HOUSE OF LORDS

Environment and Climate Change Committee, and Science and Technology Committee

Corrected oral evidence: Secretary of State for Energy Security and Net Zero

Tuesday 21 January 2025

3.30 pm

Watch the meeting

Environment and Climate Change Committee members present: Baroness Sheehan (The Chair); Lord Duncan of Springbank; Lord Frost; Lord Grantchester; Lord Jay of Ewelme; Earl of Leicester; Lord Ravensdale; Lord Trees; Baroness Whitaker.

Science and Technology Committee members present: Baroness Brown of Cambridge; Lord Borwick; Lord Drayson; Lord Lucas; Baroness Neuberger; Baroness Neville-Jones; Baroness Northover; Lord Rees of Ludlow; Viscount Stansgate; Lord Wei; Baroness Willis of Summertown; Baroness Young of Old Scone.

Evidence Session No. 1 | Heard in Public | Questions 1 – 20

Witnesses

I: Rt Hon Ed Miliband MP, Secretary of State at Department for Energy Security and Net Zero; Chris Stark, Head of Mission Control at Clean Power 2030

Examination of Witnesses

Ed Miliband and Chris Stark.

Q1 **The Chair:** Good afternoon and welcome to this one-off joint meeting of the Lords Environment and Climate Change Committee and the Lords Science and Technology Committee. We are very pleased to have with us the Secretary of State for Energy Security and Net Zero, the right honourable Ed Miliband MP, and Chris Stark, the head of Mission Control to deliver clean power by 2030.

Before we start, I remind everyone that the session is webcast live and a transcript will be taken and made public. Witnesses will have the chance to review the transcript and, if necessary, may make minor amendments. Members are reminded that they should declare any relevant interests before speaking for the first time. I would like to put on record that I am a director of Peers for the Planet, which is an unpaid role.

Before asking the first question, Secretary of State, I emphasise that this joint session was requested by your department and that it is unlikely that all 22 members of both committees present today will be able to ask the questions that they will want answers to in the 90 minutes available to us, which may be punctuated by Divisions. I establish at the outset that the committee clerks will be able to address any outstanding questions, with written responses from your department. I hope that is okay with the officials.

Ed Miliband: Of course.

The Chair: Secretary of State, events during the last several weeks have underscored the increasing imperative to act on climate change. Catastrophic flooding in Valencia claimed 230 lives, and fires engulfed large neighbourhoods in Los Angeles, claiming at least 26 lives, destroying vital infrastructure and throwing the insurance industry in California and beyond into turmoil. Last week, we heard that 2024 was the first calendar year in which global average temperatures rose over 1.5 degrees Celsius, nudging us ever closer to breaching the Paris Agreement. Just a few days ago, we had a stark reminder of the core science underlying the global warming that contributed to both these events, when the Mauna Loa Observatory reported a record annual increase in the concentration of carbon dioxide in the atmosphere to 424.6 parts per million, which represents a more than 50% increase above the pre-industrial average of around 280 parts per million. We are indeed in uncharted territory.

Secretary of State and Mr Stark, you have set yourselves an ambitious task to deliver clean power by 2030 and accelerate to net zero, with, I hope, consequent reduction of greenhouse gas emissions, in particular carbon dioxide. First, to help us understand your plan, please could you outline the main focus areas for the department and Mission Control over

the next 12 months?

Ed Miliband: Thank you, Chair. I start by saying that I am delighted to make my first appearance before not one but two Lords committees joined together today. I want to emphasise that I come here with due humility, because I know the huge expertise, passion for the subject and, indeed, values that so many of your noble Lordships bring. I have seen this from reading some of your recent debates. I lack some of the experience of some in the Lords, but I am unusual in that I am a returning Cabinet member, because I did this job 16 years ago. At the outset, I will reflect very briefly on what has changed since then and how that frames our work—and I will come on to your question about priorities.

First, as you have said very eloquently and clearly, the climate crisis is not a future threat but a current reality. Secondly, despite this, I think there is perhaps some cause for optimism compared to where we were back then. I particularly point to the way in which the cost of renewables has plummeted since I was last the Secretary of State. It is worth pointing out that, in 2024, we saw renewables overtake gas for the first time in the UK, according to NESO's figures from last year. That is quite an important moment. Indeed, for the majority of the world, by some estimates, new renewables are cheaper to build than new fossil fuels. If you like, the climate crisis is here, is worse and is accelerating, and renewables have gone down in cost.

Thirdly—and it is really worth saying this because it is it is the point from which lots of our work proceeds—in the last few years, every family and business in this country has seen their energy bills rocket after Russia invaded Ukraine. I think this has taught us something really important about the dangers of our dependence on fossil fuel markets controlled by petrostates and dictators. The reality is that Britain is at the mercy of a rollercoaster of these markets, not just in power but when it comes to how we heat our homes, fuel our transport and power our industry. That frames the argument and the narrative of my department, which is that we are moving to clean energy because it is the right choice for energy security, lower bills, good jobs and tackling the climate crisis.

To answer your question directly, when I first arrived at the department we set out six priorities: leading the Prime Minister's mission to make Britain a clean energy superpower, including delivering clean power by 2030; creating good jobs and building supply chains; delivering the warm homes plan to help families upgrade their homes and cut bills; fighting for a fair deal for consumers, including through reform of Ofgem; guaranteeing a fair and prosperous transition in the North Sea; and, finally, working with other countries to show international climate leadership.

This, Chair, is an ambitious agenda, as you have said, and we are under no illusions about the scale of the task ahead but, briefly, I think what we have tried to do in our first six months is to show a determination to move at speed. We have lifted the onshore wind ban, consented to nearly

2 gigawatts of solar, overseen a record-breaking renewables auction, established 2030 Mission Control under the excellent Chris Stark, who is sitting next to me, set out a plan to upgrade the standards of private and social rented-sector homes, launched new carbon capture and hydrogen industries for Britain, launched a plan for long duration energy storage—which I know is a real passion of members of these two committees—and published our clean power action plan for 2030. The point of giving that list is that we are under no illusions about the urgency of the task, and we are trying to meet the urgency of the energy security and climate tasks. I look forward to our discussion about some of the detail of that in our session today.

Q2 **The Chair:** Thank you, Secretary of State. Mr Stark, do you have anything to add to that before we move on to the second part of my question? It is really important: how is that work being co-ordinated across government departments to ensure delivery of those priorities? It is absolutely clear that, unless the Government work as a whole, we are not going to be able to meet this agenda.

Chris Stark: Very briefly from me on this, you are absolutely right. The premise of that question is the basis on which we have created a new structure within Government to look at this. We have a mission now to do something that is right on the edge of what we think is possible, which is to clean up the power system by 2030. The timeframe for that is very short. We are fortunate in the sense that the achievement of that goal largely rests on projects that are already in development, so we will not have to invent those projects, but we have to bring them in on time. That means that we have the ability, if we are able to use the powers and levers available to us, to accelerate those projects to get to operation by 2030. That is not solely a job of the department for energy, which I work in: it looks right across other Whitehall departments and into other arms of Government, including the devolved Governments.

In the department, we have established a small team tasked with looking across those other bits of Government. So far, it has worked very well. We have put together the clean power action plan, which was published before Christmas. That, in turn, was only possible because everyone across all arms of Government knows that the Prime Minister wants to see this happen, as well as the Secretary of State. That has kept everyone honest, if you like, on this. So far, I am very happy to report that we have been able to speak very co-operatively and constructively with every bit of Government, from the Ministry of Defence to the planning department, even into the devolved Governments. I think the test of that this year is whether we can keep going on that and maintain the momentum that we have established in the first six months.

