost £20 billion. Hinkley has 35-year CFD contracts. Sizewell is likely to be the same. What would £20 billion do for the renewables sector, in terms of emerging technologies and world leaders?

**Nina Skorupska:** We did it on the back of a fag packet; those do not exist any more, fortunately, anywhere near me. We thought, if you take £1.5 million, you could have the equivalent of not a Sizewell but something of the small modular reactor scale, 440 megawatts, if we install solar panels on 100,000 homes and energy storage, EV charging and three-phase power supply to them, for a fraction of that price. What is the equivalence that you want to balance?



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In those homes, those people will be made immune to rising energy prices and could contribute to the security of our energy system in the future from a power point of view. It does not answer all the equations. I know it is a difficult job that the Government face, so, if money can be spent elsewhere, in different ways, to deliver a broader range of solutions, we will always advocate for that.

Q159 **Alan Brown:** Sam, is nuclear a priority? What would you do with £20 billion?

**Sam French:** We could deliver at least the five gigawatts of hydrogen in the 10-point plan for a quarter of that.

Q160 **Alan Brown:** Emma, I know you are desperate to get in. In terms of the gap in power generation, there are eight existing nuclear stations, four to decommission by 2024, one by 2028 and two by 2030. They are not going to be replaced anyway. What is this mythical power generation gap that relies on new nuclear?

**Emma Pinchbeck:** It is not a mythical gap, actually. Something was said at the very beginning about one of the challenges in everything we are talking about. This is an American expression, I think. We need to walk and chew gum at the same time. We have to prepare for the future energy system while keeping the lights on and providing security of supply in the interim. As Chris said, some of what we are trying to do is prepare for the future and keep operating today.

The question is the wrong one about either/or. As Nina started by saying, I have worked in renewables for my whole career. I was a climate change activist before that. I have yet to see a credible decarbonisation pathway in the UK that does not have a nuclear power station in it. It is physically possible to have a 100% renewable energy system. I am the biggest fan of renewables out there. I named the tables at my wedding after windfarms. However, it gets quite expensive for customers because of the nature of the changes they are making to other bits of the economy, with a huge amount of electricity coming on for EVs and heat pumps, where we have hydrogen in the mix elsewhere.

When you model the whole system and how it fits together, most pathways, including the one that came out with this energy White Paper, have nuclear and other technologies in them, even when the backbone of the system is renewables. That is the best proposition for customers. Pitting technologies against one another is a bit of a bugbear of mine.

Q161 **Alan Brown:** Is there not already a nuclear gap, given the market failures, with Oldbury, Moorside and Wylfa already disappeared? There must be a gap that needs to be and can be filled.

**Emma Pinchbeck:** Yes, we need new capacity coming on. What the energy White Paper did for nuclear was talk about bringing a project to final investment decision. What was missing and what we are not clear on is the investment model for that. Again, it is kind of apples and pears



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with energy technologies, but it is quite difficult to compare a nuclear project, which is often a bespoke, significant infrastructure project, with something like solar panels on roofs. That is distributed and it is serially manufactured kit. The nuclear industry is asking for an investment model that reflects the difference in its projects.

There is also a misconception that the cost must be in the build phase because it is big kit. I do not know if you have seen Hinkley, but the biggest crane in the world was on site not that long ago. It is massive, but actually a lot of the costs are in the project financing and project development. The longer Government delay the decision, the more expensive projects get. If they are determined to bring forward a nuclear power station and determined to deliver on net zero, they need to say what they are going to do on financing as soon as possible, because that helps with project costs. It is going to be a mix of technologies to do this, but, as you have said there, to keep the lights on and do net zero affordably, I have yet to see a pathway that does not have a mix, in order to provide the most affordable power to customers.

**Alan Brown:** Nina, I know you want to come in, but I will hand over to the Chair and it will be his discretion.

Q162 **Chair:** I am sorry, Nina. We have already timed out and I desperately need to bring in Jerome for a very quick question from him. You can write to us though with your supplemental point if you would like, and we will make sure that gets fed in.

**Nina Skorupska:** The only point I wanted to add was that we believe we can deliver the net zero ambition with renewables and clean technology, which is a different answer to the question I was posed by Mr Brown.

