



Environment Scrutiny Panel
Jersey Energy Policy Review hearing with the
Jersey Climate Action Network

TUESDAY, 21st MAY 2013

Panel:

Deputy J.H. Young of St. Brelade (Chairman)
Deputy S.G. Luce of St. Martin
Connétable P.J. Rondel of St. John

Mr. R. Levett (Panel Adviser, Levett-Therivel Sustainability Consultants)

Witness:

Mr. M. Forskitt (Chairman, Jersey Climate Action Network)

[10:31]

Deputy J.H. Young of St. Brelade (Chairman):

I formally welcome Mark Forskitt to our Scrutiny Panel hearing. This is a hearing of the Environment Scrutiny Panel carrying out a review of the Draft Energy Plan 2012 Pathway 2050; draft produced by the Minister for Planning and Environment. This is the first of a series of hearings where we have invited witnesses before us. For the record I will just introduce myself, Deputy John Young, Chairman of the Environment Scrutiny Panel.

Deputy J.H. Young:

Mark, I do not think you have had the chance to see the notice before you. You are protected; you are here with legal status, as it were, so if you want to raise any issues in that. So welcome to you; thank you for coming along. We have reserved one hour for this session, Mark. We have already had a look at the note that you sent forward in the - when I say "you" - the Jersey Climate

Action Network sent to the consultation process prior to the preparation of this document. I wonder if perhaps you could begin by just telling us who you are and what the Jersey Climate Action Network is, the number of members, and so on. Just so we can put into context your note and what you are going to tell us.

Chairman, Jersey Climate Action Network:

Mark Forskitt, well, officially I chair it but we are a very open sort of organisation, so that is a very subtle touch, in that it is first among equals, really. We have been going now, I think this is our fourth year we have been in existence. We do not really have a proper membership scheme as such but there are a couple of hundred people between Facebook and the email lists and people write to us and people come to our meetings that we are in regular contact with, really focussed on the issue of climate change and a little bit subsidiary on oil dependency, the kind of relationship between those 2 of course. Our mission is to get some action on reducing CO2 emissions.

Deputy J.H. Young:

So the draft that you put forward, was that prepared by yourself or were there a number of people involved with the drafting?

Chairman, Jersey Climate Action Network:

That went through a number of people. There were about 6 people who had various inputs and pulled it about and reassembled it.

Deputy J.H. Young:

Can you tell us who they are? Would you be allowed to do that?

Chairman, Jersey Climate Action Network:

Well a few names you will probably recognise. There are a couple who do not like to be public but ...

Deputy J.H. Young:

That is okay, do not tell us then if you ...

Chairman, Jersey Climate Action Network:

Jim Hopley, he used to be at the Co-op, was involved in that. Nick Palmer, who has contributed a couple of books and is very keen, contributed some of that as well and other people have been through it.

Deputy J.H. Young:

Okay, thank you for that. So, when we had a look at your submission, I think you basically took the opening position that you were very pleased to see a draft strategy.

Chairman, Jersey Climate Action Network:

Absolutely.

Deputy J.H. Young:

The recognition that it is ... the focus of the draft we got is based on Kyoto commitments.

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

You went on to give us some opinions, or give the consultation some opinion, that while the Kyoto commitments were international agreements this was not, in your view, the be-all and end-all in terms of the objectives that the Island should set itself.

Chairman, Jersey Climate Action Network:

That is right.

Deputy J.H. Young:

Would you like to elaborate a bit on that? Is that still your view?

Chairman, Jersey Climate Action Network:

It is still our view generally, yes. The problem of course is Kyoto is an old agreement and it has taken longer than this paper to put together to come into existence and be implemented. The weight of the evidence and the weight of the opinion is that things are happening more rapidly than we planned, or that Kyoto planned or imagined to happen. As such, we are looking at 4 degrees warming probably rather than the target 2 degrees that the European Commission and, by implication, Kyoto wanted to meet, and it is looking increasingly like those targets are not going to be met. At the end of the day it is the emissions and the carbon greenhouse gas emissions and content in the atmosphere that is going to be the issue. Our view is that we may have no choice. The international agreements may yet tighten up.

Deputy J.H. Young:

So, are you saying that you think the Island should be ahead of international agreements or catching up?

Chairman, Jersey Climate Action Network:

We need to do both. We do have a little bit of catching up. Our emissions have been substantially reduced by the actions of the J.E.C. (Jersey Electric Company) in changing their power generation but there has been precious little action outside of that that has made real headway. I think we have become a little bit complacent that we have made a big step but we have not continued with the momentum. We have not made continuous progress that we would have to do to make those targets.

Deputy J.H. Young:

Constable Rondel wants to get in.

The Connétable of St. John:

You say there has been progress made by the J.E.C. et cetera, but is that not on the back of our emissions being added to the French carbon emissions, not to our own?

Chairman, Jersey Climate Action Network:

Absolutely. This is one of the big issues about importing: everything we import we do not tend to count as having emissions because they are on somebody else's account. Well this is a global issue, it does not matter whose account they are on, they are still being produced, they are still there, and your point is right. A number of people ... I cannot say this on behalf of the Climate Action Network because we have a formulated policy, but I know a number of our members would be very concerned, would argue that nuclear is not green energy. It may have low emissions in production but when you look at the construction, the decontamination process, the number of years you have got to contain the waste and all the emissions involved in the concrete and the bunkering and the water treatment and all else, it is not a clear-cut answer either.

The Connétable of St. John:

Thank you.

The Deputy of St. Martin:

I understand completely where you are coming from with the issues around nuclear power, but do you have a view on whether we should be concentrating more importantly on the short term, which is producing emissions as opposed to the long term which is dealing with the problems of the leftover of nuclear? Because you talk about our emissions increasing, Kyoto now being old, do we need to have a priority list here and the top of the priority list being reducing emissions?

Chairman, Jersey Climate Action Network:

Yes. I think, regretfully, and I think this is something that George Monbiot got a lot of stick for coming to this conclusion, that greenhouse gas emissions were more of an imminent threat than handling of the nuclear waste. But I think there are options, particularly if the world had got its act together and I think Germany is kind of showing the way. It is decommissioning its nuclear power, it is increasing its renewables. In 2012 the total energy proportion from renewables in Germany went from 21 to 25 per cent; 4 per cent per year, that is a lot of change.

The Connétable of St. John:

Do you see that going up year by year or is that ...?

Chairman, Jersey Climate Action Network:

It looks like they are committed still to reducing their nuclear reliance. They are going to have to do it and they look like they are committed; they are determined to do it.