Ed Miliband: Just to add to that, the way we think about it is that we have two limbs to the mission. The first is clean power by 2030 and accelerating to net zero—ie, meeting our carbon budgets. Chris is in charge of this, and it is very much based on the lessons of the Vaccine Taskforce, from which we learned, including from Patrick Vallance, about this sort of mission-driven approach with outside experts, civil servants

and the authority of the Prime Minister. The second limb of the mission is obviously less delivered by my department and more across Government. Both limbs of the mission, particularly importantly for the second limb, are co-ordinated through a mission board of the key departments, which I chair, with Pat McFadden, the Chancellor of the Duchy of Lancaster, as the deputy chair. That board meets regularly and is about doing what, frankly, I think has been very difficult for Government: to give the carbon budgets the level of importance and attention in every significant Minister's portfolio that they deserve.

The Chair: It is very important. I would be very grateful if you could write to our committee with greater detail on the mission board and when they meet. It would be of real interest.

Ed Miliband: With pleasure.

Q3 **The Earl of Leicester:** Secretary of State, Mr Stark, welcome. I declare my land and farming interests up in Norfolk, where my business is invested in every single sort of green energy you could shake a stick at other than wind.

Ed Miliband: That sounds good.

The Earl of Leicester: It is good, but it is important that it is also economically viable, and there is a lot of emphasis on subsidies here. One of DESNZ's priorities is to support global action—indeed, you, Secretary of State, have just said "climate leader"—the biggest piece of which is arguably the Paris Agreement. Given that 2024 is the first year where we officially breached the 1.5 degree threshold, and that COP 29 received a good deal of criticism, what is your perception of the global momentum for climate action, especially considering that some of the largest-polluting states—China, India and the USA—seem somewhat less interested in climate leadership?

Ed Miliband: This is interesting because, as I said earlier, I have been at this a long time. I would say that one thing that has changed since I was last in this job is that the transition is now unstoppable. Think about this reality: 90% of the world is now covered by net-zero targets. I was at COP recently. It was a very difficult COP for a whole range of reasons, but there was a will to get an agreement. Indeed, we did get an agreement on finance—not perfect, but we got an agreement. I am not trying to look at this through rose-tinted spectacles, because you can hold two truths in your mind at the same time: first, that the transition is unstoppable; and secondly, that it is not going nearly fast enough. Both truths are correct.

The world is moving. Look at what China, for example, has done in the installation of renewable energy in the last year. I am going to India shortly, which is also moving on renewable energy. That is not to say that it is all one-way traffic when it comes to China, India and so on, but the world is moving. Part of the role of UK leadership here is to do the right thing at home, because it is the right thing for energy security, as I have

set out. But we are only 1% of emissions. Then the power of example really matters, as does working with others. I just want to make this other point: when we passed the cross-party Climate Change Act in 2008, when I was last Secretary of State, that was then emulated by countries around the world. More than 20 countries—I think, Chris?—have made their own equivalents of the Climate Change Committee. We should not underestimate the impact of British leadership.

It is really tough. I think that the transition is unstoppable, but we need to make it move faster.

The Earl of Leicester: So, effectively, you believe that COP is still fit for purpose?

Ed Miliband: I think it is a very imperfect vehicle but it is the best one we have. This is 198-dimensional chess that you are playing, because every country is there negotiating on their behalf. Seeing the making of a sausage is not pleasant, but it seems to me that there is not a better alternative. I am sure that there are ways there could be a better process, but that multilateral forum is really important, in my view.

Q4 **Lord Frost:** I declare an interest as an unpaid director of Net Zero Watch. Secretary of State, thanks for coming. The question allocated to me is to ask you how the decision to set the NDC target at an 81% emissions cut was reached, but actually we know that: it was the advice from the Climate Change Committee that produced it. Maybe I could move one level on from that and ask: what sort of financial and legislative support needs to be in place for that to happen? Critically, what are the costs? Who will the costs be borne by? Have you done any sort of cost-benefit analysis in this area?

Ed Miliband: As you said, Lord Frost, the decision was based on advice from the Climate Change Committee, but it is really important to say that it is actually an NDC that we put forward based on the decisions made by Boris Johnson on carbon budget 6. When he was Prime Minister, he legislated for carbon budget 6. The best estimate of the cost comes from an impact assessment signed off by Anne-Marie Trevelyan in April 2021. It estimates that the cost of achieving the sixth carbon budget is equivalent to 1.6% of the UK's expected GDP. It is really important to say that that is an investment cost—public and private investment. It considers that the net present value—a positive benefit to the country—is £266 billion. The impact assessment also says that part of the reason for that is because of the overall policy objective of mitigating the potentially catastrophic effects of climate change.

It is important to say that that carbon budget decision was a really important basis for our NDC decision. The context for this is the widely held view now—not just in the Stern report but by the OBR and the Bank of England as well—on the dangers of not acting when it comes to the climate crisis, as well as the positive benefits from acting.

Lord Frost: So there has been no assessment of cost-benefit made since

2021—is that what you are saying?

Ed Miliband: What I am saying is that we got the advice from the Climate Change Committee about what the decision should be. It confirmed the figures. The figures are slightly different, but that is because of the way they are counted through the UN framework. It confirmed the recommendation that was put into law in carbon budget 6, and that is what it was based on.

Lord Frost: I was looking at the letter that the Climate Change Committee wrote last year recommending the 81% cut. Of course, it lists the 10 priority actions needed to help us get to this target. The first one it lists is "Make electricity cheaper". Indeed, Secretary of State, you just asserted that renewables were getting cheaper. I am a bit confused, because I was reading a blog written by Dieter Helm a few days ago—of course, he is an expert on this subject. He says: "It would be wonderful if it was true"—that is, renewables costs fallings—but "it isn't anytime soon". He says that the UK and the EU are "telling fairy tales that 'it's all going to be cheaper' here". Do you think Mr Helm has got this wrong?

Ed Miliband: I do not agree with him, Lord Frost. If you look at the strike prices achieved in CFD allocation round 6—that is our most recent allocation round, which happened under this Government—the offshore wind strike price was £59 per megawatt hour in 2012 prices. At £80 in today's prices, that means that it is cheaper to build and operate than gas. That is based on what was set out in the 2023 electricity generation cost report. That is the first point—it is the cheapest form of power to build and operate. Secondly, we know from the NESO report on clean power by 2030 that the system costs are no greater and that there is scope for bills to fall in a clean-power system. Thirdly, I will just be honest with you, Lord Frost: I think you and I are not going to agree on this because you, in my view, want to gamble in the fossil fuel casino with the British people's money. We know how that turned out. What happened was that we gambled in that casino after Russia invaded Ukraine, and the British people, businesses and public finances paid the price. I am not willing to keep gambling in that way. I want secure homegrown clean power that we control. I think that has benefits in protecting us and I think it can lower bills.

Q5 **Lord Trees:** Thank you, Secretary of State and Mr Stark for giving us your time. The nationally determined contributions of course relate to all greenhouse gases but different strategies will be required for different gases—certainly for methane. Secretary of State, you made strong commitments at COP 29 to reduce and tackle our methane emissions, particularly from fossil fuel use. The other two major UK sources, of course, are agriculture—primarily from livestock and primarily from ruminants—and waste. How will you work with Defra to deliver our commitments under the global methane pledge? I particularly ask: what help, support and advice will your department and Defra give to our livestock farmers, to be able to reduce methane emissions while delivering on other commitments like food security?

Ed Miliband: This might be one, Chair, where I will write to you with more detail, but let me give a broad answer to Lord Trees. I am really pleased you have asked about this. The ECC Committee produced a very important report—*Methane: Keep Up the Momentum*—which we are due to respond to shortly. The reason this is so important is that tackling methane emissions is one of the fastest and most effective tools to limit global temperate rise. CO_2 is described as the marathon and this is described as the sprint, and I think this is really important.

The UK has a good record going backwards on methane emissions. Areas such as our oil and gas sector are important, and some of the commitments we have on ending routine venting and flaring by 2030 are important examples that we can set to the world.

