

STATES OF JERSEY

Environment Scrutiny Panel Hearing

MONDAY, 16th MARCH 2009

Panel:

Deputy P.J. Rondel of St. John (Chairman)

Connétable J.M. Refault of St. Peter

Witnesses:

Mr. P. Garlick (Managing Director, Jersey Gas and Guernsey Gas)

Mr. N. Shaw (Chief Executive Officer, International Energy Group)

Present:

Mr. M. Haden (Scrutiny Officer)

Deputy P.J. Rondel of St. John (Chairman):

We will open the meeting. It is now 2.25 p.m. and we will go around the table to see who is present.

Myself, I am Deputy Rondel, the Chairman of the Environment Scrutiny Panel.

Connétable J.M. Refault of St. Peter:

I am Connétable John Refault from St. Peter and with Environment Scrutiny.

Mr. M. Haden (Scrutiny Officer):

Mike Haden, the Scrutiny Officer.

Mr. N. Shaw (Chief Executive Officer, International Energy Group):

Neil Shaw, Chief Executive Officer of International Energy Group which is the parent of Jersey Gas.

Mr. P. Garlick (Managing Director, Jersey Gas and Guernsey Gas):

I am Paul Garlick, Managing Director of Jersey Gas.

The Deputy of St. John:

Thank you. If you can continue your presentation. Would you like questions on the way through or after?

Mr. P. Garlick:

I would prefer if we could go through and take questions after if that is okay. I do realise there is a lot of information here.

The Deputy of St. John:

Well, we will see how we go.

Mr. P. Garlick:

We will see how we go.

The Deputy of St. John:

If we say we are getting bogged down with too much information then we might have to put questions on the way through.

Mr. P. Garlick:

That is fair enough. That is okay. I would like to thank the panel for inviting us along to talk about our concerns. Our concerns really hinge around the draft energy policy and the building by-laws. A pivotal

issue, the issue that we are most concerned about and leads into a number of actions, is the carbon intensity assumption for importing electricity. When we talk about carbon intensity what we are talking about there is the amount of carbon dioxide emissions attributed to various fuels. It is an important issue when you are thinking about trying to adopt a policy to reduce global carbon dioxide emissions. I am Paul Garlick, Managing Director of Guernsey Gas and Jersey Gas, and Neil is here in his capacity of C.E.O. (Chief Executive Officer) of International Energy Group. If we go on to the first slide which briefly goes through signposting what we are going to talk about. We are going to talk about the energy policy, or the areas that we are concerned about, and the intention of the energy policy; the inferred intention. Then we will talk about the building by-laws. Then we will go into the pivotal issue which we would like to look at: carbon intensities for various fuels that are available. But then our real concern is about the carbon intensity and how the Environment Department elected to use a particular carbon intensity for importing electricity, and that is really our area of concern. We will postulate a carbon intensity, one that we think that the Environment Department should have used, and we will test the Environment Department's criteria and our criteria; we will test the carbon intensities against all criteria. We will then test the Environment Department's carbon intensity selection against all of the information that is available to us. We will talk about the consequence of promoting electricity for heating and we will draw some conclusions. Then, just to throw the net slightly wider, we would like to talk about other issues with regard to the energy policy, perhaps issues that would have been developed further if a different view had been taken over importing electricity, and then hopefully time for a discussion.

The Deputy of St. John:

Can I stop you there a moment?

Mr. P. Garlick:

Yes.

The Deputy of St. John:

How long is your presentation, please?

Mr. P. Garlick:

I think it will probably be about an hour.

The Deputy of St. John:

Okay. Thank you.

Mr. P. Garlick:

So the stated aim of the energy policy as in the document, the draft document, was to secure affordable and sustainable energy. Secure affordable and sustainable energy for the Island and we do not disagree with the policy objectives. The document recognises the link between carbon dioxide emissions and climate change. It talks of Jersey proving itself to be a responsible player. It talks about tackling carbon dioxide emissions. It sets itself a framework, a hierarchy, and we do not necessarily disagree with this. That hierarchy is to use less energy, to use less carbon-intensive fuels, to use less imported energy and to reduce other impacts and then to consider offsetting carbon dioxide emissions. This is where we start to disagree with the policy because the energy policy, certainly in its draft form, elected electricity supply by J.E.C. (Jersey Electric Company) as the low carbon fuel. We challenge this and discuss it later in this presentation. With regard to the building by-laws, some draft building by-laws were presented in 2007 and they too elected electricity as a low carbon fuel. We think that they do so because that is the stair that the energy policy was setting. We are surprised that the building by-laws took this stance ahead of the energy policy being adopted by the States of Jersey. We think that perhaps we should have had the discussion about carbon intensities before the building by-laws proposed changes adopting the same philosophy. We analysed the building by-laws and took advice from an architect and a quantity surveyor who suggested that if the building by-laws at that time were adopted, it would put the cost of building a house up by about 2.5 per cent if you chose gas to heat the house, which we were advised on a small 3-bedroom unit accommodation would add about £4,000 to the build cost. So we were very concerned that if the building by-laws had been passed that Jersey Gas would struggle to get

any new connections. It is difficult enough on the level playing field at the moment, albeit a semi-level playing field, but with the new proposed building by-laws we foresaw that we would not get new connections. The building by-laws also impact upon existing housing stock if and when modifications are taking place. So we saw ...