Deputy J.H. Young:

Does that mean, Mark, that you are saying to us that the emphasis in the plan that we have got of meeting Kyoto, as dated as it is, ignores the nuclear issue completely? Does it let the whole issue of nuclear power off the hook, as it were, in terms of its challenges?

Chairman, Jersey Climate Action Network:

In terms of a local plan, it does, because it is exporting that issue back to France. We do not count those emissions that the French have in running their nuclear power station and decommissioning it. We do not know what the cost of decommissioning that would be in terms of carbon anyway, so that is not there, so we are getting a free ride.

The Connétable of St. John:

So what in your view should be the appropriate response of the Island in that situation where these matters that we were talking about are going to be determined beyond their control? What is your view that the Island's response should be?

Chairman, Jersey Climate Action Network:

Our response is to look at what resources we have to produce our own energy for 2 reasons, one of which is we can control those emissions. There will be some, whether it is marine tidal or solar because there are production issues, but there is also a kind of security and resilience issue there which is a different part of the strategic thinking in that it only needs the French Government to change policy and we could be in a problem. They could decide to follow the German route and

go: "Nuclear ethics, gone." They would have a problem if everybody relies on nuclear because they do not have much coal.

Deputy J.H. Young:

Can you explain that risk a little bit more? You think if we are entirely dependant upon that French link, what is the risk you see there?

Chairman, Jersey Climate Action Network:

The risk is the French take the attitude that the Germans have that nuclear is not acceptable and they are not going to carry on supporting it. They might put tariffs on the production. It could be made a very expensive option. It could be that they decide that internal production for generation of electricity is the priority and should not be exported at all.

Deputy J.H. Young:

Which would put up the price of energy into Jersey. So at the moment it is your view we are getting cheap power through that system?

Chairman, Jersey Climate Action Network:

We are. We are. I think the French have come to the conclusion that their nuclear is rather more expensive to run than they can make themselves believe because the Germans have been demonstrating that through their efforts to decommission.

The Deputy of St. Martin:

You would agree though the price of nuclear power per unit to the consumer is affected by the price of oil and that type of fuel? Carbon fuel. If the price of oil goes up, that will affect the price of nuclear power to the consumer. Just if they can get away with charging more they will do probably.

Chairman, Jersey Climate Action Network:

Well on commercial grounds it might do. Yes, what the producers can charge is a separate issue and there is always of course a production cost. It costs to run a nuclear power station, it costs to get the fuel. If you are into conspiracy theories, the French in Mali at the moment are there because there is uranium mining, not because they are interested in Mali as a country. Big, big issues, bigger international issues there, way beyond what we can get involved with.

Deputy J.H. Young:

Can I just reflect what I think you are saying to us, Mark, that you think that the strategy based on Kyoto is good, although it is dated. It has got all the shortcomings you have spoken of which are outside our control.

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

But we do need a strategy to look at generation, use of our own energy internally in the Island because there are these external risks.

Chairman, Jersey Climate Action Network:

Yes, absolutely. External risks are there and growing probably.

Deputy J.H. Young:

So, concentrating first on the Kyoto targets, in your note you spoke about the way those targets have been set, targets being set for the domestic sector and the commercial sector and aviation and so on. Would you like to speak a little bit more, sum-up your views on those targets of the reliability and achievability of them?

Chairman, Jersey Climate Action Network:

Achievability: I think they are all achievable. I think they have to be achievable. It is like saying: "Are we prepared to see our life-support system crash?" Well the answer is no, it has got to be made to work.

[10:45]

There is no doubt. I think the concern when we put our response together was more in a disparity of the targets between the sectors which was beyond our knowledge to kind of get to the bottom of why some sectors were being given much easier targets than others, given that we are arguably all in it together, as the phrase goes. We could not quite see a rationale in emissions terms of why the industrial and commercial sector targets were less than the domestic and why aviation is getting cheap fuel.

Deputy J.H. Young:

The impression of you and your members, where do you think the biggest waste of energy domestically is then?

Chairman, Jersey Climate Action Network:

Numerically, the one that worries me, is aviation. Although it is not the biggest contribution it is ... because we are an Island it is very symbolic. If we cannot cut that, even though it is only a small amount, you really struggle to make the 80 per cent targets that we have been telling you about. All of the sectors have to be cut but I think aviation is the one that, almost totemically, is the one that people understand is high emissions. Aviation particularly on landing and taking off when you do short-haul flights, in all landing and taking off, it is the one that hits people hard.

Deputy J.H. Young:

In the plan I think there is a relatively modest target for aviation, is there not?

Chairman, Jersey Climate Action Network:

Yes, and it is difficult for us to see why that should be so. Given that everybody else is having to make very significant changes to meet the targets, it seems like aviation is being told: "Well you do not need to do terribly much."

Deputy J.H. Young:

What is your understanding under the rules of accounting for emissions where those aviation consumptions get counted?

Chairman, Jersey Climate Action Network:

There has been a lot of discussion about that in some quarters and for a long time they were not counted at all because obviously you have got 2 parts. With international flights you have got at least 2 parties and you have got all the countries in between but we have to account for them. My view is - it is not a J.C.A.N. (Jersey Climate Action Network) one - we do not have a view on how they should be accounted, but every flight has to be accounted somewhere once.

Deputy J.H. Young:

But in practice, I am sure you have views. Have you put forward any suggestions as to how the Island could do this without damaging its tourism and financial businesses?

Chairman, Jersey Climate Action Network:

I do not know that you can. I think that is the point that has got to be adopted. None of these changes are going to come without side-effects, without consequences. The world runs on oil practically, whether it is food fertilisers in the food production system, food distribution, pumps for water, and these are basic things. If you are not going to touch those, and arguably you cannot, there is not a lot of scope left.

Deputy J.H. Young:

Are you saying to the panel that there is a choice here? On the one hand ...

Chairman, Jersey Climate Action Network:

A hard choice.

Deputy J.H. Young:

On the one hand we can reduce emissions, we can meet the targets; on the other hand we can have a viable, successful economy with all these reliance on tourism and other sectors. Are you saying there is a choice here? We cannot find ways of having both, is that what you are telling us?

Chairman, Jersey Climate Action Network:

There may be ways of having both; they will not be in the shape they are today.

Deputy J.H. Young:

Steve, do you want to pick up on that one?