Lord Trees, I think that you are absolutely right that we have further to go on agriculture and in the waste sector—I mean, there is more we can do in oil and gas too, but I particularly raise those issues. We anticipate the entry of high-efficacy methane-suppressing feed products to the UK market in 2025, and we are working closely with industry on this, but I want to accept the implicit challenge from you, and the explicit challenge in your report, that we need to do more in this area as a Government. When it comes to our carbon budget delivery plan, due to be published later this year, I want a big emphasis, including with the rest of Government, on the role that tackling methane emissions can play.

Lord Trees: At least two EU countries are now subsidising specific feed additives, for example. Is that something that might enter consideration?

Ed Miliband: I do not want to speak for Defra on this, but I will undertake to address that issue in the letter we write back to you.

The Chair: Just a follow-up from me on our methane report: on the second part of my question that I put to you about cross-departmental working, this was really highlighted very starkly in this report, in that Defra is 49% of methane emissions but we have a very good story to tell on waste and fossil fuel reductions in methane, from flaring in particular. Waste reduction was really, if you like, directly linked to the EU landfill directive, and fossil fuels have been under various other directives, not least because they are under the direct eye of DESNZ. DESNZ has ultimate responsibility in government for reducing greenhouse gases, yet Defra is responsible for livestock, or so one would think, but there is no oversight from Defra on livestock methane emissions. Is that why we are seeing 49%? Most of our emissions in methane are from the agriculture sector.

Ed Miliband: I will make two points. First, if you look at the pattern of emissions reduction over the period of the last Government and, indeed, the Government of which I was part, the general verdict would be that the power sector was pretty good and other sectors could do a lot better. That is generally true. We face challenges in the power sector for the reasons that we have set out, but the big challenges we face are in

agriculture, buildings, industry and transport. This is a sort of particular example of a more general challenge.

Secondly, the best I can say is that we accept the responsibility as a department to work with Defra to ensure that we tackle this challenge. That obviously requires working with the farming community, which faces lots of challenges, but we are determined to do so.

The Chair: Where is the interface between DESNZ and Defra for you to work together?

Ed Miliband: It is a sort of constant work in progress. I work incredibly closely with my colleague Steve Reed. The mission board is the formal part of it, if you like, but we have an incredibly close working relationship.

The Chair: The reason I labour the point is that, as you yourself have said, methane is so important if we are going to stand any hope of staying within 1.5 degrees in the next couple of decades. It is a message of hope in this really gloomy story about climate change, because it can affect net cooling. It is a message that we need to broadcast far and wide: we can, with rapid reductions on methane, start to cool the planet.

Lord Trees: Can I make one point? We have a good story to tell about ruminants, in that we produce units of production of milk or meat at less than half the global average, but there is more to do.

Ed Miliband: This is part of what the ELM scheme is about: we can encourage the kind of practices that we are talking about. That is a good legacy, I think, from the previous Government.

Q6 **Baroness Brown of Cambridge:** I start by declaring my interests as chair of the Carbon Trust, a non-executive director of Ørsted and Ceres Power, and an adviser to Holtec UK. It was good to hear the Secretary of State say that he has been reading all sorts of things that the Lords have been producing, so I hope he has read the report from the Science and Technology Committee on long-duration energy storage.

Ed Miliband: I have—and your debate. It was my Sunday reading, and it was a great pleasure.

Baroness Brown of Cambridge: Excellent—we are very encouraged to hear that. He will know that we are concerned about how a grid that is primarily powered by renewables will be resilient to those potentially prolonged periods when the wind is not blowing and the sun is not shining. We see that Clean Power 2030 envisages that this will be through the operation of gas generation as a back-up for about 5% of the time. The question is this: would not it be better, and would not it give us greater energy security—which I think we all believe is very important—if we were investing in domestic, low-carbon, long-term energy storage that can make use of the renewable electricity that we generate here, rather than relying on those volatile gas markets which the Secretary of State has described as "gambling"? Baroness Gustafsson, in her response

to the debate, said that the Government would continue to explore options around a strategic reserve of energy storage. In a very quick answer, I would like to know this: will you commit to a strategic reserve of energy storage?

Ed Miliband: Let us come on to the strategic reserve in a minute. If I may, I am going to give you an answer to this, and then I am going to hand over to Chris to say a bit more on long-duration storage itself, where we have made some important progress as a Government.

Let me sort of paint the broad picture here: we are moving to a system where renewables are a really important backbone. You are absolutely right, and it is obviously part of our plan, that we need dispatchable power in the context of that system. It is really important to say here that we have lots of options at our disposal, and my sense is that all of them play a role. Long-duration storage, and the consultation that we have issued around the cap and floor mechanism and the action will be taking this year on that, are really important. We are driving long-duration energy storage forward, and Chris will say more about this.

We have gas power with CCUS and, indeed, hydrogen to power, which can play a really important role. It is clear from the NESO report what an important role that can play in the system. We also have nuclear as part of the system, and that is very much part of our road map. We also have the current solution, which is, if you like, the back-up, which is unabated gas. As you say, we have to move away from that over time. If I may, that is the sort of context that I would set.

Baroness Brown of Cambridge: The mechanisms that you are talking about for stimulating long-duration energy storage are ones that incentivise people to move energy in and out of a store. When we get the Dunkelflaute—the period where there is no sun and no wind, potentially for some time—we need the store to be full. We do not need people to have just made a lot of money by moving the energy out of it. That is why we want you to think about a strategic store. If you would like to put your comments in that context, that would be helpful.

Chris Stark: I agree with that. We are in a unique period when we can rely on the fleet of fossil gas-powered stations during a Dunkelflaute, but that period will not last. The logic of having a clean power target for 2030 is that we want to achieve clean power by 2030, of course, but it is also about pulling through various technologies and system services that we will need into the 2030s, and it is hard to overstate the importance of long-duration energy storage if you want to continue on the journey towards a bigger power system that is also clean. I think we will have to do more on that.

To agree with the premise of your question, the cap and floor regime—which we look to for medium-duration energy storage, let us say—is largely based around the idea of arbitrage in the energy market. That is a good thing. We have put some insurance in place to ensure that there is enough there for financiers to actually build the projects that we need for

2030. I am very optimistic and bullish about how much can be done by 2030. There is some pumped hydro, but, in addition to that, projects like liquid air look very good, and it is great to see that in your report.

But, as I look at it, for the really long-duration energy storage—at the moment, at least—it is hard to beat hydrogen as a low-carbon energy store that works well with a renewable power system. We have already acknowledged that we have not put all the market mechanisms in place to deliver what we need to. At the end of this, there will have to be something that gives the incentive to store that hydrogen, because the incentive is not there at present, and the stores are huge. We have good places to put that hydrogen, but we have not yet put the policy framework in place.

On what that looks like, it might be something that looks like a regulated asset base or a contract for difference, but something that gives the long-term certainty to allow us to have that strategic store will be needed into the 2030s, and we will therefore have to bring it through over the course of this Parliament.

Ed Miliband: I will add to this—we are right into the weeds, where we all like to be. Chris will correct me if I say something wrong. It is important not to dismiss the LDES cap and floor mechanism—I am not saying you were. That same cap and floor mechanism has been running for electricity interconnection for a decade and has taken our interconnectors from 4 gigawatts in 2015 to 9.8 gigawatts operational today. The interconnectors are a really important part of our energy security.

Your report seemed open to a cap and floor mechanism. It is important, in the system we have, to say that moving forward on the LDES cap and floor mechanism is important. Then let us come to the other part of the jigsaw, if you like, which you very much led on: the National Infrastructure Commission recommendation on a strategic reserve, in particular around the role of hydrogen. It is fair to say that different people can mean different things by "strategic reserve", but, as Chris indicated, we are open to the idea. For the hydrogen storage business model, on which we are also moving forward, we are taking the first and important steps down that road. I know you got frustrated with the previous Government because they seemed rather oppositional—I think that is how you described it. We are not oppositional; we are open-minded about this, and we think that the work we are doing on the hydrogen storage business model is an important step on the road.