The Deputy of St. John:

Can I stop you a moment? I think we are going to have to put the questions as we go along because you are raising issues and I am thinking ... you just said it is difficult enough to expand your network basically at the moment. Can you tell us what your network is within the Island, apart from the bottled area?

Mr. P. Garlick:

Yes, we have about 9,000 mains gas customers at the moment and we have probably about 350 Kosangas L.P.G. (Liquefied Petroleum Gas) customers on a meter supply. We then sell cylinders on individuals; we probably have 1,000 customers buying small numbers of cylinders. So we saw the building by-laws as stopping our business in its tracks with regard to new connections but we also noted that modifications of buildings could get drawn into the building by-laws and could impact upon our existing customer base. So we challenged the building by-laws again suggesting that an inappropriate carbon intensity, not inaccurate but inappropriate carbon intensity, had been chosen to assign to importing electricity. Again, we are going to discuss that later; that is the pivotal issue. We met with representatives from the Planning and Environment Department, Building Control and Economic Development on 22nd October 2008 to express our concerns. They assured us that the building by-laws would not be amended until an economic impact study had been performed, so we were expecting to be contacted about an economic impact study at some point. However, we became concerned, and this is why we approached yourselves, when Jersey Gas heard Senator Cohen's radio interview on 13th February on BBC radio in which he suggested the building by-laws would be introduced in the next few weeks despite Jersey Gas' concerns, so we felt that we needed to act at that point. So, if we get to the issue, carbon intensities, and I hope I can explain these figures if you have not seen them before. But

given the energy policy consultation paper's hierarchy, strategy, too, if you can remember, it is on one of the earlier slides says: "We will aim to use less carbon intensive fuels." So it is very important to the policy and the work streams that flow from the policy to recognise which is the low carbon intensity fuel. This is not a difficult exercise for many fuels and I have given you some examples here because these figures are widely used and are certainly published in the U.K. (United Kingdom) and there are many other areas where they are referenced. You can see that, really, for every kilowatt of energy you get from this fuel source how many kilograms of CO₂ resource. So what it enables you to do is to compare fuels on a like for like basis. So carbon intensities, there is no arguing with these really, they are published by D.E.F.R.A. (Department for Environment, Food and Rural Affairs), the U.K. Carbon Trust and you can see natural gas there - it is not available in Jersey at the moment - is 0.185 kilograms of CO₂ per kilowatt-hour. L.P.G. is our gas, that is the gas available in Jersey, 0.21 kilograms of CO₂ per kilowatt-hour. Then we have gas oil, heating oil, 0.252 kilograms of CO₂, so you can start to see which is the lowest carbon fuel. Carbon intensities for the fuels listed above and many other fuels made to a specification, so if we say petrol, diesel or whatever, chemically we know what it is so quite simply and straightforwardly we can calculate the carbon intensity. But if we are looking at carbon intensities for electricity it is a little bit more difficult to calculate and this is where we think that our area of concern raises its head. If the source of electricity is taken from a grid system then it is difficult to calculate. Grid systems have various different inputs; different generating plant: some nuclear; some hydro. Coal, oil, wind, wave, gas, they are all contributing to that grid system at different levels, different times of the day, probably differently throughout weeks and months and even seasons, but that grid system depends upon those generators collectively putting into the system to be able to match demand and supply. They rely on all that different generating plant and they rely on that to give supply. Each type of generating plant that inputs into that system has a different carbon intensity. Not just only on the fuel that it uses: coal is higher, oil is higher, gas is lower and nuclear is lower, but it also depends on the efficiency of that plant; how thermally efficient it is, so it is plant-specific as well. So it gets very, very difficult in order to be able to arrive at a carbon intensity for grid electricity.

The Connétable of St. Peter:

Just one second, a quick one if you do not mind, sorry if I am slightly ahead of you. Are you intending to use the U.K. electricity grid of 0.537?

Mr. P. Garlick:

No.

The Connétable of St. Peter:

Fine. Thank you, carry on.