**Chair:** Understood, thank you for that.

Q163 **Jerome Mayhew:** I know we are pushed for time, so this is just for Emma. I am talking about the co-ordination of offshore wind policy. BEIS, and Kwasi Kwarteng, before he changed jobs, announced that the argument for an offshore transmission network has been won, which is great news for the people of East Anglia. The timing is being pushed off until CFD round 4, which is 2030 and beyond. Yet, in the next 10 years, we are planning to install 30 gigawatts of additional offshore wind, primarily by point-to-point connection.

The National Grid ESO report says that, to get the benefits of an offshore transmission network, the sooner you start it the better. It stands to reason. If you are going to put in a system, do not do it after you have already connected 30 gigawatts of wind. Are the Government being too slow to push the offshore transmission network?

**Emma Pinchbeck:** You are hitting on one of the biggest questions in energy policy design at the moment, which is whether we do anticipatory investment in our network and other enabling infrastructure, like EV charging, to get the technologies on that we think we need. That falls



squarely into the thing I just talked about, which is the system as we know it versus the system where we are going. Those decisions are very live. We have just had Ofgem looking at RIIIO, which is the current investment framework for networks. I thought some of the most ambitious stuff in the White Paper was in the conversation on networks, because they are also looking at opening up onshore network development to competition.

I do not actually have the answer to your question, because there are split views on it among my membership as we work through the proposals and where we think the sector is going. We think there needs to be more competition with networks. We think it is the right thing to build as little infrastructure as possible. We think the direction of the sector overall is clear, so you need to do things with a bit of a common sense approach. That is another one to come and talk to us about as the conversation develops.

Q164 **Jerome Mayhew:** Emma, I have spoken to you on a number of occasions. I think that is the first time you have not really answered a question.

**Emma Pinchbeck:** It is because, coming back after the new year and looking at the White Paper, it was a bit of a surprise to see the stuff on onshore networks too, and then of course we have had the Brexit agreement. In terms of what we are going to do with OFTOs in the North Sea, that changes the conversation again. Yes, I am not giving you something absolutely direct, but it is partly because the conversation is genuinely very live. My team are currently meeting, talking about this and other things to do with the White Paper. I am very happy to put in supplementary answers, or come back and talk to you once we have had that conversation.

**Jerome Mayhew:** I would be really grateful.

**Chair:** Thank you for that offer, Emma. I think we will probably come back to you in correspondence on the Brexit agreement as well, because we do not have time for that today. Sorry to call everybody so quickly there towards the end, but we have run over on the first panel. Thank you to Chris Stark from the Committee on Climate Change, Emma Pinchbeck from Energy UK, Nina Skorupska from REA and Sam French from the Decarbonised Gas Alliance for your time.

## Examination of witnesses

Witnesses: Richard Leese, Frank Aaskov, Richard Woolley and Deirdre Michie.

Q165 **Chair:** We are now moving on to our second panel on the industrial transition. We are delighted to welcome Richard Leese, director of cement, industrial policy, energy and climate change at the Mineral



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Products Association; Frank Aaskov, energy and climate change policy manager at UK Steel; Richard Woolley, head of energy and climate change at the Chemical Industries Association; and Deirdre Michie, CEO of Oil and Gas UK. Welcome to all of you. Sorry that we are running late.

We have you for about 40 minutes, which will hopefully be enough time for us to talk about the industrial transition. As a starter for 10, that is my first question. When you read the energy White Paper, does it meet all your needs in terms of decarbonisation and carbon capture in your industry sector, or is there a gap that you would like to highlight with us today?

**Richard Leese:** My overall opinion of the energy White Paper is that it is difficult to get excited about something that repeats announcements that have already been made and signals that there is important information still to come. The previous session highlighted that there were lots of consultations and lots of information that we do not know about that perhaps should have been in the energy White Paper. We are waiting to see that. There is particularly the announcement that we are going to have some dialogue in April on the fairness of bills. That is of particular interest to the energy intensive industries like cement, lime and minerals that I represent.

Q166 **Chair:** Basically, you need more detail from your members to know the journey you guys have to follow for decarbonisation.

**Richard Leese:** Yes, absolutely.

**Frank Aaskov:** Thanks for having me here today. As a bit of background to those who are not too familiar with the steel sector, we contribute about £2.8 billion to the UK economy and £3.5 billion to the wider supply chains, with over 30,000 jobs. Every time a tonne of steel is produced, we add about £900 to the UK economy.