The Deputy of St. Martin:

I just wanted to explore your views on carbon emissions versus carbon footprints because some of the things you have said in the last couple of minutes lead me to think that you may take a view very much more along the footprint line than the emissions line, if I can put it that way.

Chairman, Jersey Climate Action Network:

I think that is a valuable way of gauging where we are. The footprint gives us a way of looking at where we are and where we are getting to.

The Deputy of St. Martin:

You must accept that being a small Island we are physically separated from the big, bad world.

Chairman, Jersey Climate Action Network:

Absolutely.

The Deputy of St. Martin:

We have to import everything; we are relatively wealthy compared to other parts of the world. If we start applying a footprint formula to what we do in Jersey, the numbers are going to increase - I was going to say considerably - the numbers are going to increase full stop I think as regards how much more work we have to do.

Chairman, Jersey Climate Action Network:

Yes, probably.

The Deputy of St. Martin:

If I could just carry on then. In number 14 of your submission, there is something there that I would like to explore as Chairman of the Economic Affairs Scrutiny Panel. You make a statement: "Where is there any evidence that economic growth is a good thing?" I would be very grateful if you could expand on that because I would like to know a bit more about your views on lack of economic growth necessarily.

Chairman, Jersey Climate Action Network:

There is a presumption almost embedded that growth is a good thing in lots of debates on economics and so on. There are a couple of growing economic communities that have questions about that to do with finite resources and boundaries of what sensibly is growth and what it is we are measuring when we say "growth". There is an intuitive sense and there is an economic sense so you kind of have to distinguish those. In the intuitive sense when people talk about growth, they are thinking: more employment, more jobs. Fine, that is not an issue in itself, depending on what those jobs are and what they are doing. In the economic term, it is very often G.D.P. (Gross Domestic Product) or a G.D.P. equivalent and that is effectively a consumption. It does not distinguish between society: positive society and negative. So, for example, car accidents are good for G.D.P. because people have to get a replacement car, there is the insurance businesses, there are lots of things associated with that. It is not in itself a good measure. The problem with saying "growth" is it lacks the qualitiveness of whether we are getting a positive societal outcome or not. So that is the background to it. Now there are people who believe in and are arguing for steady-state economic systems. If you have a fairly steady population, then you have a fairly steady demand for housing. So once you have built all the houses, you keep it good there, you do not have to keep expanding your construction industry, it has a fairly ... your food production does not change much because you have got a static-ish number of people so you have got a fairly constant amount of food there. The whole thing starts to stabilise, to put it very crudely; there is a lot more behind it. So that is a perfectly viable system. Goods are exchanged, services are exchanged, things happen, but there is no growth. There is no growth in the classic economically-defined G.D.P. approach.

The Deputy of St. Martin:

Do you not need some sort of energy that is not going to increase in price, because obviously it is all very well having no growth but if costs increase, without growth you are going backwards.

Chairman, Jersey Climate Action Network:

Well, you see, if your growth is a measure of a monetary-based value measurement, then everything grows. Well that is not a growth in terms of material consumption or with the interchange which is the important thing in terms of emissions and footprints. You are talking about a growth that is just a numerical, like inflationary growth. If it is just inflation, then everything is going up in measured value, there is no more consumption. You are not ...

The Deputy of St. Martin:

Can we separate ourselves from the outside world to the extreme that we can do away with the financial growth and just exist with the population staying level and then the scenario that you put forward?

Chairman, Jersey Climate Action Network:

I do not know. I am not an economist and I do not have the resources to study that in the depth that it would need to come up with a model.

The Connétable of St. John:

Can I come in on that? Because the way you are explaining it, you would be stifling entrepreneurial skills no matter what areas, whether it is in finance, whether it is in agriculture, tourism. Therefore, we would be losing our population: good people would go outside so that they could use those skills that come naturally to certain people.

Chairman, Jersey Climate Action Network:

We would probably have to bring in other people with other skills.

The Connétable of St. John:

Yes, but you would bring them in maybe because there would be always somebody who is happy just to make a living. Others would want the challenge of being able to go out there and make a difference to people's lives, whether it is done towards Africa way, wherever items are needed. Would you not agree?

Chairman, Jersey Climate Action Network:

I think that is always going to be case. The world is made up of an infinite variety of people mostly ...

The Connétable of St. John:

Therefore, we are going in a circle that we are not going to change, if that is your reply.

Chairman, Jersey Climate Action Network:

I do not think that would stop ... having a steady-state economy does not stop interchange happening; you just have to understand it is not growth. Yes, the problem here is we are going to get into trying to find a way of describing what we are talking about in much more different terms than we are using at the moment and that is going to get us into a great big melting pot.

Deputy J.H. Young:

I think we were wanting to test you out as to how far you are going in this.

The Deputy of St. Martin:

Could I just go back 2 steps but I think one of the words when we are talking about people, population, if I could just focus in on the population just for a couple of minutes, Mark. You make some reference to population in section 10 but can I just ask generally for your views on the energy plan as regards population? Do you think it has too little emphasis, too much emphasis? Where in the big scheme of things in this whole energy plan should population be in your view? Should it be top of the list, bottom of the list, where does it fit in?

Chairman, Jersey Climate Action Network:

It is integral, I think is the problem. As a very crude first stab, you would say your energy demand is proportional to your population. If your energy demand is proportional then your emissions and consumption is more proportional. So, from that point of view, if you are going to grow population, underlying it you have immediately said you are going to increase consumption, therefore you are going to increase emissions.

Deputy J.H. Young:

Can I ask you to explain that a little bit more? I am not sure I quite followed that.

Chairman, Jersey Climate Action Network:

Okay. Broadly speaking, as a very first estimate without any other information, you would expect if our population grew 10 per cent, we would import 10 per cent more goods, we would use 10 per cent more power, we would drive 10 per cent more on the roads. Our emissions would go up 10 per cent. So, without any other information you would kind of expect population growth proportionate to, well, putting it the other way around, emissions ...

Deputy J.H. Young:

Right.

The Deputy of St. Martin:

You link population to energy demands directly, up or down, or staying level?

Chairman, Jersey Climate Action Network:

Pretty much, as a first guess.

The Deputy of St. Martin:

Yes, that is fair.

Chairman, Jersey Climate Action Network:

The options then are: we could change our lifestyles. We would have more people but they could be leading simpler lives and consuming less. It is possible. We are a high-consumption society and we could consume less. Whether people would want to is another matter.

Deputy J.H. Young:

So part of your submission is that in addressing these Kyoto targets that we shall achieve steady-state economy which equals a steady-state population, is that the basic understanding?