Mr. P. Garlick:

What we do here is these figures are readily available so we can reference them and that is where the U.K. come out. Grid electricity in the U.K. 0.537 kilograms of CO₂ per kilowatt-hour they have all of those different inputs: hydro, nuclear and, again, we can reference that figure. So, I know we are not on to Jersey's electricity yet but you can see certainly in the U.K. that electricity is 2 or 3 times more carbon-intensive fuel than natural gas. That is why the building regulations in the U.K. promote natural gas. They actively promote natural gas for home heating. But, of course, as you are aware, Jersey are not connected to the U.K., we are connected to France. We are connected to the European grid, not a nuclear power station. But we can still reference data published by the International Energy Agency for the average carbon intensity for European electricity. These figures, slightly lower than the U.K., but nevertheless these figures are higher than L.P.G. which is available. These figures as well are only for generation. The D.E.F.R.A. figures which I alluded to earlier are for the carbon intensity for the fuel delivered to the premises because that is the important thing as was the L.P.G. fuel delivered to the premises, so on top of these figures you would have to add (but the figures will be available) transmission and distribution losses which could account for 10, 15 per cent, I understand. So, we have 2 different carbon intensities and we received only last week (so too late to include in the evidence, I am afraid) a document that the Environment Department have written in order to support their view of why we should use their carbon intensity figure. Some of that document we already see there as saying: "We have had a consultant look at this, so it must be right and Jersey Gas do not agree, so they must be

wrong.” Well, what we are saying is the States of Jersey consultation paper September 2007 assigned a carbon intensity figure of 0.08 kilograms of CO₂ per kilowatt-hour to electricity in Jersey. We have received a communication from the Environment Department that states that this is their view of the Jersey system average. The Environment Department’s figure is dominated by the low EDF supply figure of 0.056 kilograms of CO₂. The Environment Department state that 97 per cent of the electricity in 2006 came from imported electricity. Jersey Gas do not dispute the accuracy of these figures. We argue, though, that such a method of calculation is not appropriate for policy purposes. The Jersey supply system is too small to be considered a grid. It is reliant upon Europe for supply. It is connected to and therefore a part of the European grid. This point is made in the AEA report that we have submitted as additional evidence to the panel. If I could quote from the AEA report; I would like to make some quotes from the AEA report. However, first of all, I would like to talk about the AEA’s credentials because in the submission from the Environment Department they talk about B.E.R.R. (Department for Business Enterprise & Regulatory Reform). But if I could talk about AEA’s credentials, again, just taken from their report: “AEA is a leading energy and environment consultancy delivering integrated environmental solutions worldwide. We [meaning they] employ over 1,000 staff many of which are world-leading experts in their field.” I will continue with the quotation: “AEA has over 200 specialists in energy and climate change. These include national and international experts in climate change policy, low carbon technologies, carbon management, emissions trading, climate change-driven businesses strategies and greenhouse gas inventories. Our [meaning their] experts regularly represent the U.K. Government and European Commission committees. Such experience gives them a unique insight into up and coming issues, policy and regulation.” We asked AEA what they thought of the States of Jersey environment approach. There is a quote from their report and I have highlighted the quotations in the guidance document. I quote from the executive summary of the AEA report and this is the point, we are not saying the calculation is wrong and AEA are not. What AEA are saying is different conventions are suitable for different purposes. The real test of suitability is if the convention leads to decisions and actions that deliver reliable results and hence achieve the objectives of the stated policy. It continues, referring to the draft energy policy approach of calculated carbon intensity: “This has a number of weaknesses given that it fails to capture the complexity of the

electricity supply market that directly impacts upon Jersey. For example, increasing electricity demand on the Island is likely to increase overall carbon dioxide emissions given the way that EDF sources electricity to deal with increasing demand in both the short and long-term.” Now, you have the report and obviously we can look through that again but that just gives you a flavour. It is not about us saying B.E.R.R. have calculated the figure wrong, there are many different conventions for calculating carbon and you have to choose one that is appropriate for your purposes. AEA are saying this is not suitable for the purpose of meeting the objectives of the energy policy. We are going to talk in finer detail, hopefully in more accessible language, why AEA came to these conclusions. Jersey Gas, not only Jersey Gas, though, but supported by a number of other consultants, 4 others (and we will access more consultants if this will help our case) are of the opinion that the States of Jersey energy policy should adopt the European grid average carbon intensity for imported electricity. That would be 0.38 kilograms of CO₂ per kilowatt-hour plus delivery losses, or use what is called the “marginal” carbon intensity for European grid electricity. The marginal is trying to analyse if you do ask for another kilowatt, how will it be generated? Yes? What will be the impact upon the market that you are asking, that extra kilowatt, how will that be sourced? Certainly in the U.K., and I provide this in the supporting evidence, marginal electricity comes from hydrocarbon power stations because it is those power stations that can increase or reduce load quickly. Nobody in their right mind will switch off a wind turbine because once you have built it, it is providing you with almost free electricity. Nobody would want to really pull back a nuclear power station because once built it is very cheap to make that extra electricity. So the way a grid system works is the marginal is nearly always taken up by hydrocarbon and/or maybe some water power, hydro, because you can put water up a hill and then release it when you need it. I should not say this but do not be too worried if you are thinking: “There is a lot of argument here.” What we are going to do is slow this debating point down and go through it point by point. So, we are talking about using which is the appropriate figure of carbon intensity: the States of Jersey energy policy, 0.056; or Jersey Gas, supported by a number of independent consultants, the grid average. We say to ourselves: “Does that carbon intensity figure reflect how the European grid will react to a change in demand?” Do not be too worried, again, by our marking of this, we will go through page by page why we have said this. We say no to 0.056; we say yes to 0.38. Is the carbon intensity figure that we have chosen consistent, reliable,

