



# Environment, Housing and Infrastructure Scrutiny Panel

## Draft Carbon Neutral Roadmap

### Witness: The Minister for the Environment

Tuesday, 8th March 2022

**Panel:**

Connétable M.K. Jackson of St. Brelade (Chair)

Connétable J.E. Le Maistre of Grouville

Deputy I. Gardiner of St. Helier

**Witnesses:**

Deputy J.H. Young of St. Brelade, The Minister for the Environment

Deputy G.C. Guida of St. Lawrence, Assistant Minister for the Environment

Dr. L. Magris, Head of Sustainability and Foresight

[14:07]

**Connétable M.K. Jackson of St. Brelade (Chair):**

Good afternoon, Minister and team, and welcome to the Environment, Housing and Infrastructure Scrutiny Panel where we are going to discuss the draft carbon neutral roadmap, and I kick off by introducing ourselves by saying that I am Mike Jackson, chairman of the panel.

**Connétable J.E. Le Maistre of Grouville:**

John Le Maistre, Constable of Grouville, member of the panel.

**Deputy I. Gardiner of St. Helier:**

Deputy Inna Gardiner, St. Helier, a member of the panel.

**Assistant Minister for the Environment:**

Gregory Guida, Assistant Minister for the Environment.

**The Minister for the Environment:**

John Young, Minister for the Environment.

**Head of Sustainability and Foresight:**

Louise Magris, head of sustainability and foresight.

**The Connétable of St. Brelade:**

Strategic policy 1, net zero emissions pathway. Given that Jersey has historically failed to meet its target set out in the *Pathway 2050: Energy Plan* trajectory to achieve 80 per cent reduction in carbon emissions by 2050 under the previous Kyoto agreement, how do you propose that if adopted the draft carbon neutral roadmap will successfully or be successful in achieving net zero emissions by 2050 under the Paris agreement? Can you illustrate what has been done differently to ensure the success of the roadmap?

**The Minister for the Environment:**

To start, it is a roadmap. What we were asked to do by the States, the States set us off on this journey, which we all agreed, unanimous I think, that we should seek to respond to the climate emergency. We were given the objective of exploring that on the basis of achieving carbon neutrality by 2030 and then of course since then we initiated, we went back to the States with a process involving setting up a citizens' assembly, investing in a whole lot of expert work and procuring that work, and then using it to answer those questions on how best we could do it. We have got to that point now, having gone through a draft and consultation. The honest reality ... I mean it is a start. The roadmap deals with the first few years of the next term, so it works within the resources that are available currently, but of course there is no question that that will fall short of what will be required in the long ... and yet it will be a matter of decision for future States Members as how much resources and effort they are prepared to invest because it is a long-term roadmap and we work within frameworks of 4-year States. My answer would be, I do not think there are any guarantees but this answers the questions: how can we do this? It asked the States ... where we are at the stage now is we are about to lodge the final outcome to say to the States: "We want you to sign up for this", as the States asked us to bring forward, and we have done it in time; that is where we are now. Louise I am sure will give us a ...

**Assistant Minister for the Environment:**

Sorry, I would like to jump in. The first thing is that as soon as the proposition was voted that we wanted to be carbon neutral we set aside some money, so we immediately created a £5 million fund. I think that was quite reactive on the part of the Government at that time. We also fed this fund with

monies from fuel duty. So this sum was not only set but it is also fed. This has been raised. We have been putting more of a share of the fuel duty into the fund and that means that the initial part of the roadmap, the one that we will be voting for in a few days, has £23 million to spend, which is actually quite a good start. What we are looking at is processes that were going to take place anyway and that we are just trying to accelerate. We need a little bit of money to make things happen faster, but the processes are laid out, they are things that were not avoidable. The second part, and we have thought about this when we created the carbon neutral roadmap, the roadmap set out what we would like to do to get or what we would need to do to get to carbon neutrality of zero emissions in the end. We knew that we would have to ask other Governments to follow suit. What we are doing is we are presenting it with an implementation schedule. That is a new device that will put in time all the decisions and all the actions that need to be taken if we want to reach neutrality. Instead of just saying: "This is what we would like to do and it is up to you to do it", say : "On that date you need to have decided this and we need to have found money for that or you need to have done this." So we are going to be extremely descriptive. We cannot make decisions for the next Government but we can tell them exactly what they need to do if they want to reach zero at the end.

#### **Head of Sustainability and Foresight:**

Great answers from the Minister and Assistant Minister. I think I really recognise the question, I think it is a fair challenge and we address it in the preferred strategy, as I know you have picked up, that previously we did not make the reductions. I think that comes down to resourcing and commitment. I think that everyone started meaning really well but the reality is the funding was not available. I think what is different about this roadmap is that we are very clear about (a) what needs to happen over what period of time, which I think the pathway was as well, but what we have now is a funding strategy. As both the Ministerial team have said, we have got £23 million but that is not enough. We are very clear in strategy that if we are going to meet the trajectory of Paris it will cost a lot more than that. There is a future funding decision for future Assemblies to meet the difference from the £23 million to roughly what we think it will cost. Now, the truth of that is, if that funding or the ways to make these policies go all the way does not come about for whatever reason, we will not hit the Paris trajectories. That is a given and there is no getting away from that. That is the same challenge that every jurisdiction faces. Everyone is going into this problem with exactly the same challenge, that we are decarbonising an economy and a country that has taken hundreds of years to carbonise, and that is not easy and it takes a while and it takes a different type of economy to build that. That challenge is set and laid out very clearly. I think the Assistant Minister's point about the implementation schedule gives future Assemblies an understanding and a background of the decision-making they need to make. If they choose not to make those decisions or make them differently then of course that will be their right to do so. But they will understand the impact of that on the progress that previous Assemblies have signed up to. That I think is the big difference, is the

pathway and the governance of that to the roadmap approach. The governance of perhaps a Minister for Energy and Climate Change, which is perhaps proposed, a standing Scrutiny Panel which may be adopted, all of those devices that keeps future Assemblies true to the wishes of whatever this Assembly agrees.

[14:15]

**Deputy I. Gardiner:**

A quick question to follow up. If I understand correct that as this Assembly we will debate principles but we will not have in front of us the costs for the policies that we suggest ... how much it will cost, how it will be implemented, we will not have details.

**Head of Sustainability and Foresight:**

What you will have is ... you have seen the document. Of course you are familiar with the draft carbon neutral roadmap and that puts budget aside for the policies. What that does is it takes the £23 million that we currently have and apportions it to the beginning of policy delivery.

**Deputy I. Gardiner:**

No, what I am asking because in the roadmap overall, it is not just for this £23 million, it is future spending. As I understand what we will be debating, we will not have clarity what will future spending above £23 million be required; is that correct?

**Head of Sustainability and Foresight:**

You are right, what is being asked of the Assembly is to look at the first 4 years of delivery, which the £23 million will buy. What we know is the policies that are being proposed, if implemented fully over the period of the policy progression, will lead us to the net zero and carbon neutral to 65 per cent reduction at 2030. But you are right, what we are saying is we start that on the road. We know that if we can complete the road then we get to the right outcome. The difference in the funding, until we have the policies entirely finalised, will not be clear. For example, electric vehicle grants; we have proposed a way that those might be delivered and the rough size of them, what they might be. That will be refined. Then obviously you have got the very fine detail about what those policies will cost over the delivery period. The difficulty with some of the policy delivery is that we do not know beyond 4 to 5 years because there might be technology changes. For example, you might look at saying electric vehicles are the sensible transition technology for the moment. It may be that commercialised hydrogen comes in a lot sooner than we anticipate and the Island will say in 15 years' time we need to be hydrogen ready, and that will be where we end up going. We have to have some flexibility in the roadmap for technology change. But in terms of overall funding, the full funding that we said we think we need, the additional £250 million, is currently based on an extension

of the current policies. For example, running an electric vehicle scheme all the way to completion, how much that is likely to cost is forecast, and that was supporting work to the carbon neutral strategy.

**Deputy I. Gardiner:**

Apart from the Government Plan, would finalised policies come back to the new Assembly for the debate?

**Head of Sustainability and Foresight:**

It depends. So the implementation schedule, which I am sorry you have not seen yet because that is only ...

**Assistant Minister for the Environment:**

The ink is still wet.

**Head of Sustainability and Foresight:**

That is in the final roadmap. You will see it very, very, very soon. It explains exactly what policies need to come back, what policies, if the States Assembly agree, the Minister will go away and discharge because they will have had agreement by the Assembly and they will explain where there are future decisions and future legislation and how those ... what you will see - I am sorry I cannot show it to you right here and now - is each policy will have that outlined and what the governance for that is. So you will be able to judge ... whichever policy you are interested in you will see exactly where it then comes to fruition.

**The Connétable of St. Brelade:**

Moving to power, it was announced at the end of last year that France has had to shut down 2 of its nuclear power plants and the shutdown of a third plant was also announced in January. As an Island that imports our electricity from France, are you able to advise whether you are aware from any talks with Jersey Electricity that the present situation is likely to lead to any disrupted power supply in Jersey?

**The Minister for the Environment:**

At the moment, the information I have so far is negative on that. But I think we all know, and this relates to Louise's earlier answer, we are into areas of major uncertainty, global uncertainty. Energy availability and energy price is one such, and that is why the route map includes a shift away from just a price and a carbon neutral approach but also energy security. So energy security is absolutely paramount. So I think the current situation adds to the case not to track from the reasons why we need to do this. Of course I think that will increase ... it will bring some elements of that work forward,

for example. So at the moment I am advised, and Louise will speak of the detail at the moment from her contacts through Jersey Electricity, is that we have contracts in place which are up for renewal in a number of years and therefore that will be a matter of negotiation through that. But of course, my personal view is can one rely 100 per cent going forward on that alone and my belief is no. I think the issues we have had, sadly, post Brexit, they are settling down I believe. But those issues I think have really not helped and of course now we are into the European energy crisis. There are some things I would like to talk about because I know that we are not alone in having that conversation because I have had approaches from committee Ministers in Guernsey and Guernsey Ministers wanting to engage in exploratory talks about renewable energy possibilities and the Channel Islands going forward. Because we are all in the same situation. As I see it, that would fall under the energy triangle which appears loud and clear in the plan. Louise can give you more detail but, as well as that, I think also it adds to the case for micro-manoeuvrables and doing things to encourage much more of a, if you like, dealing with that energy security situation. Could I ask Louise or Gregory to pick up from that?