Looking at the energy White Paper, for us it was very helpful and useful to see that the Government confirmed that we would be moving into a UK emission trading system. As I have given evidence on here before, that was something we had called for. We supported it because it would deliver lower overall cost for industry. We want to see that linked to the EU ETS to bring down overall costs and increase liquidity, because that is one of the concerns we have. As Richard mentioned, we also saw some of the repeat commitments to CCS, carbon capture and storage, and to hydrogen, which was useful.

However, the big thing that was missing for us was the energy cost. The energy White Paper was initially announced by a previous Secretary of State, back in 2017, as a response to the energy cost review and it fails to address just that, energy costs. From our point of view, as the steel sector, we face some of the highest electricity costs in the Europe and have done for the past decade. Because we are an electricity-intensive sector, electricity is quite a large part of our costs. About 20% of conversion costs are electricity costs; that is when you turn raw material



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into steel. For some of our members, electricity costs are even higher than labour costs, so it is quite significant.

In addition, we are a trade-exposed and trade-intensive sector, with 60% of our steel requirements in the UK being imported. We export about half of what we produce. We compete on price and we compete in international global markets. That means we cannot pass on additional cost from the energy market. The energy White Paper does not address this.

It does not address that, when we compete on price, having to pay more for energy impacts our competitiveness and makes it much more difficult for us to attract investment. Most of the steel producers in the UK are internationally owned and have sites in Europe and internationally. They have to compete for investment internally in those companies. When you have price competitiveness, that is what each country is competing on. Investment is simply not being attracted to the UK when we face such high electricity prices as we do here, unfortunately. The energy White Paper does not address that.

**Q167 Chair:** We are not doing too well so far. Richard Woolley from the Chemical Industries Association, does it give you a clear policy journey to decarbonising your sector?

**Richard Woolley:** First, I agree with the points made by Richard Leese and Frank Aaskov, in particular on cost. On the broader context, our sector is the cornerstone of advanced manufacturing in the UK. It will underpin the net zero economy: batteries, wind turbine blades, solar PV, insulation, hydrogen, ammonia, synthetic fuels, lightweight materials. These are all chemical products. We are integral to a net zero economy.

Chemistry is energy intensive and the cost of that clean energy transition that we have been discussing on the previous panel is making it difficult for industrial energy users to do business in the UK. The net result is that our sites are being run down rather than renewed and investment is going overseas. Our sites are mostly in the major industrial clusters and our members are engaged in those ongoing cluster decarbonisation projects. They also have their own individual ones. Notably, Tata Chemicals was mentioned in the energy White Paper as the UK's first industrial CCUS project.

We are a proactive sector, but the increased operational cost of net zero manufacturing will put most of our sector out of business unless we have the right policy support. That really goes into the question you are asking. I agree with the others that the provisions made in the energy White Paper are insignificant. Comparing it to what the Committee on Climate Change outlined in its sixth carbon budget, in terms of the appropriate support package, in the near term we need carbon leakage protection in the form of free allocation up to the benchmark in the carbon market. We need protection from high energy prices. In the near



to medium term, we need capital grant and OPEC subsidy for investment in net zero production technology such as CCS and hydrogen.

In the long term, to create that market for low-carbon goods and allow us to pass through the cost of decarbonisation, as Frank alluded to, we need things like carbon border tariffs and minimum carbon standards. None of those is gone into in any real detail in the energy White Paper, so it is disappointing.

In particular, to pull up a few specific points, CCS is highlighted as one of the key decarbonisation routes for industry. For our industry in particular it is important. We welcome that increased ambition in the industrial clusters mission, so moving up to £1 billion of support for the industrial clusters, and rolling out decarbonised clusters, low-carbon clusters, two by the mid-2020s and a further two by 2030. We are also expecting a funding model proposal, which will be rolled out in 2022. Unfortunately, having reviewed the current proposal, which came out in December, it is inadequate to provide businesses with an incentive to invest in CCS. It would leave them exposed to an increase in the carbon price in the carbon market, despite having reduced their emissions.