predictable? As I say, we will explain this in more detail. We say no to the States of Jersey Environment selection; yes for ours. Does it align with calculation methods and assumptions employed in other jurisdictions? We say no for the States of Jersey energy policy. Nobody else comes up with a carbon intensity figure for use of electricity by ringing up the local supplier and saying: "Hey, what do you send? What do you send us?" Yes for the average. Will it deliver strategies and outcomes that are going to reduce global carbon dioxide emissions, really the key point here? That is what we want to do. No for the States energy policy; yes for ours. Now, if you like, what I would like to do is go through why we have marked all of these no. So it is a little bit repetitious; we are saying 0.056 what the States of Jersey energy policy shows and why have we said no? Why have we said: "No, that is not a good figure?" Because if you choose 0.056 and promote electricity, it really assumes that Europe has underutilised unused low carbon generation capacity available, and we challenge this. It is not right. It is not true. If this were true it would be in use because it is pretty cheap electricity. Once the equipment is built it would be used. In economic terms, and it is not us saying this, this is the way it is, low carbon generation is usually called "must run" generation because it is so low to run once you have built that wind turbine, once you have built that barrage, once you have built a nuclear power station, you run it and what it does is back out to the hydrocarbon but then the hydrocarbon comes back on for the increased demand. So we are saying Europe does not have this. If Europe had this low carbon generation it would be running it to try and back out more of the hydrocarbon. When Jersey does not take electricity from Europe, do they switch it off? No, it is used elsewhere. Again, this is more pertinent in Guernsey where G.E.L. (Guernsey Electricity Limited) sometimes do not take the electricity. Are we saying that Europe then switch off that low carbon generation? No, they do not, they continue to run it to back out other generation. Something else that it does not do choosing 0.056, it does not reflect how companies and countries trade electricity across borders in Europe. This is becoming more and more an activity since the European directive of 2003 common rules for internal market in electricity. Electricity is becoming more so traded from one marketplace. Again, this is not tongue-in-cheek, this is a real question, if buying electricity from EDF were the answer to global warming, if you cannot access more and more electricity at 0.056, then why does Europe not simply tackle global warming by using more electricity than buying it from EDF? Why is Europe striving to try

and clean electricity up? Why are we talking about carbon capture? So that 0.056 for a kilowatt of electricity it is not available. That electricity is not available. So then we ask ourselves: "If we choose 0.056 as the Environment Department have done, is that figure consistent? Is it reliable? Is it predictable? Would we be able to count on it into the future?" We are saying no. Because you can see by this document they are saying: "It is because we get ours supplied by EDF." What happens if J.E.C. cannot secure supply contract terms with EDF and they end up buying from somebody else in the European grid? Suddenly you might be buying electricity from a completely different supplier with a completely different generation profile and thereby when the Environment Department revisit this, suddenly you find out that electricity is the highest carbon fuel. That is a credible scenario. Even if the Environment Department (because this is what is suggested) are going to mandate the J.E.C. to buy electricity from EDF, that would cause competition problems. I would expect J.E.C. not to agree to that. But also there are scenarios beyond the Island's control whereas what happens if EDF merged with a German electricity supplier who had coal power stations? What happens if EDF were bought by a German electricity buyer? What happens if EDF bought another supplier? All of these would just fundamentally change the 0.056. It would be a completely different figure and predominantly higher. There are very few electricity companies with capacity for sale that would be able ... well, very few. I do not know of any large companies that would be able to claim a figure of 0.056. So how would that be? We embark upon an energy policy driving us towards more and more electricity in people's homes and then in 10 years' time it suddenly changes. It is not appropriate for housing stock. Housing stock, once the energy choice is made, people are going to predominantly stick with it. You need something more reliable and predictable, less prone to changes that are beyond our control. The energy policy strategy, if it adopted 0.056, would be reliant upon commercial activities largely beyond the Island's control. So then we ask ourselves another criteria: "What about 0.056 kilograms of CO₂ per kilowatt-hour?" If we adopt that figure, does it align to the calculation methods and assumptions employed by other jurisdictions because they have had to tackle the same thing. They are going to say: "How are we going to treat this grid electricity? What are we going to do about it?" No, we are more familiar with the view in the U.K. but D.E.F.R.A., the Carbon Trust, Europe, B.S.I. (British Standards Institution) PAS 2050, another standard document, they do not allow organisations to calculate their CO₂ emissions

based upon the electrical supplier's generation profile. So if I run a large complex in the U.K., possibly a chemical plant in Cumbria close to the nuclear power plant, and bought my electricity from British Energy who run the nuclear power plant, I cannot claim I am getting no carbon electricity; that is not allowed. Those rules, those standards, those assumptions have all been tackled in the U.K. You must use the grid average.

The Connétable of St. Peter:

Excuse me, Paul, you say they must use the rules set in the U.K., who has set those rules?

Mr. P. Garlick:

The U.K. Government, D.E.F.R.A.; Energy Carbon Trust.