Baroness Brown of Cambridge: Given the sorts of timescales to build the facilities for such a strategic reserve, is that not something we need to be moving forward to take a decision on quickly? Given that we have set up GB Energy for the Government to own part of the energy system, would there not need to be just the right people investing in such a thing?

Ed Miliband: We are moving forward with the hydrogen storage business model. When some people say "strategic reserve", they mean a

government-controlled reserve that can be released at certain moments, such as the one the US has. There are costs associated with that and, in all these things, you are looking at how you run the system in a way that guarantees security of supply at the least cost to bill payers and taxpayers. I am not saying that we are close-minded on any of these issues, and the steps we are taking on the hydrogen storage business model are important, but it slightly depends on what you mean. This is why it goes to what you mean by a strategic reserve, because we also have a responsibility—I do as the Secretary of State, with Chris working with me—to make sure we deliver clean power by 2030, and indeed the system going forward, in a way that ensures value for money and, as I say, the least cost to bill payers and taxpayers.

Q7 **Lord Borwick:** To maintain a gas fleet that is idle by design most of the time, will we not end up paying significant subsidies through the capacity market? If we cannot store all the energy we can generate, will we not also be paying renewables not to generate electricity? How do the Government intend to minimise the amount of money we will spend paying power plants not to generate power?

Ed Miliband: Chris might want to have a go at this, but I think there are two separate issues going on here. One is the role of gas in a 2030 clean power system. In our work, and indeed in the definitions that NESO had of a clean power system, gas is operational for a maximum of 5% of the time. It is playing a different role in the system: a back-up role. That is a really important role for the periods that were raised, when renewables are not necessarily operating at a sufficient level. In our view, that is a value-for-money system, and we believe it can reduce costs and bills.

There is then a second question about how we make sure that we have the grid—it is really a grid issue and a "where is the generation?" issue—that can make sure that we do not have these massive curtailment payments that we have at the moment. Both those things are part of what we are doing, which is why we need to build, for example, all the grid we need. That is why we are being much more intentional in our clean power action plan about where this generation will be built. It is worth saying that we are changing the mindset here from what I call "neglect and delay" to "plan and build". We are saying: what is needed for a 2030 clean power system? Where does that generation need to be? What is the grid we need? What is the generation we need to approve? How do we get it the grid connection? That is a very different mindset and a very different system.

Chris Stark: We have a very important fleet of gas power stations in this country doing a very important thing. That is what allows us to accommodate the renewables that we are able to bring on to the system now. Presently, it is about 35 gigawatts and, by 2030, we expect we will need about 35 gigawatts, so that gives you a sense of how important it is. But we can use it less and less and, in a sense, the capital cost of building that is already incurred. So the majority of the cost comes from the actual burning of the gas in that, and we can use the capacity market

very effectively as a means to ensure that we will have that available to us.

We are complementing that with some of the issues that we just talked about on the long-duration energy storage side, with new forms of clean dispatchable power that we can build, augmenting that gas system. The period in which we can do that is now, and that is what allows us, in the 2030s, to then face into some of the harder strategic questions about whether we have done enough to ensure that we do not need to build new gas plant to replace the existing fleet. Again, the point of 2030 is to accelerate as much of that clean stuff as possible so that we are in a better place to accommodate the new demands that there will be for electricity over the 2030s, and hopefully face into a world where it is not necessary for us to replace those plants as they close. We think we have the tools available to do that, at a good price for the consumer. It is very important that we succeed because, in the 2030s, we will then be ready for the much bigger power system that we will have to build.

Lord Borwick: The question is: have you got the time to do it, because it takes such a long time to plan? We made the title of our report, "Get on with it". It seems to me that criticising the previous Government may be fair, but the question is: how quickly can you actually deliver something when you are still planning it now?

Ed Miliband: We are confident that we can deliver. Do not take my word for it but look at what the NESO report said. It said that it is very challenging but achievable. When I think about the sentiment in the energy industry, it is interesting that, when we first proposed 2030 clean power, there was a fair degree of scepticism—I am sure that some are still sceptical—but I think the industry has now recognised that the pace at which we are moving, some of which I talked about in my opening statement, shows a Government who are really serious about this. Of course it is hard and challenging. Chris once called it herculean—that is why I hired him—but it is achievable.

The Chair: We need to move on.

Q8 **Baroness Neuberger:** You have answered some of this, but Mr Stark said that we have enough gas generation capacity for 2030. Can you tell us how that is calculated and how you can be so sure? How can we be sure that we will not have a repeat of the energy crisis of 2021? How can we be certain? This is the "get on with it" motto that came out in our report. What are you doing to speed this up and give us some certainty that we will have enough capacity?

Ed Miliband: I will let Chris come in, but I want to say just one thing. It is very important to be clear that the energy crisis was one of price. The picture here is that we imported only 4% or 5% of our gas from Russia. It was not that we were importing Russian gas but that we were tied to international fossil fuel prices in our domestic and international production. That is the key element and insight into what was at play

here. It is precisely by moving to clean power that you protect yourself—or insulate the electricity system, at least—from those price spikes.

Baroness Neuberger: Understood—but, if we needed more than the 5%, we would be back on to the markets, would we not? What else would we do?

Chris Stark: We would look to NESO at this point to give us its assessment, given its obligation to protect us from this. It did so in its excellent piece of work, provided to us shortly before Christmas, upon which we then based our clean power action plan. The basis of that is essentially that NESO feels that it has enough with the existing gas fleet to accommodate the increase in other technologies that would be needed on the system, as long as we "get on with it", to use that term—and we are getting on with it.

In the range of ambition that we have now clearly expressed as a Government in the action plan, we are right on the edge of what we think we need for 2030, so there is no doubt it is a stretching goal, but every one of these has been put through a process of looking at actual projects that we can actually deliver, in the comfort of knowing that, if we fail to deliver, gas will provide that back-up.

Again, I make the point I made earlier: the period in which we can rely on that is not forever. The point about doing this now is that, whether you care about the emissions reduction or not, it makes a lot of sense to try to augment that gas power system that we have at the moment, because we are in a very unique period when we can bring on these new technologies—which are recovered in cost from consumers over decades—now. We get the advantage of bringing that investment in early, while we have that gas fleet at our disposal, so that we face into the decisions that we will have to take over the 2030s and beyond.

Baroness Brown of Cambridge: You have reassured us about the gas generation capacity for the Dunkelflaute. What about the gas storage capacity?

Ed Miliband: Historically, the UK has had relatively low gas storage levels compared with some of our European neighbours. The sort of truth is that it is partly because we rely on a diverse range of sources. I think we have the second-largest LNG capacity for LNG import, and we obviously have the UK continental shelf. We have a range of sources of supply at our disposal, as well as gas storage.

I faced this as Energy Secretary in the late 2000s. Some people say—it goes back slightly to our conversation earlier—"Should we not build more gas storage?" Obviously, we keep all these matters under review but, again, I make this other point: we could do that, but it would have inevitable costs. We always have to keep that under review as we look at these proposals.

Q9 **Baroness Northover:** We are now looking forward into the 2030s and

beyond, and you have been addressing this to some extent. Clean Power 2030 sets out a model for a grid in 2030, but what happens after that? Is there a plan to ultimately phase out our dependence on gas power stations and, preferably, replace these with clean energy storage technologies, or at the very least to capture their emissions through CCS? How can clean energy storage compete when, as we have been discussing, gas is being subsidised through the capacity market?

Ed Miliband: I will bring in Chris, but it is worth saying that you are asking such an important question, because our department's projections suggest electricity demand could increase by 50% by 2035, then by 100% by 2050. We are entering the age of electricity, even more than before, and it has to be an age of clean electricity. My starting point in that context is that we need all the clean power technologies at our disposal—renewables, batteries, tidal, nuclear, hydrogen and carbon capture—and we have talked about the role of dispatchable power. One of the ways that I think about this is that we have published our clean power action plan; in 2026, NESO will publish the strategic spatial energy plan, which will go beyond the 2030s.