On hydrogen, there is a laudable target, five gigawatts by 2030, but backed by a very small sum, £240 million, in the net zero hydrogen fund. I think it was £500 million overall, compared to Germany with the same target, which proposed €7 billion. Other countries, Australia, Japan, South Korea, Canada and China, already have a hydrogen strategy up and running. We are still expecting ours. As the Committee on Climate Change outlined in its sixth carbon budget, there is no current provision for a business model to support industrial uptake of hydrogen, so hydrogen use rather than hydrogen production. We really need that to be able to fuel switch to hydrogen. There is also no business model for fuel switching to electrification yet. Again, that is something the CCC recommended.

We welcome the UK ETS over the Treasury's proposals for a carbon tax. Those proposals would have been detrimental in the form they took, so we welcome the UK ETS but caution that they mention expanding it to two-thirds of uncovered emissions in the economy. We would say, "Look at the difference between the way manufacturing and power work in the EU ETS". Where sectors have different marginal abatement costs, it is not necessarily the best thing to lump them all together. We would request caution and consultation there. Also, it is mentioned that the scheme may be linked in the future to another scheme. We would encourage the Government to avoid the lack of clarity we saw in the build up to 1 January this year by consulting early with British industry to see the impact of a linking agreement and providing early details of any such link.

Q168 **Chair:** That was extremely helpful. The answers so far have reinforced the points on the first panel about business models, financing and cost of



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business, especially in the context of international competition, so thank you for that. Deirdre, in the oil and gas sector, we heard in the first panel how there are lots of skills available for transition, maybe from drilling for oil to producing hydrogen and other things. Are you happy with where the energy White Paper landed for your sector?

**Deirdre Michie:** Thank you to the Committee for inviting me to give evidence today. I really appreciate that. Yes, we welcome the publication of the energy White Paper because we think it demonstrates a holistic approach to energy. That is something we have been asking for, in terms of the development of a comprehensive energy strategy. We like the way it builds on the strengths of our sector and others in a meaningful way. We think it recognises the current contribution the industry makes, in terms of the 270,000 jobs—and I will come back to that—the security of energy supply, affordable energy and the taxes we have been paying, and it made the point that we have a strong role to play in contributing to a successful transition.

The other thing to reinforce with the Committee is that the energy White Paper provides a massive opportunity because of the Government's commitment to a transformational North Sea transition deal. In the previous panel, everybody was talking about pace. The transition deal can help us move at pace, with business opportunities, help with the jobs, help to transition the skills that are very transferable from our sector into others, and help protect and transition the wider communities that currently rely on the oil and gas sector. That is going to be really important to the MPs here today. Many of your constituents work in this sector.

We are already in action. We are already changing as a sector. We are building on our strong focus on oil and gas and starting to incorporate wind, carbon capture and storage, hydrogen, wave and tidal energies. Responding to what the other witnesses are saying, I agree that the energy White Paper is not detailed, but that is part of its design. It is not detailed on the how. A lot of work is being done and needs to be done elsewhere through consultations.

We need to turn "how" into detailed action plans and, as you have said, establish all the relevant regulatory frameworks, deliver and develop the business models that are needed and provide support for specific projects, like the money the Treasury has allocated for carbon capture and storage projects. We are detailing those elements within our North Sea transition deal. We are coming to Government to say, "Here is a way forward that provides some more detail behind the overall direction of travel as set out within the energy White Paper".

**Chair:** Thank you for that. I think the Department is starting its round tables on the question of how this week, under the energy White Paper. Hopefully you are all being engaged in that process. You are all nodding, which I am pleased to see.



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Q169 **Jerome Mayhew:** I am going to kick off by talking about the cost. Could I ask each of you to give me an overview as to how much you think the transition costs associated with what is involved in the White Paper are going to cost your sectors? We have heard in the first panel that, overall, the cost of transition is not going to be huge, but it will be lumpy.

**Frank Aaskov:** We have not done specific analysis on the energy White Paper in terms of the cost. We are highly concerned that they will repeat the past mistakes of simply lumping costs on to energy bills and perhaps start putting costs on gas bills. We are already seeing that over the last couple of years with network charges being increased and so forth.

If you take a step back and look at what energy bills are at the moment, broadly speaking, there are three elements, wholesale costs, network costs and policy costs. Wholesale costs for us, compared to our main competitors in France and Germany, are slightly higher but not significantly higher. We are paying about twice as much in policy costs as our competitors, and this is after compensation and exemption. When you look at network costs, that is where we pay five to eight times more in network costs currently, before the energy White Paper's things are implemented.