Chairman, Jersey Climate Action Network:

No, it does not have to be a steady-state population but that would your kind of starting point, I think. That would be the baseline you would work from and you could then vary it. You could say: "Well we could all give up driving cars, we could all have public transport, we could have a few more people and reduce our emissions and balance it out."

Deputy J.H. Young:

Does that mean then that if we became more efficient in the use of our energy, that would help us to absorb the growth in population?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

Will it also allow us to have a growth in our economy?

Chairman, Jersey Climate Action Network:

Well if you become more efficient ... now this is an interesting one. If you get more efficient, you should be using fewer resources. Now that could look like a shrinkage in your economy depending on where those consumptions come from but it could be a growth in activity. This is

why growth is a very difficult term to use. You have to be extraordinarily precise in what is meant by growth to start talking about that. You can get growth from a number of different mechanisms in classical terms. I think we need to be ...

Deputy J.H. Young:

So which is the number one priority for interventions? Is it demand management, increased efficiency?

Chairman, Jersey Climate Action Network:

Okay, from your point of view, or from a politician's point of view, increased efficiency is the easy answer because it always works.

Deputy J.H. Young:

From yours? From your point of view?

Chairman, Jersey Climate Action Network:

From my point of view you have got to reduce demand. Overall, and with the demand. So that could be fewer people or it could be ...

Deputy J.H. Young:

Use less energy.

Chairman, Jersey Climate Action Network:

Use less energy.

Deputy J.H. Young:

But is that not efficiency?

Chairman, Jersey Climate Action Network:

It depends. It depends whether you are using less energy per person?

Deputy J.H. Young:

Oh, I see.

Chairman, Jersey Climate Action Network:

I am interested in the overall solution, yes? I am saying we have got to have fewer emissions; you would certainly achieve less consumption. Now you can arrive at that state from more people using less, fewer people using more if that was desirable.

[11:00]

I do not think you would achieve that but it could be possible on paper, in theory.

The Deputy of St. Martin:

Would you accept the difficulty that some of us will have with this concept of less, less, less being more and more expensive and the 2 just not equating physically? Because to do less you need money to be able to do that. To use a lot of renewable energy you need Finance to be able to, at the moment, put money into those schemes which are not returning profit or making any money at all. The 2 just do not go hand-in-hand at the moment.

Chairman, Jersey Climate Action Network:

Well that is an issue for Finance to sort out, is it not? Your argument is: money is getting in the way of doing the right thing and I think that is morally and ethically a very difficult position to take.

The Deputy of St. Martin:

I am not trying to be moral or ethical, I am just trying to be realistic and I am putting to you the difficulties we face in financing some of these things which we know we need to do in reducing our carbon emissions in a small Island where we do not have access to Europe and subsidies and these type of things where we would be encouraged to do lots of good: wind farms, tidal power and this type of thing. It is really difficult for us to find ways to fund these initiatives.

Chairman, Jersey Climate Action Network:

I do not think Jersey is alone in that. I think the world is going to find it difficult to get to where it needs to.

Deputy J.H. Young:

I wonder if I can just test you a little bit more on this philosophical discussion. If you told us you think demand management is all, bringing it down, our use of energy, and yet we have this choice about our economy, if, in taking advantage of the opportunities for alternative renewable energy sources exploiting those, this generated economic activity for the Island, would that, in your view, be a reason for not pursuing those alternative renewable energy sources? Not exploiting them for economic reasons within the Island?

Chairman, Jersey Climate Action Network:

No.

Deputy J.H. Young:

So you would be okay with economic growth in that area?

Chairman, Jersey Climate Action Network:

You said economic "activity". The activity is not a problem.

Deputy J.H. Young:

It is the nature of the activity which is important?

Chairman, Jersey Climate Action Network:

It is the nature of the activity. This is the problem with talking of growth. You see, this is like arguing: "Would you be happy to see more accidents on the road because it increases G.D.P.?" Well the answer is no. It is not the G.D.P., I do not want the accidents on the road. Sometimes, yes, I will put those the other way around.

Deputy J.H. Young:

I wonder if I could stick now with the issues of achieving these energy targets. Sorry, the targets that we have set for the various sectors in the report there. I think you have so far said aviation is too little. You questioned industrial commercial being below the level of energy reduction for the domestic sector, for example. Do you have any thoughts of how we might reduce industrial commercial energy demand?

Chairman, Jersey Climate Action Network:

No. It is too big a topic for us to have looked at and to have got any position on.

The Deputy of St. Martin:

Maybe on a similar subject but take a couple of steps back, and we are looking at ways that I was putting forward a couple of minutes ago, the difficulty we have between financing reducing emissions. Now this document has been produced by the Minister for Planning and Environment. I would suspect he has done it very much more with his environment hat on than his planning hat, but that would be me. I suppose I am preaching to the converted here, but you mentioned when you spoke this morning about ways of reducing your energy demand and a lot of that is the way we live and it is the amount of light you need in your house. You need electricity to be able to see what you are doing, that type of thing. I take it you have some fairly firm views that if there are 2 types of houses that you could build and they both cost the same to construct, and one is very heavily energy-efficient and lets a lot of light in and saves the heat and does all sorts of marvellous things, and one is not, it is a no-brainer to suggest the Minister for Planning and Environment should be saying: "These environmentally-friendly houses are the way we must go and we must

do that right now and I am changing the rules immediately.” Or is that my putting words into your mouth?

Chairman, Jersey Climate Action Network:

Almost.

The Deputy of St. Martin:

I would hope not; I am trying not to do that but ... well I think what I am trying to say is, are we moving fast enough with building bylaws and do we have a real problem here with, on one hand in Jersey we are trying to maintain our historic environment, on the other hand we are trying to save power, we are trying to insulate, we are trying to use new techniques, new methods of building, some real issues. But do you think ... I imagine that from your point of view you want to come down very much immediately: “This is the way every house from now on must be constructed and there are no ifs or buts, that is it.”

Chairman, Jersey Climate Action Network:

I would not go as far as constraining: “This is a model house and that is what you are going to have” but I think you would want to consider the embedded energy in the materials and the performance of the building to ... well bring up standards and that sort of thing. You would really want to ramp those up, I would have thought. I cannot see any reason not to. But as to going: “Here is the approved design of houses in Jersey for the next 50 years”, no, I do not think you want to be quite so heavy-handed.

Deputy J.H. Young:

But you would go for stronger regulatory powers and greater intervention in, for example, the domestic sector?