The Connétable of St. Peter:

Thank you.

Mr. P. Garlick:

So, there are even such things as a green tariff where people will try and say: "Hey, buy my electricity on the green tariff." But if you read the conditions behind the green tariff you will again see why the U.K. Government say: "No, no, no, you cannot take any credit for that. You must use the grid average." The only exceptions with regard to when you generate on site using renewables yourself, then if you do that you own that generation and you can claim some credit for it. So we have challenged the energy policy people in Jersey and they still have not come up with any recognised standard referencing their calculation method to a recognised standard or relevant document or public standard that we can get our hands on that says: "No, you can use your supplier's profile." The reason the U.K. Government do not allow that is because they realise suppliers change, merge, et cetera. We are saying that in Europe there probably has not been as much buying and selling and merging of power and utility companies as there has in the U.K. but we believe that it is going to happen as the markets are liberalised in Europe. So the last criteria that we put down was do we think if we adopt the 0.056 it will deliver

outcomes that are consistent with reducing global carbon dioxide? We say no. Because if you look at where the U.K. are and even Europe you have a very high figure for electricity. That is why they are talking about trying to clean the electricity up. Electricity is the dirty fuel of the U.K. and Europe. It is where many, many technologies are aiming. That is why people want to try and get wave technology off the ground. That is why people want carbon capture. Because electricity at the moment, most people, everybody in Europe, sees it is dirty, apart from Jersey Environment. So, we say no because if you adopt that, where is the incentive for renewable generation? There certainly is an incentive to reduce global carbon emissions because that figure is so low you have practically achieved your Kyoto agreement. You have reduced your carbon emissions by 60 or 80 per cent. That figure is so low, you are nearly at zero. That figure is so low that it could hardly compete with life cycle costs of nuclear. Because nuclear power does have carbon emissions associated with a full life cycle. So, is that consistent with where we want to be? We have suddenly undermined incentives for generating by solar wave; subsea. You have really taken away any carbon emission incentive to reduce demand, something that is first in the hierarchy. It will encourage the replacement of gas and heating oil with grid electricity. I do not know whether you are aware of Europe striving to get zero carbon homes. They are doing it via heavily-insulated homes, possibly combined heat and power using biomass, wind turbines; they are using solar. This is a whole area of development for Europe. Well, this is being sarcastic, and I apologise, if we believe the Environment Department Jersey have already achieved a low carbon home. It can even be poorly insulated. It could be single glazed. As long as it is heated with grid electricity and you use that assumption, you have made it. Now that is going to be very much upon us when we stand on a world stage and say: "Look at our low carbon home." When you are truly trying to get to low carbon homes this will stand in the way because that will be saying: "You have already achieved it, why do you want to spend more money on this?" So, it is going to deliver outcomes that are not consistent with all the jurisdictions approached to tackling climate change. Again, I say, if that electricity is available in Europe, then why does Europe not simply tackle it by letting people heat their homes with electricity, the cheapest way of tackling climate change? They do not do it because, quite frankly, this figure is not real.

The Deputy of St. John:

Do you have any reason to believe that the States of Jersey left you out of the equation early on for any reason?

Mr. P. Garlick:

No, we have responded to the consultation process. I have to say that we have enjoyed dialogue with the Environment Department but as you probably appreciate from the Environment Department's perspective they say that they have listened to the argument and understand our argument but are not convinced. So I have to say that we have enjoyed a number of meetings - well enjoyed - we have been to a number of meetings. They do appear at least to have gone through the process of listening.

The Deputy of St. John:

Could it be because over the last 10, 20 years you have not been as active or appear to have been as active within the Island, having seen Jersey Gas as it used to be and gradually the decline, and we have not seen new housing estates, et cetera, et cetera, being connected up to gas, so therefore they basically left you out of the equation? I am just trying to put this in my mind that maybe it is only now that you have some younger people within your company who are getting actively involved and saying: "Right, we are going to build our business and we can do it because we know where our footprints are."

Mr. P. Garlick:

Well, we have been involved in all the consultations and we have fed back in, so we can show that. We have very much been discussing this issue. I think it is a matter of frustration because I think the Environment Department is saying: "Well, we have discussed that and we still decided this, can you not leave it alone?" But we cannot leave it alone because it is the pivotal issue. If I talk about Jersey Gas being visible, Jersey Gas have had a period where it has been difficult to penetrate the market with the level-ish playing field that we look at. But that is now turned. Electricity prices have gone up, gas prices have gone down and we think that the honeymoon period with electricity, and this is just our vision, could well be over on price. So if we can keep the situation as it is, we would expect Jersey Gas