Chris Stark: On that, essentially what we have done in the first six months of the new Government is set out very clearly what we want to achieve by 2030. It is worth pausing on that. It is the first time for a very long time that we have been as clear as we have in the action plan about how we will pursue the next five years. That is what, in turn, gives us the ability to face into the planning and consenting organisations and get the machine to work more quickly—things like connections reform really inform all that. But it would not work if we stopped at 2030.

With the offers that NESO will offer this year to key projects, we have looked beyond 2030 into 2035—so we are already into the mid-2030s in curating, if you like, the kind of energy system that we are looking for out to 2035—and then the strategic spatial energy plan will come along and look longer term. That will be published in 2026, and it will naturally have more choices within it. The longer term that you go, the more those choices open up. That will, of course, look into the middle of the century and ask questions about what kind of energy system we need. Given that we are talking about infrastructure here, which can often take several years to build if not longer, that in turn requires us to think in the near term about how we progress towards that kind of goal. It is absolutely our goal that we would prefer not to replace gas-fired power stations with new gas-fired power stations. Again, that puts a premium on us moving as quickly as possible towards a clean power system by 2030. We are then able to make those decisions with much greater clarity than we can now.

Q10 **Lord Wei:** I declare my interests as an adviser to Future Planet Capital, which invests in a lot of these kinds of technologies. Electricity demand is likely to grow beyond 2030, as we have heard: we are electrifying heating and transport more. Is it not just tempting to continue to fulfil the extra demand beyond 2030 with gas? What incentive do the market and decision-makers have to develop these other, cheaper alternatives,

which take us beyond 2030 as electricity demand grows?

Ed Miliband: That is a good question, Lord Wei. My answer is that we are moving to a much more intentional view of the system—Chris has underlined this and so have I, but it is worth saying again. This will please some people and not others. It is a much more planned system than the one we have inherited. If you are going to make this transition, which is implicit in your question, it has not been done as far as I remember that a Government have said, "Look, here is a 2030 objective, and here are the technologies and what we think they will contribute", with a range and a clear, intentional view, and then—again, it is worth emphasising this—driving through into decisions that NESO will make about who it prioritises for a grid connection. Let us be absolutely honest about this: the grid situation that we have inherited is pretty catastrophic. We have seen waiting times go up on average from something like 16 months to 70 months over the last few years, and you have something like 700 gigawatts in the queue.

The Chair: We will come to the grid.

Ed Miliband: Fine, but my point, Chair, is that, to answer Lord Wei's question, it fits into a much more intentional view of the system.

Q11 **Baroness Willis of Summertown:** You have partly answered this, but I want to slightly change this question focusing on the 2030 target. I have heard "2030" in the last hour many times. It is great to have targets, and I see this from a nature perspective: we have government targets on nature for 2030 as well. But do you think that focusing on this one date detracts more generally from the longer-term objectives and, in particular, the public confidence in them, especially with executive orders coming from the US today and yesterday? Do you think that we should have different sorts of targets, or more general net-zero targets coming through, rather than focusing on one date?

Ed Miliband: We are well served by having the Climate Change Act in place; maybe I would say that. It is an interesting and very laudable model because it has stood the test of time, and that gives us five-year carbon budgets. That gives us a very clear set of timeframes to work towards going forward. What we call CB7 will be published next month, setting out carbon budgets for 2038 to 2042, to answer your question.

I will make a point that is not self-serving: it is easier for Governments to set targets for when they might not be in office—in, say, 2050—than it is to set shorter-term goals. In a sense, we have been deliberately ambitious and stretching—herculean, indeed—with 2030, partly to jolt the system, honestly, to get over the inertia in the system, the grid and the planning system: the "It can't be done". I have mentioned him before, but I am really inspired by Patrick Vallance on this because, although it is obviously a totally different set of circumstances, the Vaccine Taskforce just said, "Look, we've got to do this". The fact of saying, in government, "We've got to do this"—and the fact that this is one of the Prime Minister's five priorities—does concentrate minds.

Baroness Willis of Summertown: It concentrates minds for the Government—I understand that—but I am more concerned about the public inertia. Is there a communication element to this that needs to be addressed?

Ed Miliband: There definitely is. The public get the idea that the lesson of the last few years is that renewables offer us more energy security than fossil fuels; all the polling shows this. The way I always think about this is that the British public do not want a culture war on climate, whatever party they support. Indeed, I think the bipartisan consensus on climate across Labour and the Conservatives has been one of our great strengths as a country. I think the public want action. They want to know that it will not cost them in a cost of living crisis, and it is the role of Government to make sure that it is done in a fair way. But I think the public are with us.

The Chair: We are coming to a question about how we take the public with us later, more fully, and we are running behind, so let us move on.

Q12 **Lord Jay of Ewelme:** It is nice to see you, Secretary of State and Mr Stark. I declare an interest as a former member of the main board of EDF in Paris. I do not want to ask about Hinkley Point or Sizewell C now—actually I do, but I will not—so I will ask about small modular reactors. The Government have said that a final decision on small modular reactors will be taken in the spending review and that a final decision might be taken by the end of the decade—2029—which means that small modular reactors will come into operation in the 2030s. So my question is: how committed are you to small modular reactors, and can this rather lengthy sequence be speeded up a bit?

Ed Miliband: I am really enthusiastic about SMRs and the technology they offer. I indicated earlier that I think nuclear is a really important part of the mix. I thought that when I was last Secretary of State. If anything, I am reinforced in that view by the increasing demand there will be for electricity, which we have covered. SMRs are potentially a really exciting development. We inherited the competition run by GB Nuclear. We have shortlisted four bidders, we are engaging with them and we will make a decision in the spending review. Obviously, Lord Jay knows as well as I do that these issues are always subject to the spending review.

On the timetable you have talked about, broadly speaking the constraint is how quickly we can authorise going forward on SMRs; that is obviously an issue. But there is also a constraint on how quickly they can be designed and built, and on how quickly we can move forward. But I very much see SMRs as part of the mix going forward.

Lord Jay of Ewelme: On the question of research, development and so on, do—or would—the Government support that, making certain that the necessary research is done, or is that just left up to the various companies involved?

Ed Miliband: That is absolutely something that we are supporting. We are supporting Great British Nuclear to do the work with the companies on all these issues. Obviously it is for the companies to develop their bids, talk to us about the costs and so on. But I reassure you that the Prime Minister, the Chancellor and I have real enthusiasm for the role that SMRs can play.

Q13 **Baroness Whitaker:** I declare an interest as vice-chair of the All-Party Group on Marine Energy. This question, which ought to contribute to the upbeat presentation that you have been giving us, also follows from Lady Brown's question. As she said, wind, solar and so-far unmentioned tidal energy are not constant. Storage is expensive. So what assessment have the Government made of the contribution that wave energy in the UK could make to help address intermittency challenges? Basically, what can the Government do to enable scale-up of the many prototypes so that we are not outmanoeuvred by the Scandinavians and the Portuguese, and save a lot of money on storage? There is a very nice graph in one of the Supergen reports that illustrates the contribution of wave energy to intermittency.

Ed Miliband: It is really important, as I have indicated, to be open to all the technologies at our disposal, including tidal and wave energy. On wave specifically, the current position of the department is that the wave industry is more at the R&D stage, which is a key step on the journey to potentially achieving commercial viability. It may have an important role to play in the UK energy system in the longer term. It is not yet at the stage of being in the contracts for difference—CfD—process, but we are regularly engaged with the Marine Energy Council, which works on these topics. UKRI administers research funding programmes, and wave energy projects continue to be eligible for that. If there is any information that you or the rest of the committee want to share with us on this, I would be happy to look at it, and I am sure Chris would as well.