**Head of Sustainability and Foresight:**

Happy to, Minister. The initial question was do we see any shocks in security of supply or availability of electricity to us due to the French grid, and the answer is we do not anticipate that at all. Jersey Electricity are very confident that our supply contract is strong, as it always has been, and will remain so. The European grid is very good at balancing power and we are a good customer of the European grid at the moment. So that feels pretty good for the short term. I think the longer-term question around security of supply and provenance of our power is absolutely right for discussion. Strategic policy 2 talks about doing an energy market review. It talks about how we look at future energy models for the Island and think about what might need to happen to make those models come about. Part of that is looking at our electricity power. It is very likely, I suspect, that we would still always want to have some connectivity to the European mainland. It puts us into a European market for power where we can choose what power source we would like. However, the shocks we have seen because of Brexit, the shocks we are seeing because of the global tensions at the moment, and energy market volatility, mean that maybe we would like to look more to our own security of supply, and that is what the Minister was talking about in saying that realistically the time may well be right for us to start far more seriously discussing things like, for example, offshore wind, which we do know we have an investable resource. The electricity contract is up for renewal in 2027 and, as you can imagine, that is a long, complicated process to retender that supply contract. Jersey Electricity are preparing for that now thinking about what that contract might look like and getting ready to go to tender. As part of that work, there are discussions under way as to whether there is the potential to look at offshore renewables or on-Island renewables as a way to contribute to some of our baseload power. I think the point that the Minister made about security of supply, affordability of supply, sustainability of supply, are never stronger. The Government-led energy strategy, that we

talk about developing in strategic policy 2, I think is really important to help us shape our energy market. The reassurance is over the next 18 months to 2 years we will be unpicking that work with local suppliers, energy actors, but led by Government. That will be the plan.

**The Connétable of St. Brelade:**

Do we know why the power plants in France were shut down? What was the history behind that?

**Head of Sustainability and Foresight:**

No, I am afraid I do not.

**The Minister for the Environment:**

I do not know.

**The Connétable of St. Brelade:**

The impact potentially on the status of our Jersey carbon emissions is questionable really until we have something else in place.

**Head of Sustainability and Foresight:**

I am not able to say that the 2 plants that have been closed down are the ones that we buy from and will affect our supply, in any sense. I mean the European power network is a cross-jurisdictional blended source of power, although we buy certified power. The connection between the 2 issues is not directly relevant to us. We buy a certified product and we are not being told that there is any danger to that certified product. I think the point is, is the new contract will have to ensure that we get exactly the sort of power that we want at a price that is affordable to Islanders because it is not inconceivable in X number of years that power prices will be different; of course they will, we know that.

**The Connétable of St. Brelade:**

So there has been no indication from Jersey Electricity at this point in relation to their contract with E.D.F. (Électricité de France) that we will see increased electricity prices as a result of ...?

**Head of Sustainability and Foresight:**

I am not speaking to a future contract price, no, not at all.

**The Connétable of St. Brelade:**

Just within this, before 2027, I would have thought that we got sort of force majeure.

**Head of Sustainability and Foresight:**

Sorry, yes. So this is about hedging. The way that electricity prices are hedged by Jersey Electricity, and I am not speaking for Jersey Electricity, but my understanding of the situation is the way you buy hedging is you obviously buy it forward. So 3 years ahead you may be, I do not know, 25 per cent hedged, 50 per cent hedged, 2 years ahead. When you are a year out you are probably about 95 per cent hedged. So we are really well hedged because Jersey Electricity managed those price situations for us and they have done very well. They continue to do that. So we are currently in a hedging position where we are hedged very well for about 9 months. We are advised that there might be moderate price increases at the end of that period because although we buy nuclear and renewable energy the overall global energy market price volatility impacts all energy providers. It is not inconceivable we will see more price rises, is what I am advised. But nothing like the price rises that people who are exposed to natural gas price rises have seen in the U.K. (United Kingdom), for example. So I do not want to worry people on that level.

**Assistant Minister for the Environment:**

Jersey Electricity was quite keen to mention the fact that electricity prices in the U.K. will probably be twice that of Jersey before the adjustments. They have kept us with a very good market.

**Head of Sustainability and Foresight:**

I think the way they would describe it, and again not speaking for them, is the energy market is very difficult at the moment and Jersey is in probably the best place it could be in. But of course electricity is only one part of it. We are certainly seeing exposure in oil and gas products because of course ... sorry, petrol, diesel, kerosene, because those products, the Island is a price taker on those. It is much harder to hedge. They pay a spot price. So every time the suppliers bring in a new motor fuel they would have bought that on the open market and, as you know, those are changing very significantly. So I think the Platts price has gone up about 15 per cent in about the last month. Sorry, gone up by 15 pence a litre, I apologise, in the last month. So we are seeing real shocks there.

**The Connétable of St. Brelade:**

The panel received a submission from Jersey Electricity in which they emphasised that due to Jersey's low carbon electricity system a target to net zero should be faster than the proposed 2050 target. However, in the light of what I was just mentioning regarding reliability of France's nuclear power source, do you have a view on potentially setting a more ambitious target?

**The Minister for the Environment:**

I think the advice I have had is ... there are 2 targets in play, as I see it, which I think need to be considered together. The first is the obligations in the Paris agreement where Jersey has committed ... I think it was committed at the COP26 with the U.K. Government Ministers, and we committed internationally that we would sign up or asked for the Paris agreement to be extended to Jersey. Of



course that is net zero. There is no question of us having, what we all talk about, offsets in that. In other words, this ability to have offsets that are offset against residual carbon is not a characteristic of the 2050 Paris target. It is getting exactly what it means on the tin; zero carbon. Now, the advice I have had is that all of the expert work on this says that it is not possible, it is believed, to get to that point in 2030 to achieve the carbon neutrality goal, which the States have set, unless we put in place of buying carbon offsets. I do not know if Louise can explain that a bit more but that is my advice. My lay view, because I am a layman in all these views, is that if we are to spend money as an Island, because having offsets involves paying money, in my view it is better to invest that in our own infrastructure to achieve targets than it is in exiting that money from the Island economy and using that to our effect.

**The Connétable of St. Brelade:**

I think I would agree and what I am sure, again asking my next question in the same vein, do you believe that the proposed incentives within the carbon neutral roadmap will shift behaviours between now and 2025 and is it sufficient to provide that immediate required drive to meet the targets by 2050?

[14:30]

Or we go back to the quicker changes through ambitious incentives such as ...

**The Minister for the Environment:**

We could go faster. I mean if I had my way, for example ... it is an open secret, I think members of the panel know that the ... we all know that the principle emissions are transport and space heating. There is no question in my mind, we could adopt as an Island, a much more ambitious, some might use the word “aggressive”, strategy to reduce our carbon emissions from transport.

**The Connétable of St. Brelade:**

Without going to offsets?

**The Minister for the Environment:**

We could do that.

**Assistant Minister for the Environment:**

Let us start from the beginning. Our energy supply is already decarbonised, and that was quite a fantastic way forward. We have another advantage as we have no industry, so an industry is going to be the most difficult part to decarbonise for everybody else. In terms of energy source, the U.K. actually caught up with us. I am quite sad about that but it is good for them. But they caught up

with us so when we were quite advanced in decarbonisation we became average compared to the U.K. But the next step for them is transport, heating and industry, and industry is really not elastic. This is not something that you do easily. Fortunately we are spared that which means that now, if we work on it, we can accelerate faster than they do. Transport, I think, will solve itself reasonably easily. Heating is a much more difficult problem. It is very expensive. It is very expensive to change. Somebody may have a brand-new boiler which just cost them £15,000. They are not going to swap it tomorrow just by sending money to them. So that is very, very different. There are costs involved, so the daily cost of using the electricity for heating is different than if you had an oil boiler, but of course oil prices change. So the 2 targets that we have, 2030 and 2050, are fairly realistic, that this is what we can do. We cannot go faster than that. The last bit, because I have only mentioned 3, but there are all the scope 3 emissions; the emissions that are done on our behalf by other people when you buy stuff. Those unfortunately mostly have to be sorted by those other people. The firm manufacturers have to make sure that they can decarbonise the firm manufacturing before we can say that is one thing ticked off. Again, that will only happen at the end in 2050. As I say, we are not in a bad position. We are in a better position than many countries but we cannot go faster than that.

#### **Head of Sustainability and Foresight:**

Could maybe I come in as well please, would that be okay? It was to pick up on the original question. Jersey Electricity has said that they would like to see us go faster. Just taking us back, the Paris trajectory of emissions reduction, which has milestones that we have to hit, asks us to be 68 per cent lower in our carbon emissions in 2030 than in 1990. It asks us to be 78 per cent lower by 2035. There is a lot to do in those 5 years. Now, 2022 we are 37 per cent lower than 1990. So we have to get from 37 per cent to 68 per cent in 8 years. That is pretty ambitious. Now we could go faster but we cannot go faster than £23 million. We could incentivise people more. We could help people more. We could do things more if we had more money but we have stuck at the moment with the delivery plan on the £23 million. We are asking for the rest of the money. If there was more money we could help people transition more quickly. And that is the position that Ministers have taken, is to go with the money that we currently have and recognise that more money needs to come in to help the transition. So J.E. (Jersey Electricity) may be of the view that we need to go faster than double what we have done in the last 30 years in the next 8 years, but I think we have set ourselves a pretty ambitious target already.

#### **Assistant Minister for the Environment:**

One thing about this, all our calculations were made with a 90-dollar barrel. If you talk about a 200-dollar barrel, which people are considering now, and like £3 a litre at the pump, it changes everything. All of a sudden electricity becomes a cheaper way of heating, and electric cars become much cheaper than petrol cars. But of course we have other societal problems to deal with. It is only going to get cheaper but there is a strong chance that it will get faster with other intervention.

**The Connétable of St. Brelade:**

Just to go back to the electricity for a moment. Policy 2 assumes that electricity imported to Jersey will remain carbon free - or low carbon - affordable and reliable. With all that is going on, how can we be sure that that is going to be the case?