Chairman, Jersey Climate Action Network:

I think we would have to. You have to. Although, I go back to what I said earlier, if you are going to head for a static population, you will not need to build so many houses, so you will not need to worry so much about that because you will not be constructing houses, you will be into renovation and refurbishment and that is a slightly different kettle of fish.

The Deputy of St. Martin:

Well we notice that 29 per cent of our reductions in this plan come from energy efficiencies that are applied to pre-1997 stock of properties. Do you think that is achievable?

Chairman, Jersey Climate Action Network:

It is difficult for me to say because I am not knowledgeable on the construction of those properties. In aggregate, it is not an area I know a vast amount about so I do not think ... it is quite possible with insulation and double-glazing and sometimes you can do under-floor as well, but you would have to look into the aggregate housing stock, what state is it now and what you could do. So I do not think I can really comment on that.

The Connétable of St. John:

Given that we have historical buildings and the like and regulations in place there, that would be countering best practice in a lot of cases that what we require for 2013 and beyond, or 1997 and beyond, these historical buildings, because of regulation, are, even with the best builder in the world, you are not going to bring them up to anything near probably 70, 80 per cent of the standard that would be required because you will not be permitted to do X in that building or externally. We see it now with wooden windows. Although, yes, they have double-glazing, but you still cannot get them airtight. After a couple of years all the special seams they put in, they wear and tear, so there are issues. But you would agree that it would be best practice at the time i.e. whether it is 2020, at that time would be the best you could do with all these, probably 50 or 60 per cent of the houses in the Island?

Chairman, Jersey Climate Action Network:

It sounds reasonable to me but I do not think I could put it any stronger than that given my lack of knowledge of the construction of historic buildings.

Deputy J.H. Young:

Sticking with demand management for a moment, do you think there are things, do you ever hear about whether there are systems of regulation, that could be applied to energy suppliers and so on through use of tariffs and so on to encourage some of the greater efficiency in the use of energy?

Chairman, Jersey Climate Action Network:

I am sure. I am sure.

Deputy J.H. Young:

Do you have any thoughts? Would you like to expand your thoughts on that?

Chairman, Jersey Climate Action Network:

Well, I spoke a little bit earlier about Germany and their rate of replacement of their energy production they get from renewables. But the big thing that Germany has had for a long time is a constructive heating tariff system for renewables which is considerably more per unit production

than, for example, the J.E.C. system. That is because of government determination to make it happen rather than, as the J.E.C. do, it is a commercial decision because they are operating purely in a commercial environment.

The Deputy of St. Martin:

You mentioned feed-in tariffs in your response but there are other ... there is rising block, there is interruptible tariffs and seasonal and time-dependent tariffs. Do you see that as a way particularly of moving forward? Especially, I mention rising block tariffs, are you on those?

Chairman, Jersey Climate Action Network:

Not particularly. The reason we particularly focussed on feed-in tariffs is because our interpretation of the evidence is, without feed-in tariffs that encourage people, you do not get the uptake of things like solar P.V. (Photovoltaic) on roofs and so on for individuals. One of the notes about the responses of the Minister to why we are adopting the E.U. (European Union) 20-20-20 programme was the thought that we could make that commitment to 20 per cent renewables by 2020.

Deputy J.H. Young:

So you would like to see a commitment to feed-in tariffs?

Chairman, Jersey Climate Action Network:

I think it is the only way we are going to get a substantial amount of domestic scale renewable energy ...

Deputy J.H. Young:

Are we talking about micro-generation here?

Chairman, Jersey Climate Action Network:

Micro, yes, domestic level largely. It can be applied to big-scale. The Germans are right up there.

Deputy J.H. Young:

What, through solar power?

Chairman, Jersey Climate Action Network:

Solar? Yes. Microturbines are, efficiency-wise, questionable. It depends on their location and a few other issues but we have plenty of roof space that is not being used and it seems a wasted opportunity not to be doing something constructive about that.

Deputy J.H. Young:

Any thoughts how that might be achieved to do that? Feed-in tariff is one thing but are there any other thoughts how we might achieve that greater use of micro-generation domestically?

Chairman, Jersey Climate Action Network:

It seems difficult because the finances on individual installations really are not that compelling in Jersey. Somebody is only going to put in micro-generation in Jersey out of a sense of conviction really, rather than for any economically clear-cut ...

Deputy J.H. Young:

Have you looked at that in detail? Have you looked at the numbers?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

As a group, have you done the ...?

Chairman, Jersey Climate Action Network:

Not as a group. I have done it personally because I installed a geothermal ground source heat pump. We have problems putting P.V. on our roof because of the construction of the house; it is a timber frame lightweight construction. Very good on embedded energy in the materials but not so good on carrying weight. We may find a solution to that using some special lightweight panels but the payback period for that for us would be somewhere in the region of 40 years. Not many businesses would indulge in a project on a 40-year payback. A few individuals like me might but the majority of the population is not going to.

Deputy J.H. Young:

Is that because the technology is not good enough at the moment? It is not there yet, as it were? Or just the cost structures?

Chairman, Jersey Climate Action Network:

No, it is partly the costs of getting the materials and installation, scaffolding and all that stuff, and it is partly because the return is partly generally defined by the feed-in tariff that you get for generating, putting it back into the J.E.C.

Deputy J.H. Young:

So what would a feed-in tariff do to help that?

Chairman, Jersey Climate Action Network:

Depending on the level of the tariff. If we did something like the Germans do, which is getting up to about 3 times the purchase cost, that would bring that down to something like 10 to 12 years payback.

Deputy J.H. Young:

What, because you get money for your surplus power?

Chairman, Jersey Climate Action Network:

Yes, compared to the current tariff.

The Deputy of St. Martin:

Are you saying, just to be clear, in Germany the feed-in tariff is 3 times the cost of buying it from the producer?

Chairman, Jersey Climate Action Network:

Well, I have some figures here for German feed-in tariffs. It varies by the type of production. So these are in euro cents per kilowatt hour. For small-scale productions 12.5, for biomass 14.3, for geothermal 25, for solar 24.4.

The Deputy of St. Martin:

Do you know why those feed-in tariffs vary depending on how they are produced?

Chairman, Jersey Climate Action Network:

I think it partially reflects the fact that there are more costs involved in certain types of production. So it slightly offsets the ...

The Deputy of St. Martin:

But in those cases the feed-in tariff is greater than the cost of purchasing it from the energy provider?

Chairman, Jersey Climate Action Network:

Yes. Yes, in all cases, I believe, in Germany, in all states, that is the case.