This is where the situation is already bad and we are now talking about making it even worse potentially, if the Government choose the same funding route as they have chosen in the past. The fact is that we pay 62% more for our energy than steelmakers do in Germany and 80% more than they do in France. Just over the last four years, that cost the steel sector £200 million, which could have been invested in the UK into jobs, new sites and infrastructure, but it has not, because we pay too much for it. That is our concern. It does not directly answer your question, as we have not had the opportunity to cost it, because the Government have not directed funding specifically. We are very concerned that they will just pile on.

Q170 **Jerome Mayhew:** I am very interested in your answer. I am going to come back to it in a moment, but I am going to allow the other witnesses to give their estimation of costs.

**Richard Leese:** The BEIS statistics show that industrial energy prices have increased 205% since 2000. We already face this cumulative burden of carbon costs and costs delivered through the power prices. We have seen Chris Stark's report from the Committee on Climate Change say that the additional investment in the electricity generation alone is going to be, on average, £15 billion per year between 2025 and 2035. That cost has to fall somewhere. The energy White Paper at the moment says that domestic bills are likely to stay level. Figure 2.1 shows that the bills are going to be level for domestics. That means the burden for that extra investment in the power grid is going to fall somewhere.

At the moment, Ofgem has this propensity to push the cost towards industrials. We have seen this repeatedly, particularly in the network



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costs that Frank mentioned. For our businesses that are internationally competitive, particularly in the cement and lime industries that I represent, we are already facing those higher power costs compared to our competitors. This adds to the additional cost for carbon that we pay in the UK because of the carbon price support system. All of this adds to the cumulative burden to put our manufacturing industries under pressure. To give you an example of what that pressure means, over the last decade we have seen imports of cement in the UK increase from around 10% on average per year to 22% or 23% now. We are looking at a percentage point per year of loss of cement manufacturing overseas.

Q171 **Jerome Mayhew:** Deirdre, do you recognise the comments you have just been hearing?

**Deirdre Michie:** It is work in progress; that is probably the short answer to your question. As Chris Stark said, it is a tough question, because it is work in progress. As the Treasury interim net zero review pointed out, it is uncertain and is going to depend on a range of factors: policy changes, technology, take-up, efficiency gains. The thing that I would reinforce with the Committee is that it is going to be a collaborative effort to cover these costs. Government need to provide the policy, fiscal frameworks and upfront investment to stimulate the markets, into which industry can then invest and bring its skills, experience and technology.

Listening to Chris previously, I would reinforce this, and I am sure the others will join me: do not lump the costs on to industries to make them uncompetitive at home and abroad. We need our sectors to stay competitive so they can bring investment and unlock opportunities that will enable us to lead at home and then abroad. The North Sea transition deal, as I have said, is work in progress, but we have sought to identify where the costs are, where the investment opportunities are and who is best placed to cover them, whether it is access to existing decarbonisation funds or to the development of commercial frameworks. It is a mixed picture and there is more to be done in that area for us to be crystallised. It will evolve as we go, without a doubt.

Q172 **Jerome Mayhew:** Mr Woolley, can you make a comment from the chemicals perspective on this initial cost question?

**Richard Woolley:** I fundamentally agree with what Frank and Richard Leese outlined. Policy costs and network costs were mentioned. Speaking with BEIS, they represent about 50% of the industrial electricity bill now. What was not mentioned was the fact that the remaining 50%, the wholesale cost, is inflated by the pass-through costs of the EU ETS on power producers to also partake in that scheme. Sorry, I should say UK ETS now, unless we are in Northern Ireland.

The other thing that was not mentioned is the fact that we use a lot of heat in our sector, so the cost of heat for us could rise if decarbonisation of the gas grid is paid for in the same way decarbonisation of the electricity grid has been, i.e. putting the cost on to gas bill payers. We



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have seen the start of this process already with the green gas levy this year to fund biogas injection into the grid.