**The Minister for the Environment:**

The contracts up to now have put the Island in a very good place. What I understand, I have not had this conversation with J.E. personally but I have heard reports from the officers, that their relations with the power company in France is extremely constructive. But of course all of us are subject to political exigences and nobody can guarantee. But I think my question is about what we are proposing in here is that we need, I think, to also explore ... we cannot afford to rely, I do not believe, 100 per cent on that remaining so for the future. We should do our best to make sure that we can because why ... to working constructively and carry on with a constructive and co-operative partner and getting a good deal. So that deal will be negotiated. I think there is an issue for the Island which does come out of this strategy. At the moment obviously we have an independent ... it is not an independent it is a partly government-owned single business provider and I think obviously at the task to work with that company, as Ministers in taking this forward and do it in a way where we come together, find ways of meeting these challenges. That, I think, could involve potentially lots of different structural changes to the energy market and so on. But that is work to be done, which I think follows through from these draft policies and I believe will be reflected in the implementation schedule, which I know Louise, Gregory, and Jess have worked on with the officers to try and translate to give greater certainty. Well, not certainty because I do not think it is possible to give certainty but to see greater clarity about how sitting here now with what we know and who has got what responsibilities how that could be taken forward to give greater clarity on that. So I wish we were having this meeting tomorrow because, this morning, we were able to talk with the Council of Ministers and I am pleased to say we did secure their agreement to the revisions and the green light on lodging. So it is a shame that we have got ourselves into this procedural hiatus but we have to stick to the rules.

**The Connétable of Grouville:**

There may be practical challenges with electrification, things like the infrastructure and cable requirements, if we all go to electric cars and electric boilers and everything else.

**The Minister for the Environment:**

Well, there are issues in the network. Louise is very au fait with those and I think Louise will talk you through those.

**Head of Sustainability and Foresight:**

Yes, so can I just go back perhaps, Constable, to your question and I think it is a very good one about how can we be sure that we are going to have access to low carbon electricity in the future? Even if we move to a position of self-generation, I can imagine we will always have a baseload from the continental markets, so it is absolutely right. We are going to have to renegotiate a contract. We have always done that very successfully in the past. What we need to remember is we are renegotiating with the European energy market who have legal obligations to decarbonise. They are not going more oil or gas. They are going more low carbon so when we go to renegotiate, we will be renegotiating with a market place that will be attempting to decarbonise too so there is every reason to hope and think that we will have access to good solid renewable hydro, nuclear, whatever our choices are at that point. So I think that is important to remember that we are in a global decarbonisation drive. We are not trying to do this alone so that is important.

**Assistant Minister for the Environment:**

That is an important point. Our access to the grids is with France but our market for purchasing electricity is with Europe.

**Head of Sustainability and Foresight:**

Yes.

**Assistant Minister for the Environment:**

So we are not limited to just the one power plant.

**Head of Sustainability and Foresight:**

Yes, and I think the Constable's second question was about the network availability, which I think it is really good point, and this was something that came out strongly in the consultation responses. So we have a lot of capacity in the interconnectors so we can get as much power to Jersey as we model that we might need with advance electrification, so that is a really great position. The main distribution network of the Island is also pretty strong. Where there is acknowledged need to keep improving is what we call the "last mile" so it is the bit from the main distribution network to particular houses or particular businesses and Jersey Electricity will happily tell you that there are some parts of the network they will need to upgrade more than others. They understand that and they have acknowledged it in their 2021 report that has just come out that they recognise that there will have to be a programme of network expansion, and they have been planning that for a very long time. So they have that programme and we think that one of the best ways of reassuring members of the public as to where their business or their home will be able to electrify will be for Jersey Electricity to be working with Government and with customers to say: "The network in your particular area is strong." "The network in your area is perhaps going to take another year or so to upgrade." They

are prepared to do that network investment, which is over £100 million worth of investment over a long period of time, to help bolster the network to make sure that everybody has the ability to run electric cars and heating systems or whatever it might be. Also what the network will need to do and, again, that is completely acknowledged, is if people begin to move towards self-generation so perhaps they are generating themselves from P.V. (photovoltaic). We can see a situation in the future where they have battery storage and they are using their car as a storage device. We can see how electricity systems are going to change. Again, the network will have to evolve and grow to take into account the fact that it is not just buy from one direction and sell to a customer at the end of the line. It will be a far more dynamic system and of course people who design and manage networks like J.E. are very well aware of that challenge and very well aware of the need to invest and grow in there. So the reassurance I think to people of where that investment is going to be made will come from Jersey Electricity. It will come through the energy market review where we will be asking energy providers to show us their transition plans, so how do other industries intend to transition in with the zero-carbon agenda? Part of that, for Jersey Electricity, will be sharing their network expansion plans to help people realise where and when options are open for them, if those options are not there already, and of course many people can already make the transition.

**The Connétable of Grouville:**

I know somebody who has replaced their obsolete oil-fired boiler with an electric boiler and they are at the end of the line. It is not very good, I have to say. It is very disappointing. What consideration has been given to large scale development of local renewable energy sources to provide alternative sources of energy when tidal and solar close up?

**Head of Sustainability and Foresight:**

So decarbonising energy generation is there. You are absolutely right. I think long term, the understanding is so many of these options are now investable. So offshore wind has been on the cusp for a while and now it is pretty likely to be investable and we have some more work with Jersey Electricity to look at feasibility work we did a few years ago and dust it off, bring it up to date, do some work with people who might look to purchase our power and start to see if we have an investable case for Government to consider if they want to go in that direction. Of course, all of that is long-term thinking. Even if we woke up tomorrow and everyone agreed that we should build an offshore wind farm - and I am sure we would not do that but let us imagine we woke up tomorrow and agreed that - it would still take 5 to 7 years, if not longer, to have a turbine in the sea. It is going to take a while and the reality is the target is 2030 so we have to look at what is available to us here and now with an eye on the bigger picture, which I think is exactly right looking to energy sovereignty, sustainable energy generation from something like tidal or something like wind. It is there in the mix but the first tranche of delivery is about the options that we currently have. We are talking a lot about advanced electrification but you have seen in the policy we talk about renewable road transport fuels

as well as transition fuels. We talk about reducing energy use. That is the easiest way to reduce carbon, it is just not to use the energy in the first place. So we are using electrification shorthand here for the zero-carbon agenda but that is the first step, is working with what we have.

**The Connétable of Grouville:**

How do the policies proposed within the bridging Island Plan intend to support the advancement of local renewable energy sources?

**The Minister for the Environment:**

They have been dovetailed. There is no question. Kevin Pilley has been leading on that project and Steve Skelton, who are both under a very, very high strategic level, have set out to make that the case. I think there has been a lot of interaction between both the Island Plan project and this project to ensure that those are as dovetailed as they can be, so I feel very confident about that.

[14:45]

I think there are a few sort of challenges in the Island Plan debate. I think we touched upon some of those issues this morning perhaps in terms of the housing procurement issues that are evolving about energy consumption for building, but I think the framework we have ended up with, including the amendments that I have lodged that the officers have worked on, will serve us certainly for the period of the bridging Island Plan. Obviously, the roadmap is a much longer-term proposal and so I personally think that during that period, a lot of the factors that we have spoken of will change and will become clearer and there will be a need to the new States and beyond to respond to that. That will involve all sorts of changes and probably changes to future planning policies, future buildings regulations even further and indeed funding mechanisms and fiscal measures and all these sorts of things. What I think we have here is a route map that sets out a path which provides that framework for those things to happen. I shall not be in the next Assembly and that is my personal decision. In some ways, I kind of wish I was because I feel really excited about this but nonetheless I feel that the community, as a whole, wants this. That is the feedback we have had from the public consultation. A huge, huge buy-in from the public. Issues about: "Yes, how do we do this? How do we do that?" but a real buy-in and I do not personally think I see that changing because of the awful situation we are in with potentially war in Europe. It will affect it but I think it adds to the case.

**The Connétable of St. Brelade:**

I think the enthusiasm is ahead of the technology, truthfully.

**The Minister for the Environment:**

Well, I think that the roadmap realistically is to look to that issue so I do not think this roadmap is taking a rose-coloured glasses view. I do not. I think it is taking a realistic view.

**The Connétable of Grouville:**

Which leads me to my next question. The citizens' assembly recommended that hydrogen-powered vehicles should be investigated, and this was noted by the Minister or by the Minister's response under active consideration. Is there any update on where we are with hydrogen? How far away is a hydrogen lorry?

**Head of Sustainability and Foresight:**

So a hydrogen lorry in Jersey is quite a way away because that technology is not commercially available yet. That is not to say that it will not be soon and then it is not to say that it will not be spatially for Jersey but, at the moment, it is not looking very quick for us. I know the Assistant Minister wants to come in and I am going to give way.

**Assistant Minister for the Environment:**

Essentially, it is one of my favourite subjects. Hydrogen becomes useful in very, very specific cases but mostly when you have so much energy that you do not know what to do with it and there are not many places where that happens because it is reasonably easy to do. It is reasonably easy to make hydrogen but you lose a part of your energy in the transformation. So when you fill up a car with electricity, you get about 70 per cent of the energy generation when you put it back into the engine. When you use hydrogen, you get about 10 per cent. I am going through the whole chain but the energy back into the wheels is about 10 per cent of the energy you started with at the plant, so it makes completely no sense as a generic product. So having hydrogen everywhere instead of electricity makes no sense because you lose so much of it before it is transformed back into power. However, this is not entirely true for everything. There are many vehicles which will not do very well with batteries. Aeroplanes. It is going to be very, very difficult to put batteries in aeroplanes. It makes no sense whatsoever to put batteries in boats. It is much easier to use a boat with fuel when you are talking about something that is going to be 4 weeks at sea and in what capacity you would need a battery for. You use it once. It makes no sense and then the cost. It is quite interesting because you can buy an electric boat today. It has 2 hours of autonomy and the battery costs £200,000 for a 10-metre boat, so it makes no sense. You could have 3 weeks of autonomy with a tank of diesel but that is where fuels, biofuels and hydrogen, can become interesting. So it is not terribly good to put it in our plant. On the other hand, there are a few technologies that are completely mature so wind generation, that is mature. That is as good as it will ever be. It was not 20 years ago. Now there is really nothing that you can add to it. You can keep making them larger because the larger they are, the more efficient they are, but that is about it. Apart from that, it is finished. With battery technology, we are getting extremely good. The latest batteries for cars are really good.

There are some incremental changes that will happen especially in chemistry so they will become more environmentally friendly which is very, very important, but they will not increase dramatically in capacity. So, again, it is something that is really getting mature so we can really bank on those things because we know them and they are mature. There are other technologies that are still quite far away. Tidal, for example, we know is possible but it does not exist today.

**The Connétable of Grouville:**

Biofuel?