Deputy J.H. Young:

So you have studied it in Germany?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

Is that the situation through Europe?

Chairman, Jersey Climate Action Network:

No, the feed-in tariff schemes vary quite a bit. The U.K. (United Kingdom) have changed theirs because it was too successful on a large-scale. There were Chinese companies buying up fields in Devon to try and convert them into solar farms because the tariffs were so good. They were making a good return on it, yes. They were making 8 and 9 per cent returns on their capital investment. So that was going probably too far the other way.

The Deputy of St. Martin:

Are the energy companies in the U.K. in that circumstance, were they then subsidised by the Government or was that regulation? Did the Government enforce those feed-in tariffs on the energy providers?

[11:15]

Chairman, Jersey Climate Action Network:

There is a requirement for them to have a feed-in tariff, yes. The amounts are done through the Government now, I believe.

The Deputy of St. Martin:

I am just trying to work out in my head how the relationship between trying to make money, the energy providers trying to make money, and having to provide a feed-in tariff which is above their retail price, for want of a better phrase, and how those 2 equated. Obviously government is telling the energy provider: "We want people to provide their own energy so we want you to do less. We want them to sell your product back to you for more than you charge." It is not much of an economic model for the energy provider. I am just wondering where the claw-back is from their point of view.

Chairman, Jersey Climate Action Network:

The Government sets the tariff rates, those rates.

The Deputy of St. Martin:

So there is no option? They just get on with it and that is it?

Chairman, Jersey Climate Action Network:

Because the Government is providing a chunk of the funding and of course have adopted their production. The utilities in the U.K. are regulated through the Government regulation office. You have the Ofgem type of regulator ...

Deputy J.H. Young:

Is that something you think that should be part of our strategy in Jersey: that we have got government regulation for the setting of these tariffs?

Chairman, Jersey Climate Action Network:

I struggle to see how you are going to get any significant uptake of domestic micro-generation without it.

Deputy J.H. Young:

What would be your response to the electricity service provider saying: "Sorry, well it does not save us any costs"?

Chairman, Jersey Climate Action Network:

Well, yes, that is probably true.

The Deputy of St. Martin:

But it is a government decision?

Chairman, Jersey Climate Action Network:

It is a government decision.

The Deputy of St. Martin:

It is a government decision on a policy and then the energy provider has to go away and make best use of the policy as it is written.

Chairman, Jersey Climate Action Network:

Yes, there are other instances where governments have made regulations for permitting or controlling tariffs of electricity suppliers and there are parts of Europe where they actively discussed having a much lower tariff for the first few thousand units, I think to counter energy poverty. Then the ramp-up is very huge when you get above the two-thirds of the average consumption, whatever it is. So if you are a very modest consumer, you pay very little but you are consuming because you are below that threshold. If you are prolific user, you start paying through the nose as the tariff runs on.

The Deputy of St. Martin:

It is not usually a popular one with the energy provider though?

Chairman, Jersey Climate Action Network:

No, but I believe it tackles some political issues from the policy-maker's point of view.

The Connétable of St. John:

Can I come in here? To go back to your solar power, given I used to manufacture solar panels and install them, and you mentioning a 40-year payback. In fact, the life expectancy I would have said was 15 to 20 years of this equipment, so you are a loser immediately. But on top of that, why do you think if that was so efficient for an Island like Jersey, I am just thinking of where we are here, and in particular the last several years, solar power as such has not been taken up over the last 40 years since this equipment has been around, why would you say that? Because if it was successful, we would see them everywhere up in this part of the Northern Hemisphere. I am not saying down in the south of France and beyond where the climate is somewhat different.

Chairman, Jersey Climate Action Network:

There is quite a lot in Germany but then it makes sense. It makes economic sense of individuals doing it in Germany because the feed-in tariffs are ...

The Connétable of St. John:

Because they are getting it subsidised by the Government.

Chairman, Jersey Climate Action Network:

Because they are getting enough money for the electricity they are producing to cover the risk of putting up installation up-front costs.

The Deputy of St. Martin:

If I could carry on on the theme of renewables. We are talking about micros there but when it comes to large-scale, do you have a view on where the Island should be when it comes to large-scale renewables with wind?

Chairman, Jersey Climate Action Network:

Yes, we see that as one of the real opportunities for the Island. Clearly we have potential in marine, not as strong as Alderney and Guernsey, but there is still potential in marine power generation. We are less keen on offshore wind but it is certainly a possibility. If the French are going to build turbines right up on our border, does another kilometre make a significant

difference? Maybe not. Or maybe you co-produce with them: we will take half the risk and half the benefit because they are going to do it anyway.

The Deputy of St. Martin:

If I could just concentrate on the tidal one, which is your preferred option, do you have a view on whether we should be waiting for tidal to become economically viable or should we be getting involved in the research and development?

Chairman, Jersey Climate Action Network:

I think it is probably a situation where you really need to be on the leading edge. You really need to be right on top of what is happening and get involved in research so you know what is going on when it goes. Because it is still going to take time; it is not going to be an instant solution but now is as good a time as any to get on top of that research.

Deputy J.H. Young:

Can I just come in there? What do you think are going to be the critical success factors for Jersey being able to take those opportunities for renewable energy large-scale?

Chairman, Jersey Climate Action Network:

I think we are going to have get our heads around the fact that we are going to have to take some risks. Jersey is not noted for taking risks.

Deputy J.H. Young:

Does that mean financial risks?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

Putting our money where our mouth is basically?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

That means becoming directly involved in early investment?

Chairman, Jersey Climate Action Network:

Probably. Well whichever way you go, you are taking a risk. The risk is: are you going to take a financial risk or are you going to take an environmental risk? I could live with a financial risk going wrong but an environmental risk going wrong I may not be able to live with. That is the sort of challenge that is happening globally.

Deputy J.H. Young:

What sort of framework would we need as an Island to be able to take forward those renewable energy sources? Should it be government, should we do it with bureaucrats, should we have a quango? Any thoughts on this?

Chairman, Jersey Climate Action Network:

No. Outside of J.C.A.N. in a previous ... when I was in the U.K. I worked for a couple of organisations which were research associations ... they were not companies, they are a special limited liability foundation set up by the Government just after the Second World War and there were about 30 of them covering ceramic production, there was one for the shoe industry. The one I particularly was involved with was the fluid mechanics and hydrodynamics. That sort of modelled my work better. You need to team up with some academically-minded people because they have share facilities quite often with universities and so on. But they are separate commercial viable entities and ...