**Q173 Jerome Mayhew:** We are talking about increased costs, which you are already suffering from. You have mentioned the ETS, which is about £18 a tonne. We recognise that the true cost of carbon to society is in fact much greater than £18 a tonne. You are all international businesses and you have to compete internationally. The sense I am getting is, as we raise our energy costs because of policy considerations here, we make ourselves increasingly internationally uncompetitive, as evidenced by the infiltration in the cement market in the UK, as just one example.

What is your view about border carbon adjustments, BCA, as being a mechanism by which we can protect domestic manufacturing from offshore leakage of our carbon and yet, at the same time, start to introduce a more realistic price for carbon within our domestic economy and therefore unlock the free market to help us decarbonise? Richard Leese, perhaps you could start. Cement is an incredibly heavy polluter. What is your view?

**Richard Leese:** To address that point, the cement industry in the UK is decarbonising more quickly than the UK as a whole. We have decarbonised 53% since 1990. We recognise fully that we need to decarbonise to net zero and beyond. The cement and concrete industry has a net zero roadmap, which outlines exactly how that will happen, whereby we will be capturing more CO<sub>2</sub> from the atmosphere than we emit. We have that transition detailed. Clearly, that needs power.

We have a transition to go through and that transition means that the UK is moving at pace. We are moving more quickly than other nations. We are moving more quickly than nations that can supply cement and other minerals to the UK. We need transitional assistance. You mentioned carbon border adjustment. There is free allocation, as we currently see, which is deteriorating considerably, to the point where it is becoming much less effective at shielding UK manufacturers from international competition, particularly from countries that do not have as high environmental standards as the UK. We need something. Whether it is border carbon adjustment, free allocation or a combination of the two, they can both help us in that transition.

That will allow the inward investment from the international businesses that operate in the UK, in the cement industry particularly. It will allow the investment in carbon capture, which is very much needed. It will allow the investment in the fuel switching that we need to go through. Currently, we are running two fuel-switching projects at MPA, one looking at putting hydrogen energy into a cement kiln and the other looking at putting electrical plasma energy into a cement kiln so we can net zero fuel cement production in the UK. We are working to decarbonise our industry.

**Q174 Jerome Mayhew:** That is great to hear. Mr Aaskov, you are probably



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familiar with the work done by Frontier Economics, which has assessed the impact of border carbon adjustments on the steel industry in the UK and found that it would increase international competitiveness of your market. What is your view on the UK making border carbon adjustments a key issue for COP 26? Do you think that could help a renaissance of steel in the UK?

**Frank Aaskov:** Border carbon adjustment is definitely part of the answer. It is not something we have yet assessed, because there are so many ways one could implement it. In the way the EU is approaching border carbon adjustment mechanisms at the moment, I think it is looking at four different ways. It depends on which one it chooses as to whether it will be successful in helping our sector.

You are quite right in saying that it would definitely help us compete with countries that produce steel with much higher emissions and that do not face the same regulatory pressures as we do here. Unfortunately, it will not protect us or give us that level playing field when competing with steel plants in Germany and France that have been shielded from some of the other costs they are facing but are facing carbon costs. It is part of the solution, I am sure, depending on how it is being implemented. It still does not address the fundamental issues of being able to compete with our neighbours in producing steel and creating a pathway for us to invest and be ready for net zero. Unfortunately, that is the situation we are in.

Q175 **Paul Howell:** I want to focus this part of the discussion on jobs and levelling up. It is about how the White Paper proposals affect businesses in your sector across the different regions of the UK and whether the Government sufficiently understand the scale of change that businesses and workers in the sector are asked to undertake. What policy support is required? Deirdre, what sort of impacts are there for regional jobs? What will drive or support investment in areas like the north-east, where my Sedgefield constituency is? Are there opportunities, as I asked in the earlier session, for creating technological opportunities for investment, in terms of the skills we have?

**Deirdre Michie:** The answer is yes. We have quite an exciting opportunity. The energy White Paper needs to ensure that the transition is a managed one and takes communities with it. You will be aware that the oil and gas sector provides 270,000 jobs across the whole of the UK. We have specific communities like Teesside, Humber, Shetland and Aberdeen. It is really important that the energy White Paper and the whole net zero journey helps us retain and retrain our skilled workforce and attract new people into the sector, targets the existing energy communities and helps them develop new centres of excellence.