**Assistant Minister for the Environment:**

There are 2 paths. Biodiesel is quite good today so we have a very, very nice product but it relies on second-hand grease and fats and on grown oils like palm oil. So it is a very good product but it is always going to be limited in quantity. There will never be enough biodiesel to supply everything and that is one of the strategies that we have taken is to say: "We want some of it." We want to secure a good supply of it but not to power everything but to power the things that cannot be powered otherwise, like tractors, machinery plant and boats, so that is why we want to have a good little supply set aside. There is potential for synthetic petrol. There are at least 2 large companies that are working on making it. This is fuel that you extract from the air so basically you take carbon from the air and make fuel into it so it is very, very neutral which means, if you use it, you are going to be carbon neutral. It is likely to remain extremely expensive so it probably is going to be again for small use vehicles that are very difficult to change. Sport cars. Porsche is one of the people that are working on synfuel but they expect that it will be about 4 times as expensive as petrol. So even if petrol goes up, it will still be quite expensive. So they are marginal and they are quite likely to stay. Aeroplanes, for example, will very, very probably need fuel for decades from now, so they are marginal but they will remain for quite a while.

**Deputy I. Gardiner:**

It is clear for us, technology will move forward and we will see different prices but if we are going to finance it as it stands today, then all the significant investment will be required for Jersey to facilitate and meet our goals. However, we have a budget currently at £23 million. We have proposed incentives between now and 2025. How confident are you that the proposed incentives will deliver the best value for money in respect of carbon reduction outcomes?

**The Minister for the Environment:**

Well, the work has been done in the draft roadmap, it is to focus very much on that, of what can be done to best effect in the next few years and how to use that £23 million to give the best outcomes. So that has been the challenge of the work that has been done. So the recommendations put forward are the ones that give the biggest payoff. You have seen various degrees of financial



support structures to be able to support transition but of course will that be enough? Well, no, it is not.

**Deputy I. Gardiner:**

No, but I am talking about the money that was allocated now to the incentive to give us the best value for money that will be available.

**Assistant Minister for the Environment:**

It was also my speciality because I led the panel that looked at all these and tried to distribute the money in the most effective way, so we have seen all of these used in other countries and remember it is not just money that we plant in so it is not only the budget but we have used the stick a little bit. So, for example, the possible subsidy on buying an electric car is also helped by an increase in vehicle emission duty. So by using both, we are making the differential cost of buying big and we are trying to hit the largest engines and the biggest polluters. So we are really narrowing the spread between buying an electric car and buying a petrol car by using both and, of course, if people really insist on buying a petrol car, that money can go back into the fund and be reused because it will be set aside specifically for that. So, yes, we spent quite a lot of time. It was an accelerated process but we did spend some time. We had Members from the whole Assembly. It was not just within Government. I just saw Deputy Morel across the street who was a member of the panel and we looked at exactly what would be the most efficient.

**Deputy I. Gardiner:**

The most beneficial.

**Assistant Minister for the Environment:**

We are really positive that we have made the right decision.

**The Minister for the Environment:**

I think they are the best we can come up with now but of course things will probably change. For example, one of the things that impressed me, and Gregory has spoken about using the stick on the vehicle emissions duty as well. We know and I think the expectation is that there will be a journey. At the moment, there is a differential between the cost of carbon vehicles, if you like, and electric vehicles. That is expected to narrow and so, therefore, the financial schemes need to factor that into the plan but I think these are really, really good starts.

**Head of Sustainability and Foresight:**

So I think what Gregory was explaining was the multi-criteria analysis tool. So you are absolutely right. There is no shortage of great ideas on policies that will produce carbon emissions. The

citizens' assembly has lots and lots and we have only got so much money, so you have got to somehow prioritise, right. So the multi-criteria analysis is a tool that was worked with us from PwC (PricewaterhouseCoopers) who were working on the future economy programme, and it is a weighted tool and you set it up and we set ours up to be 50 per cent carbon weighted. So you score each policy over a number of criteria 50 per cent of which were carbon abatement potential but other relevant factors. So we sent all of the proposed policies through that tool which helped Ministers in the Carbon Neutral Steering Group to start to prioritise. So there are some policies which are really, really great policies and they just were not quite as good as another policy, so you have to start making decisions about where you prioritise. The Assistant Minister's point around looking at policies that have worked elsewhere, so they are tried and tested, you can see the very likely impact of them in the local environment weighed against a plethora of factors including affordability, accessibility, equality, income distribution and carbon weighting, which allow you to start to sift through those policies. If you have got more money, you can do more policies and of course you understand that.

**Deputy I. Gardiner:**

No, but thank you. Yes, it is helpful to understand how the decision process has happened and has worked.

**Head of Sustainability and Foresight:**

Absolutely, yes.

**Deputy I. Gardiner:**

I have a quick question. What considerations were given to increase taxes or duties at marine and aviation because you said with the planes and boats, the technology will probably take much longer to be there? So what consideration was given in how marine and aviation maybe duties or taxes can contribute to the financing of our carbon neutral plan?

**Assistant Minister for the Environment:**

Aviation is a little bit special because they can buy anywhere. There are very, very few planes that just fly around Jersey and come back and refuel. They all do trips so this is a completely international market so that market, unfortunately, has to balance out everywhere else otherwise we would not sell any fuel at all in the Island. Boats are a little bit different, and I must admit that we have not looked at them. What we have looked at is the fact that they will need fuel in the future and that we want them to use biofuel and of course, right now, biofuel is much, much more expensive than what boats pay for red diesel. So we have not put that in the plan but there needs to be a path where they end up using biodiesel, which is much more expensive than what they pay now.

[15:00]

**The Connétable of St. Brelade:**

Once again, we have to be on a par with the rest of the marketplace.

**Assistant Minister for the Environment:**

It is a little bit less important for boats but it is true. If you can just go to France to refuel for 6 months, it is different. For planes, it is guaranteed because a standard plane will do 7 or 8 legs in a day. They will refuel at the best price they can have.

**Deputy I. Gardiner:**

What consideration was given for utilising using the COVID-19 recovery while providing support to the Jersey economy to grow our environmental goals so supporting businesses to go green?

**Head of Sustainability and Foresight:**

So there were some applications made to the fiscal stimulus system and some of those had a kind of Build Back Better connotations. I think there were some of the ones that we put in a bid that did not make it over the line in terms of deliverability so, unfortunately, that one was not accepted. You have to stand and fall against other people. So, currently, the financing has remained within the Climate Emergency Fund envelope but I think the point that is made is that we know we are going to need a lot more money and how we find that, where it comes from is of course open to part of the financing strategy. Thinking about the question as well that was asked about duties on transport fuels, I think it was felt, as the Assistant Minister has answered very well, that the international market is quite difficult. We have to be very careful that, as an Island, economically we rely on external links to keep us competitive so you have to be a little bit careful about where you start to put those levers. I think that something that came through out of the consultation response that is worth thinking about is people's views on things like private planes and private boats which would appear, on the face of it, to be discretionary and leisure purposes and perhaps those should be taxed or not so that is not in the draft carbon neutral roadmap but it is worthy of consideration in the next phase I think.

**Deputy I. Gardiner:**

Probably about the recovery and the extent that it is something that can be considered further, we can get that stimulus fund and it is finished, but we will still need to invest in the recovery of our economy in post-COVID time as in how it can be connected.

**Assistant Minister for the Environment:**

There is one. It is the technology fund. If this comes forward, there will probably be projects that can fit with the budget and work towards that.

**Deputy I. Gardiner:**

Just to keep it, I think at the back of the mind, say, how we are making this investment and connecting to it. Governance and oversight is another part. I think it all was clear that, to achieve our goals, the focus on commitment and strong leadership will be required. We all can see that we have to co-ordinate this across all departments across the Government. It has been suggested by the citizens' assembly to have a Minister for Energy. We also looked at other jurisdictions and they establish and I will read it out: "... dedicated independent statutory reports to advise Government to monitor and to report to parliament regarding their climate change objective." The U.K. has established a Climate Change Committee to provide independent advice on setting and meeting carbon budgets and preparing for climate change, monitor progress in reducing emissions and achieving a carbon budget, conduct independent analysis into climate change, science, economics and policy and engage with a wider range of organisations. So the U.K. Parliament has this Climate Change Committee that is presently engaged. Would the Minister consider this type of independent committee can be helping in the decision-making going forward in Jersey?

**The Minister for the Environment:**

I will answer your latest question. I think there is absolutely no question that we do need, as part of this roadmap, to have in place both a governance procedure and, if you like, a monitoring process. So I think the 2 things that are clear at the moment - and I cannot avoid bringing in my personal view which is very much to support the recommendation that came out in the citizens' assembly - is that there needs to be what I think we have come down to phrase "a Ministerial portfolio". So I think in terms of when we talk about the Minister, we talk about adding somebody at the table at the Council of Ministers in that sort of way. I think we are talking about having a very clear portfolio for an elected Member who is put in place with the responsibility of achieving that co-ordination across the piece because, as you say, it involves issues. Energy crosses over into infrastructure. The whole question that the Connétable was raising there about network and all this kind of thing. We have got financial issues. We have got fiscal issues. No question about it. Fiscal levers that we pull again to achieve the right effects and raise some money.

**Deputy I. Gardiner:**

Education.

**The Minister for the Environment:**

Yes, to both raise money and influence behaviour. Those are what we have fiscal levers for. Those need designing so I think, at the moment, we have been able to get it this far without that structure.

My own view is that we will need that going forward. Now we also need the other elements. I think we have seen how we have worked with the community or the citizens. I think it is shaping up a little bit like what you might call “a network” where we have some structure in place for businesses, community and others. I think that will probably have to be a standing body and there needs to be a dialogue between the Minister and that. Now whether we need an expert body of our own, an independent body, I am not so sure I would go that far at the moment. We are quite a small community and I think we should be able to have a bit more confidence that we do some of these things ourselves but we can buy experts. That is my reaction. My colleagues would probably have a slightly different reason but, yes, you are absolutely right. Can I put on the table the details of how that structure will work? No, I cannot because one of the things that I should probably put a flag up on here, and I think I voiced it this morning, is I am planning to bring my own proposition as a private member anyway to assist the States and the new Chief Minister to bring back to the Assembly a Ministerial structure, one which reflects the challenges of Government and able to adapt rather better. So that will be for the next Chief Minister. The rules do not allow us to have that now, and nor are we being prescriptive, but nonetheless what is in here is it contains the recommendations that have gone through the citizens’ assembly that there should be that co-ordinated Ministerial portfolio. However that is done, there are lots of different options for doing that.