to be getting more new connections. But you are quite right and we have not had as many new connections as we probably did have 5 or 10 years ago but the economics have now changed and we would expect, all things being equal, to start to have the market penetration that we had perhaps when you were thinking about. The energy policy people do say: "Well, your imports have been declining. You are in decline." But these are for genuine good reasons. We have been promoting high-efficiency boilers and that is reducing a customer's central heating demand by 20 per cent. But we see that that is the vision and those are the challenges for our business. Energy efficiency, we are not arguing with that. It will not help our business the fact that we are going to reduce demand; that is the thing, but we will not argue with that because we would see, as a responsible operator, that this is the way that the world goes and we must modify. I can talk a little bit later about how taking this approach basically puts everybody out of the energy market and makes J.E.C. a champion full stop. The reason is because in the U.K. as they are migrating to true low carbon technology, other business opportunities come about but unfortunately in Jersey if you think it is over now ... sorry the 0.056 is gone. If that 0.056 is adopted nobody else can really compete even though they can deliver proper low carbon technology. But we do believe that the future should be changing in our direction now with electric prices going up 25 per cent here and gas prices went down 22 per cent. There are a number of other indicators in Europe, some of them are alluded to in the AEA report, that would suggest that electricity in France is going to go up and up, more and more than other fuels. So we think that the price differential is going to get bigger. At the time this decision was made maybe it did not look like a big deal but it will. It is going to back out fuel and I think customers will start to rely more ...

The Deputy of St. John:

A permanent supply, a constant supply, I am just breaking away from this slightly, but over the last couple of winters we have seen problems with gas supplies, et cetera, coming from the other side of Georgia across Russia and they are talking about reducing the supply to Europe, et cetera. These obviously are things which people take into account when they are putting in new installations, whatever: "Can we have a good supply?" Just breaking away, as I say, from what is up on the board, you are happy in your own mind that you will be able to put a supply in place that you could increase

your market share ...?

Mr. P. Garlick:

Yes. Two things here: the news items you have been talking about apply to natural gas; a piped natural gas. The Russians are restricting supply of piped natural gas. We do not have natural gases here; it is liquefied petroleum gas. That is what we use and it is basically a refined product of crude oil and while crude oil is available you will get L.P.G.

The Deputy of St. John:

So you are not part and parcel of a team who are also looking at bringing a pipeline across from France?

Mr. P. Garlick:

If you will forgive me, I will tackle that later. But I will say, again, if I am being rude, the energy policy could well have been formed by U.K. breakfast television. The U.K. only have about 12 days' natural gas supply stored in caverns, et cetera, that it can draw upon. So if there is any small perturbation in the market there can be quite a lot of panicking. Yes? However, the U.K. are building more and more facilities to import natural gas from various places in a liquid form; liquefied natural gas. So the U.K. will not be vulnerable to such political interference in the gas market and it will get itself out of this short-term dependency issue. However, if we had French television and could speak French, you probably would find that the natural gas issue as it was on the television in the U.K. is not there. The reason is Germany and France have over 100 days of natural gas storage, so any small perturbation in the market is not going to affect them. Again, people are looking toward liquefying natural gas to move liquefied natural gas about. So my view of a natural gas pipeline supply, certainly if we were connected to the U.K., it would not concern me but connected to Europe, no problem at all. Both of those countries, Germany and France, have over 100 days' supply and Europe will not let itself be a victim of such perturbation. The U.K. will sort this out in the short to medium-term, so security of supply is not a problem for natural gas but it has absolutely nothing to do with the gas that we have at the moment. Our gas is a product of a crude oil refinery and there are refineries all across Europe and we can pick up

supplies regularly and have done from Rotterdam, Esso and Norgal in France, although we do prefer to have one or 2 preferred suppliers because we have good relationships and we can guarantee security of supplies.

The Connétable of St. Peter:

Paul, I am just slightly confused, why do you think that the Planning Department was so entrenched on using the 0.056 figure?

Mr. P. Garlick:

All I can say is I think the figure came from Jersey Electricity, they have adopted it, it has become such a part of the energy policy, because it is step number one. So we did challenge the view in the first step, possibly not as strongly as we have done. At the second consultation we challenged the figure more so and we entered into dialogue with the Environment Department. When we could see how the Environment Department had arrived at that figure, we then built up this type of approach but I do not know. That is a question we would have to ask them, really.

The Connétable of St. Peter:

Has D.E.F.R.A. ever done a measurement on the CO2 emissions of a standalone nuclear power plant?

Mr. P. Garlick:

Well, I do not know that D.E.F.R.A. have; there are certainly figures. But I think where we are going, we are going to challenge the fact that ... because I think this is the widely-held view that Jersey and Guernsey are connected to a nuclear power plant and we are not. We are connected to the European grid and in close proximity to our connection is a nuclear power plant and we buy from a supplier that has quite a generated profile. But as we go through here, we are saying you cannot rely on that. You cannot rely on it.

The Connétable of St. Peter:

But would 0.056 be a realistic figure for a standalone power plant?

Mr. P. Garlick:

No, as we have said, the 0.056 we believe is an accurate figure. We are not challenging the figure, it is, is that figure appropriate? That is what we are challenging. It is not appropriate because 0.056 might be the generation profile of EDF but you might lose the supply contract of EDF and then you end up back at square one and your whole policy has been undermined.