Baroness Whitaker: There is more on the contracts for difference. Are they not rigged against wave energy, because it is not enabled by R&D yet to get to scale-up? It cannot compete.

Ed Miliband: You raise a broader issue here about the role of CfDs, what they are appropriate for and what they do not necessarily work for. CfDs work for technologies that have reached a certain level of commercial viability. That auction process has been incredibly successful at bringing down the price of, for example, fixed-bottom offshore wind. I think, candidly, that it has been more challenging for some of the newer technologies, and the current judgment is that it would not necessarily help wave energy to be in that process, unless there were a separate pot designed for it. But, in that case, it might be better to just do it as we currently are, through an R&D process. Do you want to add anything, Chris?

Chris Stark: Just that really. I have some experience from my days as a director in the Scottish Government, when we tried very hard to support the then very nascent wave sector. Wave Energy Scotland was

established in that period, basically because we found that the goal of grid-scale generation for wave was beyond that sector at that point. There were two promising technologies, both of which failed, and it moved to being probably a smaller-scale technology, one that holds lots of promise, particularly in areas where you do not have grid. But again, at a smaller scale and at a stage where the technology itself is not as commercial as, say, wind, it is hard to say that CfD, even in a ring-fenced way, is the right mechanism to support that technology at this stage.

Just as the Secretary of State says, we would welcome any technology, particularly one that offers the system benefits that wave and tidal offer in the certainty of the generation that we can get—in contrast to the variability of wind and solar—but we need them to compete and get better so that we can come down the cost curve.

Q14 **Lord Duncan of Springbank:** I draw attention to my interests in decentralised energy, nuclear and forestry. I will ask a preambling question, then a more specific one. It would be remiss of me not to mention the comments of the new President yesterday—"Drill, baby. drill"—and the withdrawal from the Paris Agreement. Do you want to reflect on what that will mean for the global picture and, I suppose, does the US now form one of these petrostates that you would be concerned about?

Ed Miliband: Thank you, Lord Duncan, for your question and your advocacy on these issues. Obviously, the new Administration came into office only yesterday, and it is important for me, as the Secretary of State, to seek to find common ground with them. It is obviously for them to make the decisions that they consider to be in their national self-interest, and that is what they will do. We are strong supporters of the Paris Agreement, obviously, and we want as many countries in it as possible.

I will make two other points, in the spirit of reflecting on where we are and where things are going to go. First, I believe that this transition is unstoppable. All my evidence from COP—obviously, there was a sense of the intentions of President-elect Trump, as he then was—was that countries believed it was in their national self-interest to remain in the Paris Agreement and to continue working on these issues, because they saw the advantages of moving forward on this and the dangers for them of not. The transition is not fast enough, but unstoppable. Secondly, it is worth saying that, under the first Trump term, we continued to see quite significant investment in renewables. That makes me think that, whatever their decisions on the Paris Agreement, there is always common ground that we can seek with the new Administration.

Lord Duncan of Springbank: I have a question specifically on biomass. You have obviously set engineered greenhouse gas removal targets of 5 million tonnes by 2030, and that will require a BECCS system to be brought in and collaboration. I am wondering what progress has been made on this, because five years is a very short period of time and this seems quite a complex issue. You may want to write to us about this,

because it is a challenge.

Ed Miliband: I am happy to do so. You will know that the last Government did a consultation on biomass in general and specifically on support to biomass stations. We are obviously considering that consultation. A whole range of issues need to be looked at in that context: how we ensure security of supply and ensure the best deal for consumers, which I have emphasised a lot in this committee, and future issues around, for example, power BECCS and the role of biomass and carbon capture. I am happy to write to you about it.

Q15 **Lord Ravensdale:** I declare my energy-related interests, including as a chief engineer working for Atkins Realis. My question is around AI. It was really good to see the AI opportunities action plan published last week. It is a really exciting opportunity for the country. You have talked about the herculean task of clean power by 2030, but we want to get a lot of data centres for the purpose of AI training in this country, which are obviously very energy intensive. How are you going to ensure that those data centres do not compromise the clean power targets that you have? It seems to me that it adds to that already very difficult task. Secondly, I am interested in your plans on this: SMRs were mentioned in the action plan, but could you maybe provide a bit more detail on how you are going to facilitate non-grid nuclear in the UK for the purpose of powering those data centres?

Ed Miliband: That is a really good question—very apt. It is really worth saying that this Government are very committed to capitalising on the opportunities there are from AI and, indeed, in the energy sector. I will be co-chairing an AI energy council, bringing together experts from the industry and from AI, along with my colleague Peter Kyle—indeed, I was discussing it with him today. Being completely candid with the committee, this is precisely to scope out what the scale of demand is for AI and what pressure it will put on us. It is worth saying that NESO's recent analysis in its *Future Energy Scenarios* found that data centres could increase annual electricity demand from approximately 7 to 62 terawatt hours by 2050. That is obviously a very broad range. Even at the maximal end, I think that is something like 10% of total demand by 2050. NESO is confident that, as far as 2030 is concerned, the demands of data centres can be accommodated, but one of the things that Peter and I want this committee to do is get a proper handle on the scale of demand that there will be.

I also think that one of the exciting things about AI is the extent to which it has the capacity to make our energy system miles more efficient. One of the other things our committee will do is seek to bring together people from different walks of life, if you like—from the energy industry and the AI industry—to ask what the potential is here. We have not talked about this yet, but we are moving to a world of consumer-led flexibility and half-hourly settlements, and there are absolutely ways in which AI can play a role in making this a much more efficient system. Chris, I do not know whether there is anything you want to add.

Chris Stark: I have just a couple of things on this. We have been thinking quite a lot about AI, particularly the likely power demand if we see an explosion in the growth of data centres. It is very helpful, of course, to have the broader government commitment to see the development of the AI industry, but the power demands are quite uncertain. There are a few things that matter. One is the location of those data centres. We want to put them in the best place for the grid. The idea of these AI growth zones is partly informed by our best understanding of the topography of the grid that we have at the moment.

The second thing is that I am sceptical about some of the future projections for the increase in power demand, because they are ultimately based on the idea that we will not see efficiencies in the way the AI itself takes place. I am very confident that, at national scale, we can accommodate the increase in power demand that would come from AI. I would like to be confident that we are ready to plug those data centres in where they need to be, and the connection here is to probably the most radical thing in the clean power action plan: our reform of the connection queue. This is designed to rationalise a connection queue that is largely based on new generation projects, but it also frees up space for new demand for electricity and for AI and data centres. It is very important that we go through that process so that we have the space in the queue for new demand. Even if it comes at the scale that it is required, our objective is to never refuse that kind of connection request when it comes.

Ed Miliband: I did not answer the second part of your question. I said in a recent speech to the Nuclear Industry Association that, if there are AI companies that want to come here and help us with new nuclear, for example, my door is absolutely open. Hopefully, there are some of those discussions we can have.

Q16 **Lord Grantchester:** Thank you for your comments on AI and data centres. NESO recently announced that it will pause new grid connection applications while it considers the queue, which has a huge backlog of projects. I declare an interest in having a solar project that must wait until 2038 for connection. What assessment has been made of the impact of changing the priority list? Will the focus on AI and providing grid connection data centres distort power from other important growth priorities locally—for example, the predictable tidal power of the Mersey Barrage, completely separate from wave technology—as well as wider community energy development that could utilise a smart-meter digital infrastructure for demand-side management? How will the clean power action plan include community energy and set the balance between those competing priorities?

Ed Miliband: Lord Grantchester, you ask an absolutely fundamental question, and it is really important—Chris has just underlined this. This is a dysfunctional system we have inherited. Really, it is a "first come, first served" connection system and we are moving to a much more intentional, different system based on the mix of projects that we need to achieve clean power by 2030. Connections reform is about ensuring that

the right projects connect in the right place at the right time, and it is slightly remarkable that the system has not been put in place before.