**Head of Sustainability and Foresight:**

If I could perhaps add to that, so from the other end of the telescope, the scrutiny end, it was proposed in the draft carbon neutral roadmap that Scrutiny might consider having a standing panel that looked at energy and climate change. That would mirror very nicely if there was a Ministerial portfolio for energy and climate. You would see a standing Scrutiny Panel who would hold Government to account on the long-term delivery. So going all the way back to the chair’s very first question, which was why did Pathway 2050 not work as well as we would have liked? Part of that was it would have been nice to have a stronger sense of joint accountability for delivering those targets and to ensure that we were able to continue the pathway that we started and that perhaps we strayed a little from in terms of the loss of budget over the course of budget cuts and all that kind of thing. So the potential for this to be a stronger piece of work because of the long-term governance and oversight has to be right, otherwise it is true, it will just be a report that dies away quietly and we do not achieve those ends. Because it will not be easy to do this and we are only going to do it if we really commit to it and really hold ourselves as a community and an Island and as a Government true to it.

**Deputy I. Gardiner:**

There are 2 points I would like to pick up. Thank you very much. First, I will put now aside the Ministerial position, which will oversee, I think that we are on the same page. I would like to raise

the independent type of committee that they have in the U.K. Which issues would you see, what will be standing as a disadvantage of establishing this committee in Jersey?

**The Minister for the Environment:**

The agenda comes out of the action plan or the implementation plan that will be in the final version. For me the things, if I was staying on in Government, that I would really see a real priority, I would want to look at the way we structure our energy market. Because, if we are to facilitate that transition, we need to look at how effectively we can encourage the uptake of micro-renewables and all those. In fact, how we are geared up to be able to deal with longer-term investment possibilities in infrastructure, major infrastructure. Already we have spoken about the network, very substantial sums of money. But also prices, because we should not forget, I am sure none of us do, that when the States set us this goal they said not only must we bring forward a plan that makes this journey how we do it, but that journey must avoid creating fuel poverty. Fuel poverty takes you into pricing mechanisms and tariffs. So that is a whole body of work that I would personally want to see. The whole issue of fiscal levers, because fiscal levers can allow us to make faster progress because we can invest more, if we get those right. Those are my personal things. Those are big tasks that I would want to see us do. There is also the technological stuff. You want the scientists, the engineers, all the drones picking up the ideas. Because we have already seen now, we get messages all the time from people in business saying: "I have this idea. I picked this up." One wants to be able to capitalise on that and find a structure where we can lock that in. Also, that goes into the community as well; the community has lots of things, some ideas. So it is not just like a top-down Government-led thing. This is a structure and the governance that unlocks all those things.

**Deputy I. Gardiner:**

But this is about the Government's accountability because our term is a 4-year term and we will change. Scrutiny does play an important role with oversight. At the same time on the Scrutiny Panel we might not find enough expertise to fair. You need to understand, to have some scientific background.

**The Minister for the Environment:**

I see, bring in expertise of course, absolutely. I will leave it to my colleagues what they think the best way of doing that is, but it is a principle that we get the best expertise, we bring it to Jersey.

**Assistant Minister for the Environment:**

We are already doing that.

**Head of Sustainability and Foresight:**

The Deputy is probably thinking a little bit like we use the advisory panel for the citizens' assembly. The Scrutiny review of that praised the fact that the advisory panel were able to bring a degree of independence and knowledge to it, which was helpful. It certainly was. It was fantastic. We had great quality advice there. What you are suggesting is that something like that would stand in perpetuity to help keep the roadmap ...

**Deputy I. Gardiner:**

To be neutral and to make sure there are no private interests involved and it is independent.

**The Minister for the Environment:**

Now I see. I get your point now. You are worried about inbuilt conflicts of commercial issues.

**Deputy I. Gardiner:**

I am worried about looking into the Government's accountability and we will need to build a structure that does not exist, which will guide the Island through these policies to our goals within 2030 and after 2050. So it will have a Minister and it will have Scrutiny and there is some independent committee ...

**Assistant Minister for the Environment:**

But the principles of governance and accountability are the same whether for a business ... you do not need to be an engineer to check that money is banked properly and that there are no conflicts of interest. I do not think we need that. I think the P.A.C. (Public Accounts Committee) is perfectly able to check whether this is right.

**Deputy I. Gardiner:**

It is something that maybe we need to consider because it is an ongoing journey and it has been established in other jurisdictions because it does work as to give independent advice.

**Assistant Minister for the Environment:**

Remember the ...

**Deputy I. Gardiner:**

I will not go there.

**Assistant Minister for the Environment:**

Every single time we do this, we spend money. Money that we have a very good goal for. So we do have to be careful. If we have a mechanism that works for the goal that is needed, the last thing

we should do is to create more panels and more budgets to look at this. In this particular case, absolutely the whole of the rest of the world is doing it.

[15:15]

So it is only to look at Jersey as a special case and say: "What are we doing in Jersey? Is it the right thing?" Just look at what every other country is doing and say: "If we do something radically different, is there a good reason for that?" You do not need to be an engineer or scientist to do that.

**Deputy I. Gardiner:**

Maybe we need to see how we are creating the networking with other cities and to have this monitoring with all of this.

**The Minister for the Environment:**

No question, networking with other jurisdictions, but I am with Gregory really because we are a small Island, we are a democracy, and I personally need some persuading that we create a lot of external structures and just contract it all out, and it is all right because they say it is all right. I much prefer to use our resources well and effectively and control our own destiny. But make sure we take advice and work, but that is a philosophy.

**Assistant Minister for the Environment:**

We do have to be careful. When we do something like that, it costs us the same as it costs the U.K. to do it. But the U.K. does it with 700 times our economy. So they have a group of 10 people to do this; it is peanuts compared to their economy. When we do it, it is very serious. So we must be very, very careful with that if we have the systems already in place. In this case, definitely governance and accountability throughout Government, I do not think you need to be a technician, I think you just need to be able to count carefully and understand the problems.

**Deputy I. Gardiner:**

But the question how we as a Government, as an Assembly, receive independent advice, monitor and reporting, so we know that no other interests are involved. Because it is coming from the public, it has been raised.

**The Minister for the Environment:**

This is why we have Scrutiny. I think Scrutiny do a fantastic job. We have seen in the last few years probably the best performing Scrutiny that we have had for years. You certainly keep those with the authority and decision-making on their toes. I would expect, if there are problems or things went wrong, you would say so. That is my thinking.



**Deputy I. Gardiner:**

I am just exploring this.

**Head of Sustainability and Foresight:**

If I could just make one point, a lot of this is a political discussion, which I do not want to step into that arena. But the thing that I would say, the ultimate arbitrator of our progress is our carbon emissions and they are independently counted for us. So I know that is not quite the same as what you are asking, but the point is that our ultimate progress by the tonnes of carbon we are reducing by every single year or not, it is an independent process. So that is the first step in accountability. I fully recognise that the Deputy is asking about something a bit deeper than that. But just to make that point.

**Deputy I. Gardiner:**

Thank you. So we can move to the next.

**The Connétable of St. Brelade:**

Strategic policy 4: the policy programme and development, enabling policies. The draft roadmap proposes creation of a carbon neutral alliance, which is policy EN2, which would encompass businesses and community groups to encourage decarbonisation in Jersey. Considering that £500,000 has been allocated to support this policy, how will this money be utilised and are you confident it will demonstrate the best use of money in respect to the policy objectives and carbon emission reduction?

**Assistant Minister for the Environment:**

I would like to start off. The first thing is that, for reasons beyond my comprehension, it is not anymore called the carbon neutral alliance, it is now called carbon neutral network.

**The Minister for the Environment:**

Good to get that on the record. Unless there is budget, it is not going to be able to do anything. That is the starting point. It has to have a budget.

**Head of Sustainability and Foresight:**

If I can come in on that one. The idea within that, and I am sure you have seen it yourself, is that there is an idea that there would be the provision of small grants to help stimulate local networks. So some of that money is clearly some resource to make things happen. Again, going back to the very first question, why did Pathway 2050 not do as well as it wanted to? Probably because it did

not have the resources. So we have been very clear in this one where we are putting additional resource and people to help other people. So the alliance network ...

**Assistant Minister for the Environment:**

Is that where we put the Parishes?

**Head of Sustainability and Foresight:**

Yes, so the Parishes would be with us in this. The idea behind the network is that it would be businesses, third sector, Parishes, all of those sorts of groups, the local community, who are all making incredible progress in many different ways, to work together, leverage knowledge, help one another. But also the concept would be that there might be a small grants funding there to help people with micro-initiatives. There might be some training, so for example you might want to bring over someone who could do training on energy performance certificates. That is probably not a good example. But micro-initiatives like that, which can help a network of people in practical measures. So that is what the budget in there is for. Some of that will help generate momentum within the network for learning and expansion. So that is the idea behind that. Just to add one thing, the important point about the network will also be to help signpost people to best practice. So what we often hear is imagine a small business owner, you are running a small business, that is a full-time job in itself in a difficult marketplace. Perhaps it is incredibly difficult to find the space in your day, in your business planning, to be able to think about your carbon neutral objectives. You can see something like the network having toolkits and resource to help those small businesses, as an example, to be able to point them towards grants that they might be eligible for, towards tools that might help them, benchmark their environmental performance and make progress. Point them at other members of the network who can share best practice. That sort of knowledge exchange and signposting would be very useful for a lot of small businesses. Of course what we know about the Jersey economy, and many, many of our businesses are very small with very few employees, which obviously means that the day-to-day running of their businesses is a full-time job for them and there are plenty of other things they would like to be able to do that perhaps they do not have the space for. So that would be the idea behind the network to help with that.

**Assistant Minister for the Environment:**

Fertiliser for the grassroot movement.

**The Connétable of St. Brelade:**

The policy EN5, blue carbon, biodiversity and sequestration. The draft roadmap notes the development of a marine spatial plan by the end of 2023 to manage the needed regulatory and consenting frameworks for the blue carbon sequestration. Moreover that strategic policy 5 of the draft roadmap requires the development of a carbon sequestration framework to address a range of

issues. Although the draft roadmap notes that work is being led by the Marine Resources team to investigate blue carbon, what work is being done to investigate soil carbon storage and who is leading that work?

**Head of Sustainability and Foresight:**

I can do soil carbon. There was some money put aside under the Biodiversity Crisis of the Climate Emergency Fund a couple of years ago to put towards a P.h.D. (Doctor of Philosophy) in soil quality on the Island. That is to develop a piece of work that would measure our current soil organic matter, but a number of other issues around our soil, because obviously we know our agricultural soil has been very heavily worked in the Island. So the purpose of that study was to look in depth at our soil quality and where it has room for improvement or not and map that out and see where there are possibilities for increased organic matter in soil, which of course can lead to carbon sequestration. So the answer to your question: what are we going to do about it? There is some money put aside and there is a project being worked up at the moment to attract a P.h.D. student to come and work on that matter for the Island.