We have the CCS project in Teesside as an example. We have the Humber project. In Aberdeen, we are looking to champion the energy transition zone. These are all where we see existing communities very focused on oil and gas and see how they can develop and embrace the energy transition. When we look at East Anglia, that is a great exemplar



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of an area that manages to combine oil and gas and other renewable forms, in terms of how the supply chain grasps the opportunity. There are lots of lessons to be learned from areas like that.

As we heard in the earlier session, the majority of skills in the oil and gas industry are transferrable. A technician can be a technician; a lawyer can be a lawyer. The key skills that we have in the oil and gas industry, in terms of reservoir, hydrocarbon management, processing, and transportation, will transfer very readily into carbon capture and storage and the hydrogen economy. It is important that we remember that the people we have today, the companies we have today in the existing industries, are going to be vital to the skills and experience that will be needed to drive the energy transition.

I know I am flogging the North Sea transition deal a bit, but it is an incredibly important opportunity for our sector. That has a very specific focus on people and skills, how we identify the skills that will be needed and how we make sure we have the training and standards in place so people can transfer seamlessly between the emerging energy sectors as we go forward.

**Q176 Paul Howell:** I am conscious that the other three witnesses were much more pessimistic about the cost pressures that are coming on to their sectors, so I wanted to pick you up first. Richard, I will go to you next, because I spent three years working in the cement industry as a financial controller, so I have a bit more understanding of your space. Then I will ask if Frank or Richard would like to come in on any specifics that you would want to pick up, to try to keep us tighter for time. Could you comment, particularly on whether there is any particular policy support that you think is appropriate for the sectors and the regional impacts?

**Richard Leese:** Minerals operations take part in every constituency, in every region, so we are well covered throughout the UK. Many of those regions are rural. The mineral operation is the largest employer or provides employment throughout a local supply chain, so is really important. Those jobs in the minerals sector are better paid than the average manufacturing job. It is really important that, when we are talking about green jobs, we are talking about our industry. We are decarbonising and we are going to get to net zero and beyond. It is really important that we support essential industries like minerals in the energy and carbon transition.

There are a number of ways to do that. Innovation support is one, where we can get those new skills within our industries in things like carbon capture and interest in low-carbon and zero-carbon fuels. There are a number of areas around the specific product benefits, where we can use concrete's thermal mass properties to reduce the energy demand in buildings. All these will need new skills for a whole range of the workforce.

**Q177 Paul Howell:** I acknowledge the impact of this. The cement works I used



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to work at was actually closed a few years later. It was Blue Circle cement between the two parts. It has a very extended supply chain in terms of impacts on local communities. I am also conscious that, while we talk about creating green jobs, we have a jobs risk in the sectors as well. I thank you for your comments, Richard. Would either of the other two guys like to add anything?

**Frank Aaskov:** The jobs in the steel sector are broadly located in the places that the Government want to level up in, in Wales, Yorkshire and Humberside. These are the places where we want to see new jobs and sectors expanding. That is why we are a bit concerned that this is not necessarily being addressed at the moment, in terms of the cost.

As Richard said, we are the green jobs providers as well. You need quite a lot of steel for wind turbines and energy efficient housing. As a material, over 99% of steel is recycled when you look at scrap cars and over 96% when you look at demolishing houses, because it is endlessly recyclable. It is part of the green society and green economy. We want the Government to create the necessary framework for us to grow and thrive in a post-Brexit environment, where we are an independent trading nation. That involves lower electricity prices.

Q178 **Paul Howell:** Is there any policy you think the Government should be pushing particularly hard?

**Frank Aaskov:** In the last four years, we have outlined what policies we think the Government should adopt to lower our electricity prices. It is matching German levels when it comes to exemptions for renewables. It is matching French exemptions when it comes to network pricing. They need to go in and look at how they are pricing carbon, that carbon price support as a top-up on their own scheme, to see whether that is really fit for purpose at the moment. We have outlined that quite clearly. If implemented, and it could be implemented tomorrow, we would see prices fall to German levels.

Q179 **Alan Brown:** My questions are for Deirdre. The White Paper sets out proposals to reduce emissions from oil and gas. The oil and gas sector has its own decarbonisation plans as well in terms of emissions. Is there any implication for future oil and gas demand of the worldwide efforts to decarbonise? What is your assessment of future demand?