Deputy J.H. Young:

Because that is what Alderney have done, is it?

Chairman, Jersey Climate Action Network:

It is not unlike what Alderney have done, yes. But there are a number of schemes that, certainly BHR Group, the one I worked with, got set up with in Hong Kong and various other places to do modelling and do research on dams and hydroelectric systems.

Deputy J.H. Young:

So from what I am hearing, risk-taking, commercial structures, but government-steered, I suppose, or government-led, is that right?

Chairman, Jersey Climate Action Network:

I think it has to be because at the moment it is not going to be a commercial decision.

Deputy J.H. Young:

Because of the technology?

Chairman, Jersey Climate Action Network:

Yes, and the reasons for doing this are not commercial. You are not putting up money to make money; you are putting up money to preserve our environment and preserve our life-support system, if you like.

The Deputy of St. Martin:

Well if I could just take our commercial aptitudes to a slightly different topic which is the sustainable transport policy or transport generally. Much is made in the plan of reducing our emissions by moving over to ultra-low emission vehicles and electric cars, do you have a view on transport in Jersey and cars in particular?

Chairman, Jersey Climate Action Network:

The view of J.C.A.N. is reasonably positive towards electric vehicles, largely as a stopgap between where we are and where we need to be and realising the fact that people are not going to give up their cars easily. We do have intermittent bites at trying to get more bicycles and buses that will take bikes so that we can integrate more with the bus network and promoting use of buses. We do not have a policy as such; that is not what we do. Talking very much personally, I worry about motor vehicles, mainly because in the research I have done, and Renault did quite a lot of work on this, up to a third of the emissions associated with a motor vehicle over its life come from the production and disposal. So, even if you switch to electric vehicles with zero emissions, if they still have the same construction and disposal costs, your maximum reduction is any ...

The Deputy of St. Martin:

So it is really a classic case of emissions versus footprint?

Chairman, Jersey Climate Action Network:

Yes, will only get you down to 30 per cent which is not where you want to be. You need to get it down to 20 per cent, so it is not enough.

The Deputy of St. Martin:

So the answer from your point of view would be to try and find a way without cars?

Chairman, Jersey Climate Action Network:

Yes, and if we are going to get those sort of degrees of reduction, that is the thinking that has to happen by 2050.

The Deputy of St. Martin:

Does your group have a view on the sustainable transport policy and the success or otherwise of it?

Chairman, Jersey Climate Action Network:

We do not have a direct policy or view on it although the individual comments are generally it is a ... what has been done so far is a decent first step but the thinking needs to change about cars. That is a big issue to take on. It is a big education issue.

Deputy J.H. Young:

So you are arguing there for public transport?

Chairman, Jersey Climate Action Network:

Yes, and changes in ways people work as well. Work from home, the use of videoconferencing and so on. We put a lot of money into Gigabit Jersey and we have got a bigger issue with Digital Jersey and we seem to have not picked up on the technical, it would seem, which is perfectly possible. The bandwidths are there, the technology is there. Now how much of a contribution that can make needs to be studied and we do not have an exact answer but it certainly is possible.

The Deputy of St. Martin:

I know you do not like cars but do you have a view on whether the Government should be investing heavily in electric vehicles? When I say "investing heavily", I mean policy-wise and subsidising the purchase of. I read at the weekend, although Renault have a quite extensive fleet of electric vehicles now, the take-up has not been what they had expected 5 or 6 years ago ...

Chairman, Jersey Climate Action Network:

Yes, one of the issues with take-up is the accessibility of charging points but that is changing in Jersey fairly rapidly at the moment and that is one of the factors that might make a contribution and it is one of the things that the Government might want to support more actively. It would not cost a lot, it is just a matter of making sure, as they have already done to some extent, there are spaces in the car parks that have charging points and other public buildings or that sort of area would be a start.

The Connétable of St. John:

But would your footprint then not be reduced? Because if you have the disposal of these batteries and the vehicles ...

Chairman, Jersey Climate Action Network:

Yes, that is why I said personally I do not think electric vehicles are the solution. I think they might be an interim step. I do not know. If people are buying a new car, they have a choice in electric vehicle and a petrol/diesel vehicle, then probably electric vehicle is going to make a useful step. It is not going to get you all the way to an answer by 2050 but it might get you part of the way there by 2025.

Deputy J.H. Young:

I would like to bring in now Mr. Levett and I think there are some questions there. So you have some questions for Mr. Forskitt?

Adviser, Levett-Therivel Sustainability Consultants:

Thank you very much, Chairman, yes. Some very interesting things there, thanks very much. What I wanted to do was to ask you if there were specific changes that you would like to suggest to the energy plan as it is drafted to deal with some of the things that you mentioned. For example, does it need to set targets and objectives in terms other than the Kyoto targets which, as we have discussed, could produce perverse results? Are there specific initiatives that you would like to see in it about developing larger-scale renewables or promoting energy efficiency in existing housing?

Chairman, Jersey Climate Action Network:

I think the key one a lot of our members were quite interested is to get a better integration and see the modelling that relates to the work the Statistics Unit have done on population. Because if you have one set of policy-makers who are assuming a population growth because it makes the numbers for Social Security add up easier, and we have another group looking at some other sort of modelling assuming 120,000, well that is a big difference. In fact, I would go as far to say all of the departments in all of their forward-looking strategies ought to be integrating what the Statistics Department's population models imply for that.

Adviser, Levett-Therivel Sustainability Consultants:

Could the energy plan avoid having to try and tackle that head-on by thinking more in terms of per capita emissions and targets for per capita emissions and carbon footprint?

[11:30]

Chairman, Jersey Climate Action Network:

In some areas possibly, but some aspects like infrastructure, roads and buildings and so on, are not per capita, so you might be struggling. At the end of the day the game is to keep those

emissions down regardless of whether the population has gone up or down. Whether commerce is booming or not, the issue is the emissions. I think we have to look at that *in toto* not to try and split it down too far.

Adviser, Levett-Therivel Sustainability Consultants:

Any other specific things you would suggest changing in the plan?

Chairman, Jersey Climate Action Network:

I do not think there is anything other than we have put in the notes of where we are that we feel we have done ... we are not in a position to do enough modelling and economic research and so on to go into the depths of that, so we would be a bit hesitant about going into the depths of something that is going to impact on other areas. We have made our comments really just on the emissions aspect. We understand there is going to be huge implications from the departments and we do not pretend to have accommodated all of those or thought all those through. That is for much bigger heads and a wider body of people than we are.