**The Connétable of St. Brelade:**

Do you have a timeline for that?

**Head of Sustainability and Foresight:**

I believe that the business case is in the process of being signed off at the moment, so we would be able to start recruiting a student this year.

**The Connétable of St. Brelade:**

Good. It is our understanding that the Government was undertaking work in 2019 with Cranfield University on more accurate baseline studies of soil organic matter across the Island. This was to identify and implement additional measures to increase the sequestration. Is that the same student?

**Head of Sustainability and Foresight:**

Not necessarily the same student, but the same package of work; so the work that we are doing around soil to better understand the position. Then probably baseline work that has helped setting up what the P.h.D. student might look at. So that is all packaged together.

**The Connétable of St. Brelade:**

Are we still working out of Cranfield on that?

**Head of Sustainability and Foresight:**

I believe so, yes. I can get you an update on that to be completely sure.

**The Connétable of St. Brelade:**

Thank you. In policy EN5, much of the funding for 2022 to 2025 is allocated to biodiversity, namely £1.325 million. Is that not short-sightedly cutting off support for the development of blue carbon beyond the delivery of the marine spatial plan?

**Head of Sustainability and Foresight:**

Do you mean because there is no further funding?

**The Connétable of St. Brelade:**

Yes.

**Head of Sustainability and Foresight:**

The sequestration plan will identify the need for some funding, which will probably then have to be turned into business cases. The reason it is not in there at the moment is because we do not know what that looks like. So do the sequestration work ...

**Assistant Minister for the Environment:**

The other thing is that we are talking about protecting areas, so we need to know what it means to protect them, what it does to them. You are talking about marine grass, sea grass, that sort of thing. So first we need to know what they do, what they really absorb, and if the figures are very good then we need to protect them, which is a different job that does not need money. I believe that is why there is no extended budgeting because we need to know exactly how much you get from your hectare of grass, and then you need to put it in a Spatial Plan to make sure it is protected, because you know how much it brings in carbon offsets. But that part does not cost anything.

**The Minister for the Environment:**

This blue carbon is an exciting development that is happening. Obviously difficult to predict the pace. As I understand it, Louise, at the moment the accounting for carbon assumes that blue carbon sequestration is already a given. In other words, the accounting system for carbon emissions does not take account of it. But we all expect it will. Of course the early work is pretty exciting, particularly for island communities who have these seas that are both biologically wonderful environments, as Gregory has spoken of, to understand them and then see what we are told is the potential for blue sequestration is enormous. But that is very early work. The work has been picked up and certainly when Louise and I met with other islands, other islands are all very interested in this. So this is an area where our investment in marine science on the back of Brexit and what have you has really potentially shown us some exciting opportunities, a way forward. But they are not going to happen in the next couple of years.

**Assistant Minister for the Environment:**

Carbon sequestration in the water is several times that of the land. It is very, very good. The one thing we cannot do is take account of processes that are already taking place. We cannot account for the trees that have already grown; it is the trees that we will grow that take carbon out of the atmosphere. The problem with sea beds is that now they are damaged, they are disturbed by dredging and by trawling. So they are absorbing the carbon that they should. In fact, they probably produce carbon because they have been disturbed. So we need to know exactly where those sea beds are in Jersey, what they could produce, and then by protecting them from, for example, trawling, all of a sudden reverse the process and absorb carbon. Those are offsets that we can account for. Those are figures that we can put into our accounting for carbon neutrality. Of course we have way, way more sea beds than we have fields.

**The Connétable of St. Brelade:**

Considering that soil management supports other initiatives including clean water, biodiversity, food security, nutrition and the natural environment, has soil management as a target for investment in the draft roadmap been inappropriately dismissed? If so, why?

**The Minister for the Environment:**

I do not know that it has. You spoke of the Cranfield investment. If Mr. Peggie were here, he is leading on that work, I know it has been talked about at the farming conference a number of times.

**Assistant Minister for the Environment:**

I will put it in another way. Demonstrated offsets have a market. So if you can say: "I am farming this way but if I farm that way I would save that much carbon," you can sell that. So again we need the science behind it to show exactly how many tonnes of carbon you save. Farmers would be creating offsets that have value. So, even if we do not directly invest in it, it has an intrinsic value, we do not need to put money in it.

**Head of Sustainability and Foresight:**

Can I add to that? The point is very well made. So the reality is that the more soils are disturbed, the less carbon they can sequester. So, for example, land that is in permanent pasture will sequester an awful lot more carbon than land that is ploughed every year. So it is a bigger question about what we do with our land in the Island. If we have an intensive agricultural industry around potatoes, which we do, that is our cultural heritage and where we currently stand at the moment, then that will have the impact on carbon that it has. If, as an Island, and as an industry, the agricultural sector move, they start to think about different practices, then of course that will have a carbon impact. So what is really interesting, as part of the development work we have been doing around the carbon

neutral roadmap, is working with the agricultural sector. They are very keen to make themselves a net-zero industry, so in line with the objectives of the roadmap. They are doing some really interesting work at the moment with U.K. experts to look at their existing agricultural practices, not just for carbon sequestration, but for biodiversity, because of course we know that there are impacts on biodiversity and helping improve the biodiversity crisis is really important as well.

[15:30]

So the industry are doing quite a lot of leading work in this area. We have been working alongside them to help identify where those opportunities lie. But a lot of it is about the shape of the industry. If the industry carry on being an intensive agricultural potato industry that leaves us one paradigm and one set of carbon issues. If, for example, they move towards biofuel growth as a possibility that would be different again. As the Assistant Minister just said, carbon credit growth is a possibility as well, although that interlinks with issues like food security, food supply locally. So there is a lot going on in the industry. What I am trying to say is a lot of this is about the shape of the agricultural industry.

**The Connétable of St. Brelade:**

Has the traditional potato growing industry impacted the potential of soil carbon storage in the Island?

**Head of Sustainability and Foresight:**

It does because deep ploughing ...

**The Connétable of St. Brelade:**

Is that quantified in any way?

**Head of Sustainability and Foresight:**

The way we quantify it is when our annual carbon accounting is undertaken, so before I answered the question to Deputy Gardiner about how we independently account for our carbon. So when we give our statistics every year, we explain what land-use practices have been. So we say that X-amount of land is under potato, X-amount of land is dairy, X-amount is people's gardens and playing fields, and any substantial changes in that. What they do is they apply factors and the average carbon lost or gained from that particular activity times the area. So we use our agricultural statistics to inform that calculation. Now what the local agricultural industry are doing is they are taking a much more granular approach to that. So we have been working with the Jersey Farmers Union and the J.M.M.B. (Jersey Milk Marketing Board) to have a look at it. They have some people over who are technical experts in this area and are going to be looking really closely at a granular level

about what the industry is up to on a far-less macro scale because we give total numbers. It is not crudely done, but it is done at a less granular level. They are doing some work to better baseline what they are doing as an industry to see where there is room for improvement. So the chair's point is well made. If you have 10 fields and you treat them a certain way and then another year you decide to do something different, then the carbon sequestration potential might be different. Really understanding that gives the industry the ability to make management choices around, not just food production, not just whatever else the opportunity might be on that land, but also carbon outcomes as well. So that is a journey that they have definitely started and they are showing a lot of interest in going along, and I have attended some meetings very recently with them. So what they are doing is the rural economy strategy, which is a piece of work that has been developed by colleagues in the economy section, they are working with them and with us to set themselves this net-zero aspiration. That is work that is in train and that will be coming out.

**The Connétable of Grouville:**

Can I just ask a bit more about that, because I am interested in it? So permanent pasture, that sequesters carbon?

**Head of Sustainability and Foresight:**

Yes.

**The Connétable of Grouville:**

A potato does it all?

**Head of Sustainability and Foresight:**

It does a bit but less. So the carbon is released when you disturb the soil. So obviously if you are deep-ploughing it is very different to if you are not ploughing at all or if you have land that has been in the same condition or natural condition for a long time. Those factors are applied differentially. So, for example, if one year you only plant half the potatoes for whatever reason, then obviously your carbon sequestration will be double depending what else you do with that land. But of course it changes annually because it is a very mobile industry. Well, not "of course". If it changes annually, because the industry are doing different things, you will get that change year-on-year. But of course if you put an area down to permanent pasture for 3 seasons to rest the land, but then on the fourth season you plough it back up and do something with it, well you have lost that potential. So the thing is about looking at land in the long term and its sequestration potential for a long period of time, which of course is sometimes at odds with farming practices in order to develop food. We have to accept that because it is always a balance. We might want to grow local food on a piece of land and we fully accept that it has that carbon impact versus something else that we might do to abate carbon in a different sector. So it is always a balance and it always has to take into account the

economic, the food security impacts, a farmer's ability and husbandry practices, all of those things; it is always a balance. But it is something in the mix that they are very clearly coming to terms with and have got really good ambition around in a way that I am sure 5 or 8 years ago we would all agree with them that they had not got to yet. So it is a positive picture, in my view.

**The Connétable of Grouville:**

Thank you. Now we come to a completely different subject. The switch to low-carbon heating is encouraged within the roadmap by domestic and commercial incentives to assist with the cost of the equipment. Is it realistic to believe that electric heating is achievable in all circumstances?

**Head of Sustainability and Foresight:**

No, it is not. At the very moment there are some homes that it would be much harder to achieve it than others. It will just completely depend on where the systems were. So this goes back to the answer that I gave before about the network expansion plans and helping people to understand if they are in a zone or an area where, for them, it will be much more easy to transition than perhaps another home in a different part of the Island. So this is where it gets quite tricky and what you are rightly challenging is how simple is it going to be to do this. You are completely right. To do an Island rollout at the level that we need to do to meet the objectives requires a really concerted effort. Jersey Electricity inform us that they stand ready to help co-ordinate that effort in terms of providing the network availability. But it is true, absolutely true, that some places will be able to transition quicker than others just by virtue of where they sit on the network and the type of property they are as well, that makes a big difference as well. You would be familiar, very big houses that have poor energy performance are going to require energy efficiency improvements before they change their heating systems. Compared to perhaps small properties that are well-insulated, you can change a heating system and reap the benefits very quickly in the most efficient way. So it will come down to the type of properties and their position in the network as well.