In answer to your question, I would say that we are confident that, far from AI and data centres pushing out generation projects, I would put it the opposite way: the much more intentional approach that we are taking will free up grid space for the demand projects that we need. Your case is 2030, and I cannot promise you a faster connection date—and it would be wrong to do so, for the avoidance of doubt. Your case is certainly not unique. This is what I hear all the time, whether it is in industry or in generation—people not being able to connect.

I just want to warn the committees that there will be some people who are not happy about this connections reform because they will not necessarily be the priority in the queue, but that prioritisation is absolutely crucial for the generation that we need, and for the demand projects that we need to connect as well.

Lord Grantchester: That was very useful—thank you.

The Chair: Just to say, I would be very interested if your department could write specifically about the reforms outlined in the clean power action plan in support of community energy.

Chris Stark: Definitely.

Q17 **Baroness Neville-Jones:** Good afternoon, Secretary of State. Can we perhaps talk a little bit about planning for clean power from 2030, and public support therefor? Constructing clean power is going to take a lot of public investment. Some of that public investment in infrastructure is not going to be all that popular—such as pylons and, indeed, windmills. As Mr Stark said in answer to Baroness Northover, some of that construction could take a very long time as well.

My question to you is: given that net zero is now becoming a topic of increasing public debate—people taking a position—and the targets are getting closer, do you have a public engagement plan to ensure that people know what is coming and hear about the benefits? It seems to me that they need to hear the benefits when they learn about the construction that may come to them quite shortly and on their doorstep. How are you going to go about convincing everybody so that, when the construction comes, they do not seek to stop it but support it?

Ed Miliband: You ask such an important question, Baroness Neville-Jones, if I may say so. Let me deal with the answer in two parts, one on the narrative and one on the actions that we are going to take. On the narrative, this is what we are trying to do, and it goes to some of the argument that I was making in my opening, and indeed to Lord Frost: we are making the case that this is the right thing to do for the country—for our national self-interest—on a wide range of grounds, including energy security as well as climate. That is the first point.

Secondly, it is important to say to people who are going to be living near clean energy infrastructure, "You will see direct benefits for your community". We will be saying more about this in the coming year but, in a sense, people in the countryside and elsewhere who are hosting clean energy infrastructure are doing a service by the country, and it is important that they benefit from it.

Thirdly, to those who are worried about nature and biodiversity—I totally sympathise and understand that—there are nature-positive ways in which we can build this infrastructure, but it is also important to say that the biggest threat to nature and biodiversity is, frankly, the climate crisis. It is not pylons or solar farms.

That is, if you like, the narrative and the argument. We will be publishing later this year a public engagement strategy. That is very much about information, not instruction. Chris may want to add stuff about this, because it is something that the Climate Change Committee focused on quite a bit in its work when he was running it, but people want to know more about what they can do to be part of this. It is really important as a service to the public to do that.

Lastly, the three transmission operators are also going to be doing a programme of public explanation of what they are doing. I believe this was done last time lots of grid was built—was it in the 1960s?

Chris Stark: The 1960s, yes.

Ed Miliband: That is important. Your question is incredibly apt, frankly. Do you want to add anything on engagement, Chris?

Chris Stark: I will add something briefly from my time at the Climate Change Committee. We did look at some of these issues. The need to bring the population along with the big changes that come with the journey to net zero is absolutely essential, of course. What is interesting is that, time after time, we see in polling that the way to do that is not strictly speaking to make the argument based on climate; it is based on the wider impacts that come as the benefits accrue from making steps that are positive for the climate. In terms of the work that we have been doing in the department, of course energy security polls very highly, regardless of your view on climate change.

The other thing that came out very strongly from the work that we looked at in the Climate Change Committee is that this idea of a nanny state is never going to work. It is not a very sensible thing to tell people what they can and cannot do in life. However, there is a deep desire for more information about choices that are positive for the climate, which can come from several sources, including the Government. Probably more important than anything, the incentives have to be right for people to simply make the right choices. That is often about things like pricing. The classic example is the cost of electricity versus the cost of gas. The more you can skew that towards electricity being cheaper, the easier it becomes to tell a story about the country electrifying, moving towards

electric vehicles, heat pumps, et cetera. That is not strictly speaking climate policy in those terms. The broad incentives matter immensely here, alongside the information that we can provide and the reassurance that we can give people that their wider concerns are also being met by this journey.

Baroness Neville-Jones: You are publishing an information plan later this year. What are the likely contents, if you can give us a broad view of what will be in it?

Ed Miliband: It is in its early stages of formulation, Baroness Neville-Jones. When I go around the country, the thing people want to know is what they can do. Lots of people who care about this say, "What can I do to be part of this—to contribute to this?" If you take this issue of home insulation, solar, batteries in homes—all of those things—there is huge potential here. I will give you just one example. Octopus Energy is partnering with the housebuilding developers to offer people zero-bill new homes for 10 years—not zero-carbon homes but zero-bill homes. That goes to exactly the thing that Chris was talking about: this is about climate, yes, but it is also about how people can benefit from it. I was going to make this point: part of this is about giving people the information about—when it comes to your home, for example—you having the right financial incentives to benefit from this, and in a way that benefits the planet. It is partly about information.

I will also say this to you—this is less part of the public participation strategy but more something that I think is important. I think that, as a department, we have a duty to do better at informing people about the intelligence we have on the scale of the climate crisis—what is actually happening. We have a huge body of scientific knowledge in my department and I am thinking about how we can, in the right way, give people the information that they frankly deserve about what we know about how climate change is happening and progressing.

Baroness Neville-Jones: That is a perfectly fair point, as is people being aware of the amount of electricity we are likely to need. You take a very optimistic view of human nature—

Ed Miliband: I do.

Baroness Neville-Jones: One reason why there was a de facto ban on windmills on land was that they were unpopular. You say people want to know what they can do, but they also want to know how they can avoid some of this.

Ed Miliband: I was taking this up with David Cameron, believe it or not, when I ran into him a few months ago. They were not unpopular: the DESNZ polling, which is on our website, says that not only is onshore wind heavily supported—one of the most supported technologies—but, even among those who live near onshore wind, it was unpopular with a small minority. This is important. A large majority in this country believes that this has to be done in the right way and in a way that does not

penalise ordinary people, but we need to do our bit to tackle the climate crisis because it is the right thing to do on climate grounds and on all the other grounds that we have talked about.

The Chair: I totally agree that this is absolutely the most crucial thing that your department must get right.

Q18 **Lord Drayson:** I draw attention to my registered interests, particularly in technology commercialisation. Secretary of State, the clean power action plan already acknowledges that our planning systems are not working at the pace we need to meet the 2030 target. How will you speed them up?

Ed Miliband: We were ministerial colleagues and it is a great pleasure to be before you today. You were a brilliant Minister, and it is really good to be with you today. The answer is: what the Government are working on and what is in the clean power action plan is an end-to-end change in the way the planning system works. I will give you some examples. First, we will publish the energy national policy statements—updating them—later this year. Clean Power 2030 will be at the heart of that because, as the National Infrastructure Commission has said, the problem is that planning inspectors were, if you like, given a role without proper leadership from policymakers. So there should be clarity about the priorities of the Government when it comes to national priorities like Clean Power 2030.

The process of those planning decisions and the relevant bodies involves ensuring that this is something we are working on with MHCLG and ensuring that 2030 decisions get the priority they need. We know the projects we need for 2030—there are between 70 and 80—and we know that, if we can build them to time, they will be built in time, but they need to be given the priority when it comes to the planning process.

Thirdly, making sure this planning system is properly resourced is obviously a discussion we are having with Treasury colleagues. It sounds rather mundane, but making sure you have enough planning inspectors and investing in them is absolutely crucial to this.