The Connétable of St. Peter:

But at this point in time we could make an assumption that 0.056 is an appropriate figure for a standalone nuclear supply in France?

Mr. P. Garlick:

I think it is almost certain in this area they will probably assign an even lower figure than 0.056, but yes.

The Connétable of St. Peter:

So you are not looking at today, you are looking at over the lifetime of the housing unit, shall we say?

Mr. P. Garlick:

Well, we are saying that we are not connected to a nuclear power plant; we are connected to the grid. The AEA report substantiates that. It shows you that EDF trade electricity across borders and will buy electricity. The grid needs all of the different inputs. So, again, it is just like in the U.K. I know we buy electricity, but in the U.K. you are not allowed to say: "I live near a nuclear power plant, so I approach my energy policy in a different way." This is the fundamental point; you have to select the grid system. I do not know of a standard or a document ... and we challenged them to come up with one that says: "How to calculate your carbon footprint for this purpose." You ring up your electric supplier and say: "Hey, what is your generation profile?" It is inappropriate. It is inappropriate for a policy where you are trying to drive down global carbon dioxide emissions. I think it is becoming inappropriate for

everything. If you look at lifetime manufacture of appliances, as B.S.I. PAS 2050 does, they do not allow you to say: "What electricity will this appliance use?" "It depends upon your supplier." No, it does not. It depends upon the grid which you connect to. I think this is why we are finding it very difficult because perhaps on the public relations front we should have been challenging every time somebody says: "It is nuclear electricity; it is from France." We should have been saying: "No, it is not." But this is where I think we are in very difficult circumstances to try and get out of there. But I will come up with some other evidence, even by J.E.C. and G.E.L. when they made the connection they were saying: "It is not nuclear." So, if I go forward.

The Connétable of St. Peter:

Yes.

Mr. P. Garlick:

So we are saying you should use the European grid average because that is where you get it from. A nuclear power plant or a hydro plant would be no good on its own, it needs all of the other inputs that supply the system. The grid system would be completely inadequate at security supply if it did not have all the various inputs. Something I do not mention in here but it is a figure which I can access for you, Europe, 50 per cent of their power is generated from hydrocarbon fuels, so if they did run out of gas your electric supply is going to go, anyway. Europe is heavily reliant on hydrocarbons because that was an issue that the Guernsey energy policy felt: "Oh, let us get off hydrocarbons. We have to get off hydrocarbons." Well, you will not, because 50 per cent of the generation in Europe is hydrocarbon; it is from a grid system. So, we are saying use the European 25 grid average 0.38. Or use the marginal. Because some of these independent experts are saying you should use a marginal. The marginal is where does that extra kilowatt come from? If you want an extra kilowatt, where does it come from? Those are proven and tested because marginal usually apply to marginal economics. Marginal economics determine that if you want an additional kilowatt of electricity the likelihood is it is going to come from a hydrocarbon power station because all of your other power stations are running because they are producing cheap electricity. But marginal, we will accept, is difficult to calculate and we do not

know of where you would reference a figure from now. But if you use marginal it is probably going to be in excess of 0.38. It is in the U.K. and that is a declaration of the way a grid system works. You want an extra kilowatt, it will come from a hydrocarbon power station. You want to back out a kilowatt, they will give you a higher value. They will say: "You have done well. You backed out a kilowatt of electricity and you get a higher value." So, the status with regard to how marginal electricity is generated is very much proven; it is predominantly hydrocarbon. But you do not have to go through the hardship of trying to determine what the marginal is if you just accepted 0.38 it would give your policy the right signal. It would say electricity consumption should not really be promoted. We should really be looking at reducing electrical demand. I think that that is very much that slide covered. So, now, if you remember the 4 criteria, we are going to go and test the average figure that we are postulating. So if we use the average, does it reflect how Europe is going to react to an increase in demand because that is what Jersey will be calling for if it promotes electricity? Yes, it does. Europe does not have that low carbon available for us. It is not switched off ready waiting for us to use. If Jersey places an additional demand on the European grid, ultimately it will be this additional or marginal that will be met by hydrocarbon power stations. Sure, we might have a contract with EDF, EDF might send us it, and we might be near a nuclear power station but somebody at the end of the line is going to be one kilowatt short and how are we going to make that up? Predominantly it is going to be made up by hydrocarbon generation. When we are talking about carbon dioxide we are talking about global emissions. We are not talking about: "I do not care what happens, it is not in my back garden" because we are talking global carbon dioxide emissions with global consequences. So it does not really matter where that carbon dioxide is emitted. If it is emitted into the atmosphere it is adding to global warming. If we adopt the average it will be consistent with the way that electricity is traded across borders and we will talk about the Environment's simplistic view about generation and trading. Because the AEA report just basically says that this happens; you do cross-border trade and it will increase because this European directive is going to say to countries you cannot protect your electricity crisis, you will take electricity from whichever member state is generating it for the lowest price. That is what you are going to have to do. So any idea that they are going to run their station just for us is nonsense. It reflects the fact that you cannot tackle global warming by using more electricity no matter who you buy it from. If