**The Minister for the Environment:**

There is some body of experience to help with this. Certainly my understanding is that J.E. will help advise people when they are considering certain tasks. But also the work that was done on previous energy schemes to help people with insulation in their homes, a fair degree of knowledge has been built up in the past about that. But there is no question about it, there will need to be investment in order to be able to open that up universally. Obviously the big issue is how that investment is financed I suppose, and that takes you to the issue of fuel tariffs, subsidies, and indeed issues about avoiding fuel poverty for people who are unable to meet that cost. So that is where these schemes are going to need more detailed design. The key thing for me is to make sure that they are as well targeted as they can be. The point now for the next few years is to make sure they are targeted on the right things and deliver us the best result that we can achieve for the next few years. But in



parallel with that, my expectation is that that policy work will evolve and I think that decisions can be made by future Ministers and Members and with the support of Scrutiny the nil network we are setting up, which will result, I think, in changes and fiscal measures and budget sums going into the Government Plan. I think the mechanisms are there through the Government Plan process to be able to not only make those decisions. It is not a question, I do not think, of saying, look, those are the decisions and they are casting stone on the money for the next 4 years; the system is there to provide for that to change. What, of course, we cannot do now is we cannot of course commit forward. We have to be limited by, therefore, the allocations of where we think the money that there is now within the known sums can be used to best effect. But I am really excited and hope that the momentum gathers in pace and that the new Council of Ministers will embrace the challenge and come up with measures to allow that - in my personal view - to be accelerated and to broaden out the coverage of this sort of assistance and speed up investments and so on.

**The Connétable of Grouville:**

Are there any alternative fuels and power that can be used for heating and will they be encouraged as well?

**Head of Sustainability and Foresight:**

Yes. We are using electric heating systems as sort of shorthand but what we say are low-carbon heating systems in the policy. It would not necessarily have been an electric system that people might choose, they might choose a P.V. array backed up with an electric system. Quite a lot of the feedback that we got in the consultation process was around asking what technologies the grant would be applicable to or what they should be applicable to. That is certainly work that is going to move into the design phase. We will not be just saying it is only an electric heating system, we will be saying if it is a low-carbon alternative then that is fine. It is about the carbon, not the fuel type, if you see what I mean. For example, people could use that grant towards putting a P.V. system on the roof, perhaps battery storage, all of that sort of thing. That would be the intention; it is not just electric.

**The Connétable of Grouville:**

Policy HC1 notes that they acquired industry support and the available local skills to install and service the alternative heating systems would be a prerequisite of this policy. Has consideration been given as to how these dependencies would be addressed in a timely manner?

**Head of Sustainability and Foresight:**

Do you want me to pick up on skills? I think skills are really important. The reality is currently the Island probably puts in about 300 heating systems a year, switches to electricity or puts in new electricity, so that is roughly the metric. Obviously we are going quite possibly several times faster

than that, which means several times as many heating engineers for whatever the technologies are. We fully accept that that may be an issue for us because those skills on Island, they are fully utilised at the moment. If we are going faster we might need more heating engineers. There is an important piece of parallel work with the skills strategy and the education providers to help skill-up people to be able to fulfil what the market should be creating as a new market force, which is spaced in these systems. I think the skills is, potentially, something that is a barrier to us for being as fast as we would like to be. Of course the money we have in the first tranche will only buy so many boilers, so you have not got hundreds of thousands of boilers to change because you have only got money for so many. It gives us time to work on that skills strategy to make sure that we, ideally, train and use local people or local talent or locally-based companies to deliver those heating system transitions because clearly that is money back into the local economy. What they have done in other places is they have brought in people to do that work from elsewhere. I do not know that that would fit well with our normal wish to keep money locally and to invest in our own people; I am sure we would rather do that, so that is an important opportunity. If you think about just transition, it might be that people who have skills in the industry in fossil fuels may find that it makes sense for them to retrain and reskill in different areas. I know your question was about heating systems but you could think about vehicles, could you not? Over the next number of years we will be phasing out petrol and diesel vehicles. People whose job it is to work on petrol and diesel vehicles, of course there will be legacy vehicles on the road for a long time but they are bound to want to reskill to work with electric vehicles or other types of micro-mobility potentially. Again, it is about helping people transition with good skilled, well-paid, understood, respected work to help the transition and that can create new jobs, it is not a case of destroying ones that exist.

**The Connétable of Grouville:**

We have sort of touched on it before as well but what sort of consideration has been given to how the cost of electric heating might impact Islanders, particularly those on lower incomes?

**The Minister for the Environment:**

That is the key thing. I think we need to have systems in place that prevent disadvantage. At the moment the truth is that I think lots of people that are pretty well-off can afford to make investments anyway. Obviously what we are seeking to do is to speed that progress up and in time the costs will come down. But I think because we are needing to speed that up for all the reasons we have spoken of, we need to have systems in place and that means subsidies and also tariffs. I remember that when we had the 2012 previous energy policy I was in your chair, Chair, as chair of the panel. We had a top expert come to advise us and he said that as we move through this journey we will need to have total structures that do provide incentives, not only incentives but also prevent fuel poverty and we need to design those. Of course that means that the solution there, I think it means we need to work with the energy providers and I think it takes us into the work that I spoke about

the structure of the energy market. I think that implies moving away from a single business model approach into a more multiple model which can factor that in. But there is no question, Government will need to put some money into that. What we have started to do is to put in here some support with initial grants but beyond that, I suppose, you have got the issue about ongoing energy costs and what support we need provided.

**The Connétable of Grouville:**

That is really a question of tariffs; it is a problem, is it not? I do not know how you would deal with that because ...

**The Minister for the Environment:**

Yes, I am trying to be polite about this, I think we have to have tariffs. I am trying to find polite language saying that we need to change the whole structure of energy tariffs.

[15:45]

If you remember Deputy Carolyn Labey, the Deputy of Grouville, using the proper technology, she took a proposition to the States which got through, requiring a piece of work about the way in which our network is financed, the tariff structures. We have all heard the reference euphemistically called feed-in tariffs, which is when people put in micro-renewables on their own property and the incentives they get and, therefore, all that work is being done. But the reality is, and I think the conclusion from that work is, that whatever happens we need to have a network. We need systems to be connected to a network and somebody has to pay for it.

**The Connétable of Grouville:**

What I was trying to focus on was that if you have got electric heating, as opposed to oil, it is going to cost you a lot more money, is it not?

**Head of Sustainability and Foresight:**

Your point is absolutely well made. What is the cost of running any system and is it more or less than another system? That point is well made. We should certainly not be putting people into a position where their new heating system of whatever type cost them more; that is of course right. What J.E. would say is if people are on the right tariff system, for example, if they have electric heating and they are using the heating system tariffs and they are using their system correctly, it should not be more expensive; that is what they would say. I think there is an awful lot in helping customers making sure that they really are on the right tariffs, they really are using their systems appropriately. They are not just firing up the immersion heater at the wrong time and incurring peak charges. There is a lot to support people to make sure they are getting the best of their heating

system and the best of the energy efficiency of their property. Because if they are just leaking energy they are just using too much energy. It is absolutely right. It is also true that oil traditionally has been a cheap energy source in particular types of property. I do not think that is going to last. I think that we are seeing the changes in the oil market.

**The Connétable of Grouville:**

I appreciate that, yes.

**Head of Sustainability and Foresight:**

Exactly, it is going to go up. But of course that does not help because what it just means is that we are just equalising our high cost for the higher cost. One of the big issues that we have looked at is income inequality and that was principle 5 of the carbon neutral strategy brought by Deputy Morel, who wanted to make sure that nothing that we did in this made things worse for people and increased income inequality as a result of bringing in policies. We carried out a distributional impact assessment of the policies, which began to help us identify where things may be made unequal for people. There are 2 issues here: it is very difficult to solve social policy issues within environmental policy but you certainly cannot make it worse. What you must not be doing is putting environmental policies in place that create social problems. What you may need to do or what we may need to do as a community is help people who have social pressures with additional social policies. I suspect, although we do not know yet, the impacts of global energy price rises are going to put more people into fuel poverty across the world, let alone just Jersey. That is something that my colleagues in social policy would be far better placed to talk about. But the recognition, if that were the case, is that, firstly, we would need the immediate social support mechanisms to help those people but then to make sure they are living in really well-built, well-insulated, high-performing properties so that they get the comfort that they deserve and need to keep them healthy and comfortable and safe. What a lot of this is about is about the quality of our building stock. If people have been living in poor-quality buildings that leak energy and that do not perform well, they are going to be spending too much on energy and they are probably not going to be comfortable. We saw this with the work we did with the energy efficiency service, which you will remember, where we helped low-income people with makeover grants for their properties and we increased their insulation, as well as their heating system type. There is recognition in these policies around energy efficiency improvements because the thrust is around carbon and it is the heating system replacements that we have focused on in the draft carbon neutral roadmap. But there is a wider piece around building standards, so that is about work we have done with the building bylaws to bring them up to scratch or we will be doing in order to ensure that properties perform the best they can. You give people a fighting chance that the property they are inhabiting is not at least wasting energy or performing badly. One of the problems that we have - and the citizens' assembly picked it up - was an understanding of the baseline data. What we do not have is a building stock survey, we do not know exactly how good

or bad on the whole our property stock is. But we know that there is quite a lot of our stock that was built before 1997, which may not be as highly performing as we want it to be. That is when building bylaws come in to help improve the quality of those buildings as they become touched by the bylaws. But also things like energy performance certificates drive up standards at the point of sale or perhaps rental to make a property reach a particular standard. There are a suite of policies in here about making properties rise over the course of time, so that the symptom, i.e. the person inhabiting that property, is not exposed to unreasonable energy costs of whatever nature energy that they have. Sorry, that was a really long-winded answer but I think it is a really complicated area and one we need to really get to grips with and it will not be easy, it will be an evolving process. Because of course people only do things to their house, firstly, when they can afford to, which lots of people cannot necessarily afford to do. Secondly, if they have agency over their home; if they are a tenant they may have no agency at all over their home or, thirdly, at a particular point in time, for example, when they are selling or upgrading or doing an extension or something like that. To get in and help people make those improvements sort of happens at particular break points in a property-owning history sometimes and it is getting in at those points and helping them to improve at that point, that sometimes might require quite a big capital investment.

**The Minister for the Environment:**

It is difficult because building bylaws, as we know, only kick in when you build a building or make a change to it. I think one of the most salutary things is to look at the heat map on Jersey somewhere and you will see the energy oozing into the atmosphere from a lot of buildings in Jersey that predate building. We were very late in bringing in energy conservation into the building regs.