Adviser, Levett-Therivel Sustainability Consultants:

We had some very interesting exchanges about quality of life and economic growth and the way growth is not a measure of quality of life. Could that offer a way to square the circle of quality of life versus emissions by looking at people's access to energy services: warm homes, comfort, freedom to move, freedom to do business, rather than energy consumption?

Chairman, Jersey Climate Action Network:

I think that might be a useful way of presenting the impacts and the outcomes and how it will affect people. The problem with the quality of life is trying to pin it down. It is qualitatively true but quantitatively it is difficult to sell that to the accountants and the financial people because it is less easy to manipulate the draftsman than deal with numerically. The difficulty there is, human beings, and this is a psychological observation of many years, trust numerical evidence more than they trust anecdotal evidence despite the fact it may not be as good.

Deputy J.H. Young:

Do you want to follow up any matters?

The Deputy of St. Martin:

Well I was just looking and listening and it is quite obvious that when we talk about priorities, number one is to reduce emissions and it does not matter whether it is per capita or what have you: reducing emissions is the most important thing. So then you come back to what is the number one priority in ways we can reduce emissions here in Jersey, do we need to be using the

stick or the carrot? If it is going to be the way we live, which is your preferred option? Is it to help people to insulate their homes so they use electricity or is it to introduce a regulation which ... I was going to use "encourages" them but that is probably not quite a strong enough word but basically forces them down a particular road. So stick or carrot when it comes to locally reducing emissions?

Chairman, Jersey Climate Action Network:

Well the problem there is the Government can wield sticks and carrots but who wields the sticks and carrots for the Government? You can regulate or you can give incentives for people and business to do things, but where is the incentive on the Government doing things is the question which it comes back to insofar as things like population? Setting population levels is down to government policy. Nobody else sets a target population for the Island.

The Deputy of St. Martin:

Would you put population above sticks and carrots?

Chairman, Jersey Climate Action Network:

Yes.

The Deputy of St. Martin:

So population is pretty much at the top of your list?

Chairman, Jersey Climate Action Network:

Without any other clear model to say otherwise, that is going to be proportionate emissions. I would suggest if that population was ... I am not saying this is a target we must aim at but if our population was 65,000 our emissions would be half of what they are today collectively.

Deputy J.H. Young:

What target are you saying we should aim at? What target?

Chairman, Jersey Climate Action Network:

I think we should target a population that gives us emissions that meet our targets.

Deputy J.H. Young:

So the targets are number one then?

Chairman, Jersey Climate Action Network:

So some use this for modelling, the problem is there is not any modelling for that in short but, as sure as eggs, if we pursue a population growth policy, we are going to have an emissions growth.

Deputy J.H. Young:

So, no to growth in population, in your view?

Chairman, Jersey Climate Action Network:

Yes. I think that is the biggest first step you can make to reducing your current and future ...

Deputy J.H. Young:

You said an integrated population policy for the Island?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

Which is in use by all Ministries and all the strategies?

Chairman, Jersey Climate Action Network:

Yes. So the impacts of those population changes, if they do come about, or reductions or whatever they are, can be seen through.

The Deputy of St. Martin:

Could I not put it to you, in the same way that we are not realistic about our emissions because we do not at the moment look at the emissions from the French power station which is imported power, if we reduced our population by 20,000, for example, would we not just be putting those 20,000 people somewhere else in the world where they would continue to have carbon emissions so we would not be achieving anything anyway?

Chairman, Jersey Climate Action Network:

That is why I am not arguing for a population reduction but I do think we should try to limit our future emissions and that means having a population policy.

Deputy J.H. Young:

In the future from where we are now?

Chairman, Jersey Climate Action Network:

Yes.

Deputy J.H. Young:

So you take where we are now as a starting point ...

Chairman, Jersey Climate Action Network:

I think we start from where we are ...

Deputy J.H. Young:

... look into the future and address the emissions as number one? That means the control of population, as you have said, and integration of population policy. I think we have probably got ...

The Connétable of St. John:

What is missing out of this? Are you happy with everything that is in it or is there anything missing?

Chairman, Jersey Climate Action Network:

I cannot think of anything in our notes that we identified was screamingly missing. We took the view that this is a framework to start from, given that we do not have one at the moment and we do not have anywhere to start from. We were loathe to be hypercritical of it. In fact, we are not, but I think we need to get something in place that is a framework to start from and it will need to be reviewed, and it will need to be reviewed in 3 to 5 years.

Deputy J.H. Young:

So it is more important to get this established?

Chairman, Jersey Climate Action Network:

To get going.

Deputy J.H. Young:

To get going.

Chairman, Jersey Climate Action Network:

We need to start. We have been spluttering for 7 years, I think it has been, to get an energy paper together and out and I think now is the time to get it out there.

Deputy J.H. Young:

Thank you, Mark. Steve wants to get in one point ...

The Deputy of St. Martin:

I just have one, it is very general and it does not matter whether you apply it to Jersey or England or Europe or the globe. We have been talking about population but you, Mark, obviously must have a view on the population. We should be controlling population properly, in other words, taxing it? Taxing the number of children you have, that type of control?

Chairman, Jersey Climate Action Network:

I do not think money is the route to controlling that. I think that just enables those who have got more resources to do more.

The Deputy of St. Martin:

Education?

Chairman, Jersey Climate Action Network:

In other parts of the world education and population are highly correlated: the more educated the population the fewer children they have.

Deputy J.H. Young:

Well I think that is a subject that strays beyond our bounds so I think at that point I am going to draw this session to a close. If you do not mind me saying so, I think you have really helped us tremendously today. Because this is the first, it is a big subject, it is a very tough subject, and you have really helped us penetrate into this and probe and get a sense of the purpose and importance and you have steered us towards the directions that you have set out in your paper. Thank you very much for giving up your time today and helping us with that. I am sorry it is such a formal setting but it is all on the record and these things have to be done that way. We appreciate it.

Chairman, Jersey Climate Action Network:

Well I wish you the very best of luck because it is an extraordinarily difficult topic to try and square any corners of economics, commerce, finance, emissions and population and they are ...

Deputy J.H. Young:

Well our task is different to the Minister's. The Minister has produced this; our task is to look at this, have an independent look at it, and try and make suggestions, comments to try and assist fully the States in how this thing is taken forward, and what is in it, and so on. So with that, I will formally close this morning's session, so thank you very much. Thank you, in closing.

[11:39]