**Deirdre Michie:** In terms of the outlook for oil and gas demand, the energy paper states that it will fall over time. Oil and gas demand will fall over time, but it is still going to form an important part of the UK energy mix throughout the transition to net zero. Is that the question you are asking me?

Q180 **Alan Brown:** Yes. What are the implications of a drop in international demand? Does that have any effect on North Sea? Presumably it is demand and prices that have an impact on the sector.



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**Deirdre Michie:** Thank you for clarifying. We expect demand to fall, certainly in the UK, in line with what the Committee on Climate Change is looking ahead for. As I said, the energy White Paper reinforces that. The thing I want to reinforce is that there will still be a demand for oil and gas. It is important that as much of that as possible is met by a domestic industry, which is also declining. We see that, for as long as we have this indigenous industry, if we continue to invest in and support it, it can continue to bring the significant economic benefits I referenced earlier.

It is really important that the Committee supports the fact that the sector has a role to play today and in the energy transition. It is important that we continue to produce the oil and gas because, if we do not, we will still have to import it to satisfy the ongoing demand for oil and gas. I do not think that we should be overly concerned about how the global implications will impact upon our indigenous industry. We can continue to contribute quite effectively as an indigenous industry with the production profile we have going forward, in the context of the energy White Paper.

There is a bit of a win-win for us here. We continue to have all the benefits that this sector brings, in terms of security of energy supply and jobs, and optimise the skills and experience so that it can then help to drive the energy transition and deliver and contribute to the net zero ambitions that the UK Government are striving to deliver.

Q181 **Alan Brown:** We talk about transition. There has been talk of an oil and gas sector deal for a number of years, which is now badged as a transition deal, and you are hopeful it will be signed off in the first half of this year. How realistic is it for that to get signed off? How important is it that it does get signed off in the first half of this year?

**Deirdre Michie:** The Committee has heard all this morning about pace and the fact that everything needs to move forward really quickly. We are in the 2020s and we need to make significant progress in certain areas. In answer to your question, we think it is really important that it gets signed off as quickly as it can be. We have been working really hard to come up with a substantive proposal that is credible and can be signed off quickly.

My ask of the Committee is that you are very important people who can help challenge and support the transition deal being pushed along and signed off, because of the benefits we see it bringing, in supporting the energy transition. I am optimistic, but I am not complacent. It is still going to need an awful lot of hard work and support from across the board.

Q182 **Alan Brown:** I have one other question on transition. How important is the promotion of carbon capture and storage in the selection of the clusters? It is going by phased selection, the way it is set out in the White Paper. How important is it that that aligns with the decommissioning strategy for the North Sea sector? Apart from demand, clearly lifespan dictates some of the decommissioning priorities coming up.



**Deirdre Michie:** That is a really good question and it is something we have to be really thoughtful about, making sure that any decisions or policies that are put in place do not have unintended consequences and that we do not find ourselves switching off infrastructure that might well be needed. It is a really good point you make and we have to watch out for and be thoughtful about it. We have to make sure there is alignment. Otherwise, we could find ourselves falling short in that context.

Q183 **Alan Brown:** Should that alignment form part of the transition deal, then?

**Deirdre Michie:** We are going to have to ask that question. You are absolutely right. We are going to have to make sure that there are not unintended consequences of forging ahead in one area and finding ourselves having to catch up in another. You make a really good point.

Q184 **Alan Brown:** How important is the St Fergus-Grangemouth project to the north-east of Scotland as well?

**Deirdre Michie:** It forms one of the five clusters we are talking to. They are all important. That is a real leading one for Scotland and would help to support the communities that are already in place in their transition. Yes, it is an important project that has the support of industry and of both Governments. We are looking to make sure we progress it in good time.

**Chair:** Thank you to our witnesses on the second panel, Richard Leese from the Mineral Products Association, Frank Aaskov from UK Steel, Richard Woolley from the Chemical Industries Association and Deirdre Michie from Oil and Gas UK. Thank you to our friends from the Environmental Audit Committee for joining us today and to my colleagues on the BEIS Select Committee.

It is very clear there from that session that the framework of the energy White Paper, while very welcome, still has a lot of work to be done, in terms of the detailed delivery. It sounds like that is especially the case for industrial decarbonisation. I am sure that we will be revisiting that as a Committee and no doubt speaking to you again in due course.