**The Connétable of Grouville:**

We touched on planning and building control and we discussed it this morning but just to repeat what you said: do you envisage any challenges and delays as a result of the lack of resources you have in the department?

**The Minister for the Environment:**

I think there is no question. The agenda of work is huge, as we have discussed. There is no question, I think, the amount of resources that the States are able to make available, both in terms of money for revenue, budget support, capital investment and indeed people because we need people to see this through; it is going to be crucial to the progress. Like everything else we have to make choices, the Government or the new Council of Ministers will have to make choices on priorities and balance one issue against another. I think the issue for me about climate change, this is about the future generations and this is about international commitments and it is a global thing. I think Jersey is a wealthy place, with all our problems we are still a very wealthy society. I think we

do have a duty to fulfil our international obligations but we will need to find practical ways of reducing delays and speeding up.

**The Connétable of Grouville:**

Because the citizens' assembly recommended that all new builds must be carbon neutral by 2023, given what you have said that is ...

**The Minister for the Environment:**

I think we have had this discussion on the Island Plan, on the bridging Island Plan. I think that is proving to be very, very difficult, if not impossible. We saw how the policies that went forward in the draft Island Plan, I think we spoke about this this morning on energy policies, did receive quite a bit of an air time at the Planning inquiry. There were mixed views from parts of the industry. We have also had issues being raised by other Members. In particular I know that the Minister for Housing and Communities is very concerned about the impact of bridging Island Plan policies on energy, on the costs of construction of affordable homes; he is very concerned about that. I think what I have tried to do is to find a way through and I think we have arrived at some Island Plan policies, that I think I spoke about this morning, that seek to take us towards that, and I am confident it made really good progress. But that certainly does not achieve what you have read there from 2023, it does not achieve that.

**Head of Sustainability and Foresight:**

No.

**The Minister for the Environment:**

That is the reality, I am afraid.

**The Connétable of Grouville:**

I think somebody suggested that perhaps it would be closer to be 2025 before that could really ...

**The Minister for the Environment:**

We are in the hand of industry. My recollection of working with the construction industry is that when you introduce new building regulations and new rules the industry needs time to adjust. It needs time to, if you like, train up in the new methods and the new methodologies and is a learning thing. Also, in terms of the equipment and the gear and the materials they use, the industry has to gear itself up with new supply lines to be able to do that and also everybody in the chain. That, I think, requires proper notice, proper consultation. I cannot recall we have ever introduced building regulation changes inside 6 months early warning; 6 months and nobody said once you even get to the point of saying this is the new rules, there is still another 6 months before they are put into effect.

Those are the sort of processes by the commitment to work under the building regs and I think you did put in an amendment somewhere, I think, in there about working with ... as a panel you put one in and I think we have gone with this.

**The Connétable of Grouville:**

Because you have been consulting with the industry about proposed changes, are they aware?

**The Minister for the Environment:**

Yes, but they are. What you have got is you have lots of people in the industry who are really gung-ho for this and want it tomorrow. Equally you have got other people who are not.

**The Connétable of Grouville:**

What you are really saying is that 2023 was a bit too ambitious, it is not possible.

**The Minister for the Environment:**

I do not know it is not possible.

**The Connétable of Grouville:**

It is not that you would not want to do it, it is that you have got ...

**The Minister for the Environment:**

Of course we want to do loads of things, if somebody said to me here is £100 million, let us get on with it. Although I have to say in all honesty if we had £100 million, what would be the priorities of where I could do that? If could wave a magic wand but we live in reality, do we not? We have to ...

**The Connétable of Grouville:**

We do indeed.

**Head of Sustainability and Foresight:**

Sorry, can I just add to that?

**The Connétable of Grouville:**

Yes, please do.

**Head of Sustainability and Foresight:**

The Island Plan process of course has mirrored the ... and that is why you had the discussion this morning. Where we have got to is that there is going to be an immediate 20 per cent increase in the bylaws to increase energy performance of a property, so energy and not carbon, but that is really

important for the people in the property. Then looking to HC2, that is right to do a bigger review of how we ... and, as you said, we cannot quite meet the timescales that the citizens' assembly would have liked but we want to go at this quickly. Then of course the important point that we propose in the draft carbon neutral roadmap was to prohibit new fossil fuel boilers being installed in properties after 1st January 2026 and that is ambitious. That is saying to people at that point in time those heating systems, you cannot put them in your homes anymore. Obviously that will be debated and agreed upon but that is the proposal at the moment and that is very strong and gets our heating systems turned over, over a course of time. So that is an important one to remember and that is ambitious.

**The Connétable of Grouville:**

That is ambitious. What do you do to the house that has not got a very good electricity supply in 2020? If they have not got it by 2026 it is grossly unfair.

**Head of Sustainability and Foresight:**

That is absolutely right, is it not? What we have got to do is work out how that policy works for people and their availability for the network. We would find that 2026, there is time between now and then. Obviously Jersey Electricity are aware of these policies, are aware of the direction of travel, so they are thinking about their network expansion plans. But you are right, it would be unfair to ask people that could not transform their systems at that point, so that would have to take that into account.

**Deputy I. Gardiner:**

A very quick follow up because, Minister, you mentioned obviously that you have limited resources and we can talk about the rural economy strategy, net-zero waste strategy, climate and finance strategy, there are a lot of resources required through I.H.E. (Infrastructure, Housing and Environment), S.P.P.P. (Strategic Policy, Planning and Performance), the Law Department and it is all priorities and a bit of priorities. How confident are you that you will be able to deliver all the strategies within the timeframe that we have?

**The Minister for the Environment:**

I think I would like to reflect on my experience. I was told you might ask me about what are the things that I think in the last 4 years has got better? I have to say I will give great credit to the Scrutiny Panel, you have helped my officers and I work to be able to win support in a very competitive situation for additional resources. Having said that, they are not the Crown Jewels, they are quite modest, though people might ... they are relatively modest. I think we are in areas of the business areas that I take political responsibility for. We are coming from very small beginnings. There is no question the States have underinvested in our environment, underinvested seriously for decades.



We have not given due attention to the sort of issues we are talking about today, about energy and the importance of energy policy. We have been very driven by economics. I think what we see now, and there is a big sea change in our community; I see this. I see those things now have risen right to the top of the pile; social justice, equality, care for the environment, all those things are big in our community. Therefore, I think I am very hopeful that future States Members will come forward and will carry on with that.

[16:00]

But having said that, we have got to be realistic. If you suddenly put some very, very big sum on the table, we have heard from Mr. Scate earlier in the earlier session, how it takes time to recruit people, to build up teams; it is not an instant thing. I would be hoping strongly that we ... I will be frank now, at the elections I want to see new candidates come forward and push to deliver those. It is not just in the I.H.E. team, it is in our S.P.3 policy team. I think this S.P.3 team, of which Louise is one of the leading members, and you have heard from Louise, how her expertise has transformed this piece of work. There is a small team there. The work that is being queued up for that team is enormous, they have not the people there to do it. They do need much more investment in future years. Can I be confident? I will not be there; I am hopeful, Chair. That is my principal speech for the day.

**The Connétable of St. Brelade:**

I just want to wrap up with one final question really, given the time. It is our understanding that by Jersey aligning to the Paris agreement, which we discussed earlier, that Jersey would need to reach net-zero emissions by 2050, how this will not detract for Jersey reaching the carbon neutral status earlier, by 2030 or otherwise, if so wished. In addition, that carbon offsets would be a necessary requirement in achieving this, which is policy EN6, carbon offsets. For the benefit of the general public, can you confirm whether our assumption is correct? Are we going to get this by 2050?

**Head of Sustainability and Foresight:**

We are trying ...

**Assistant Minister for the Environment:**

That is the plan, that is the plan for ...

**Head of Sustainability and Foresight:**

Yes, that is what the world has signed up to.

**The Connétable of St. Brelade:**

Exactly, that we will, is that what you say?

**Assistant Minister for the Environment:**

Absolutely, yes.

**The Minister for the Environment:**

What happens if we do not? What happens if we do not, I ask? The international committees on climate change, we have got to keep that rising climate down to 1½ degrees; we are not achieving that now, we are not. Whole swathes of the world will be devastated, our biodiversity can be destroyed.

**The Connétable of St. Brelade:**

While we are doing our bit, do you think President Biden is doing his bit?

**Assistant Minister for the Environment:**

He might be but there is something else and it is something that I have put forward ...

**The Connétable of St. Brelade:**

Or President Putin for that matter, that is a ...

**Assistant Minister for the Environment:**

That is something that I have put forward from the beginning, we are also looking at co-benefits. If all cars become electric, that the rest of the world, such as our climate, we will still have silence and safer traffic, so it is a benefit and, ultimately, cheaper because an electric car of course is more expensive to purchase but it is much cheaper to operate; cheaper commute, silence and safer because much, much more running cars. Electric heating is the same, it might be a little bit more expensive on a daily basis but it is silence.

**The Connétable of St. Brelade:**

I think that is a realistic outcome.

**Assistant Minister for the Environment:**

All the pollution, I even forgot about the pollution because all this carbon; we think in terms of carbon and greenhouse gases but you have to breathe it. In terms of the carbon, which is okay, it is all the other particulates that we breathe in as well. All of these things, especially for us, again, without an industry, have co-benefits, which should be enough on their own to do this, not to say we have just cancelled pollution in Jersey; it is not a bad place to start with.

**The Minister for the Environment:**

I will not see 2050. Our grandchildren and our children are the ones that are going to have to deal with the world as we leave it. If we sit back and do nothing that is not a moral thing to do. Just recall, since I have been Minister I have been around to lots of schools. One of the things that has stuck in my mind is talking to the children. I tell you they absolutely get it, they understand it, not just secondary-aged children, probably more life experience but primary children and it is very empowering, I can tell you. Their voices are going to be heard and I think our generation has to listen. Just because we are stuck in cynical politics of the western world, well we get used to putting up with what we have put with. No, this is a time of exercising real, I think, leadership and judgment and I am really hopeful that what we have produced here because it has come from the community, supported by experts and advised by experts, will give us that start on that journey. I just hope there are people there to see it through. I think you said it earlier, did you not, Chair, if you do not start the journey you do not get there at all?

**The Connétable of St. Brelade:**

Yes, that is right. Minister, thank you for those final words and I thank you all for coming for us today.

**The Minister for the Environment:**

Thank you very much, Chair. Thank you and thank you for your time. Thank you.

[16:05]