Fourthly, on the point of the end-to-end process, we have a system of judicial review at the moment. I commend Lord Banner's report on judicial review. Access to justice and being able to challenge Government Ministers' decisions is an incredibly important part of our system, but we have an endless loop of judicial review in this country—certainly for energy projects and indeed for some others—whereby projects that get green-lighted do not properly get the green light for two years and even more, because they are in an endless judicial review cycle. I do not want to prejudge the planning and infrastructure Bill, which will come out later this year, but that is something we are intensively looking at.

Lord Drayson: So if an item of infrastructure was clearly critical to your Clean Power 2030 plan, would you take it out of the planning process and allow Ministers to approve directly?

Ed Miliband: You say "out of the planning process", but we have a system of national decision-making for the larger energy infrastructure

projects. We obviously have local decision-making, but we also have the national regime, where I or my Ministers make decisions on development consent orders. The issue is more about whether those decisions reach Ministers' desks quickly enough and whether, when they reach Ministers' desks, they make decisions. I will be honest with you: some of the solar decisions I had made had been hanging around for a long time on Ministers' desk, with more information being asked for. This is what I mean about it going from the pre-application stage to the process of it going through the planning inspectors, to it getting to Ministers, to Ministers making timely decisions, and then to the process at the end of that.

Q19 **Baroness Young of Old Scone:** It was interesting to hear you say that the biggest threat to biodiversity is climate change, but I think we can be smart about the way we deal with biodiversity. That particularly means that we have to be smart about the way land use is taken forward. Indeed, this afternoon, both you and Hercules—I worry about Hercules being Steptoe and Son's horse—

Ed Miliband: I do not think we call him Hercules, actually.

Baroness Young of Old Scone: You both talked a lot about the locational impacts of new green energy. Are we absolutely on the ball with this at the moment? In particular, solar, wind, the grid itself and biomass have pretty strong land use requirements—but then there are lots of other requirements for land, like food security, flood-risk management and practically everything else.

Like you, I had a wonderful Sunday read—the clean power action plan—but the strategic spatial energy plan will not come until 2026, and many of the technologies and sites that need to be operational by 2030 will have to have had their planning permissions agreed before you have the spatial energy plan in place. So can you tell us how we can make sure that we do not end up with the wrong developments in the wrong places, with suboptimal use of land? How will your energy planning spatial activity dovetail with the land use framework, if we ever get it?

Ed Miliband: While I am in the compliments business, I am a big fan of Baroness Young. The land use framework that is planned for later this year is a really important document that my colleague Steve Reed at Defra will produce, because it will set out—I think for the first time—the assurance that people want on food security, the role of clean energy and how we protect nature and biodiversity. It is a really important document.

My other point—Chris will want to say something about this and the role that Craig Bennett is playing as one of his clean power commissioners—is that I believe that clean energy development is absolutely compatible with nature protection and restoration. I do not buy the zero-sum game argument. Solar farms can be compatible with rewilding, wildflower meadows, even sheep grazing and other things. The notion that it is either one or the other is not something that I buy. By the way, on solar

farms, even on the most wildly ambitious solar numbers, it will be less than 1% of agricultural land.

I agree with what you are saying, which is that we must and can do clean energy development, nature protection and restoration together. Indeed, the role of nature restoration is a crucial part of meeting our carbon budgets.

Chris Stark: I would add to that only that I spent almost seven years being very frustrated about the lack of a land use framework, when Baroness Brown and I worked together at the Climate Change Committee. We will have that shortly, and that will be tremendously helpful for all sorts of reasons, including in the work that we now do on clean power.

To deal briefly with the clean power implications, one of the really exciting things about setting out a plan as detailed as ours already in the first six months is that we can then start to do something at a strategic level to look at the location of that infrastructure. The Secretary of State mentioned Craig Bennett, who is one of the commissioners who is serving among eight commissioners on the clean power commission to help us steer the journey towards clean power. Craig is there because he also believes that it is possible to do the restoration of nature alongside that energy infrastructure. Think of natural infrastructure growing alongside energy infrastructure.

If you are able to look at something at a strategic level, you are also able to look at impacts at a strategic level and do things such as compensation at a strategic level, which is really exciting. The idea of nature restoration alongside the cleaning up of the power system is absolutely central to what we are trying to do. We have committed to doing something on that this year with Craig's leadership, and that will feed directly into that land use framework. But just as the Secretary of State said, the energy infrastructure requirements for that land use framework are tiny. Most of the electricity generation we will have at this point onwards to 2050 will come from the seas around the UK rather than from onshore. We still have this question of how we use that precious land we have in Great Britain and across the UK in the best way possible, but it will not be dominated by energy infrastructure at all.

Baroness Young of Old Scone: How about the time issue? Will the strategic spatial energy plan be too late? Is it going to be all over bar the shouting by then?

Chris Stark: I do not think it will.

Ed Miliband: No. We already have a sense of what we are seeking to do with the clean power action plan. I think of that plan as the first part of the strategic spatial energy plan in many ways, because we have accelerated the timetable because of 2030 clean power. The SSEP goes beyond 2030, but it is absolutely intrinsic to what we are doing. I should say that Craig's role is also important in this. It is absolutely intrinsic to

what we are doing to have nature and clean energy dovetailing together as part of our clean power plan. Craig is the CEO of the Wildlife Trusts. That is his relevance in this.

Q20 **The Chair:** They are indeed two sides of the same coin. I am very conscious that we are now at 17.01, but we have one question remaining. Would you have time to take a question on hydrogen and locational pricing?

Ed Miliband: Of course.

Baroness Brown of Cambridge: Thank you very much, and thank you for staying for a few minutes with us. I think there are a number of decisions that the Government have not yet—

The Chair: Sorry, I think that Viscount Stansgate—

Viscount Stansgate: As I am here, I will ask it very quickly, Secretary of State, because of the time. As we understand it, there are two decisions that have not yet been taken, and I would like to ask you about those. The first is about locational pricing for electricity, and the second is about the timeline for the possible use of hydrogen in heating systems. Can you give us any news on when those decisions might be made, and is it your view that, until those decisions are made, further investment might be at risk pending those decisions?

Ed Miliband: There can be no better issues for injury time at a Lords committee than these two quite knotty issues. The first, electricity market reform—so-called REMA—is obviously a very complex subject and an important one for us to get right. What we sought to do alongside the clean power action plan—this is deep in the appendices, but you can find it on our website—is to clarify and reassure on the decisions that have to be made on this. As you will know, Viscount Stansgate, we have a reformed national wholesale market or a zonal pricing model, and we have tried to provide reassurance on both sides about what those two decisions look like. It is certainly our intention to make a decision later on this year on the way forward. We are confident that we are going to be able to move forward, and we have provided some reassurance on AR7, for example. But we are confident that we can both make the decision but also move forward in a way that keeps the investment flowing, whatever decision is eventually made. We are going to indicate later on this year where our thinking is on that.

It has sort of been part of this discussion that hydrogen has a really important part to play in our clean energy mission. We have moved forward with the HAR1 project, for example. On the question of hydrogen in home heating, the previous Government committed to taking a decision in 2026. We think we need to speed up this decision and provide clarity sooner than that and, again, we have said that later on this year we will issue a consultation on this issue.

The Chair: Can I just point out that the National Infrastructure Commission has concluded that there is no place for hydrogen in home

heating? I think that was a view corroborated by the Climate Change Committee also, and that the pilot projects in Redcar, Ellesmere Port and Whitby have all been stopped because of safety concerns. I just wanted to put that out there for your consultation.

Ed Miliband: Indeed. I will not be drawn on to prejudge our conclusions, but I can assure you, Chair, that I have read the appendix to the National Infrastructure Commission on these issues.

The Chair: Excellent. Thank you. It is 17.05. It just remains for me to say a huge thank you to both the Secretary of State and to Chris Stark for being so generous with their time and so willing to answer our questions openly. Thank you very much. With that, I formally end the public session of the meeting.