everybody bought their electricity from EDF, what do you think EDF would do? It would buy its generation capacity from all the power stations in Europe. It is a nonsense way of trying to tackle global warming. We ask ourselves if we adopt 0.38 instead of 0.056, do we have a consistent, reliable, predictable figure to work with because that is what you need for energy policy. You do not need a figure that is low one day and then 5 years later is high and then 10 years later is low. We want to develop long-term strategies, particularly when I am talking about housing stock, that deliver. So, if you use the average it will because what is happening in Europe is spending a lot of money on trying to clean up electricity. But believe me if people are then going to say: "Oh, well, so we will be right in the long-term" the very, very long-term you might be, because some of the people we have referenced here will tell you that electricity is going to be a higher carbon-intensive fuel for the next 20 or 30 years in Europe. If you read the *Stern Report* and that is referenced in the Environment policy, you should take action now to reduce global carbon dioxide emissions. Now. That is why gas is being promoted as a path through, in many countries, to low carbon. It is not being told it is sidelined. So, we ask ourselves if we adopt the 0.38, will it look like the assumptions and calculation methods that other people use? Yes, it will. U.K. D.E.F.R.A., Carbon Trust, these are people who are genuinely interested in reducing carbon dioxide emissions. Europe, because we are looking at European standards more, PAS 2050 published in 2008. None of them allow you to calculate your emissions depending upon what supplier is supplying you today. They all say: "Grid average" because the intention is to reduce the grid average and we will all share the benefits. If people started pushing in in front of each other trying to claim the benefits of this or that generation, we would not get anywhere in tackling climate change. We would all be sat there saying: "Well, my supplier tells me that theirs is green." Again, if the Environment people could find us a document or a published standard that supports their methods we would like to see it. We would like to see it. They have not come up with one to date. Then we say what happens if we have the average carbon emissions that we are suggesting? Would it deliver outcomes from the policy that you would expect? Yes, of course it would. There is an environmental advantage for reducing electricity demand. There still remains an environmental advantage for importing electricity because on-Island generation is even higher carbon intensity. So those are sensible outcomes. There will be environmental incentives for renewable generations, solar wave, subsea, turbine; that is sensible. It is

not sensible if you select a figure and suddenly all of these technologies everybody else are trying to develop you no longer require. Those outcomes are consistent with the outcomes that people are striving across the world for. It will give you a low carbon home in Jersey that is genuinely a low carbon home. It looks like a low carbon home than the rest of Europe; it is not just a single block building with an electricity supply. So, we have tested ourselves against those 4 criteria but we are also saying ... because this is the sort of thing that was thrown at us in the early days: "Well, you are Jersey Gas, you would say that, would you not?" So, we have 4 independent consultants there and these documents are in the supporting pack. I do not expect you to read them all. We have picked out areas and highlighted them. But Poyry, a consultancy which the States of Jersey Environment Department were seeing fit to employ in the past, their comment: "The entirety of Europe is interconnected, one could argue that the average carbon emission factor is the most appropriate." They also tell you that the average carbon emission factor in Europe is not going to be cleaned up to the state of gas for many, many years. A smaller consultancy, but a gentleman who we have worked with in the past and he is the director of this consultancy: "The impact of additional electricity demand on the network has to be assessed across the whole of Europe and not by a reference to a single State." That was at the time. Energy Markets International. Well, this gentleman went about it in a very different way. He tried to calculate the marginal electricity for Jersey as happened on a number of days in December 2007. He analysed the French grid way of reacting to increasing demand and where they called their electricity from. His assessment says: "Action marginal 0.529 kilograms of CO₂." AEA will tell you that Jersey's load is marginal. The Environment Department want to say: "No, it is not." But the AEA report if you read: "Jersey's impact upon the European grid. The French grid is 0.17 per cent; the European grid is insignificant and the way that Jersey wish to go putting heating load on will increase the peak times." It will not increase the base load necessarily; more peak times and those peak times are already met by hydrocarbon. So it is not ridiculous, it is as we expected, that that is probably your impact of increasing electricity demand. But AEA Environment they make this statement: "Increasing electricity demand on the Island [you find it very difficult not to understand this one] is likely to increase overall CO₂ emissions given the way the EDF sources its energy to deal with increasing demands in both the short and long-term." If I may just read a little bit out here because having read what the Environment

Department wish us to believe, or their view, is I think we need to look at this further. Because that statement is at odds with the States of Jersey Environment Department's view. In the communication they sent to us (unfortunately too late to put forward as evidence but perhaps they have sent you the same document) item 4.2 they quote: "EDF is contractually obliged to supply Jersey using their generators or generation capacity purchased by them." What do AEA say about this statement? They comment about this statement because that was one of the points that the Environment Department keep running back to. AEA say, and I am quoting from the executive summary of the AEA report: "This statement is highly flexible. The previous sections [talking about the report] have shown the wide range of electricity sources within and outside of France that are used by EDF." So it is not all nuclear; it is nonsense. So what is that statement? AEA tell us: "Hence this statement merely means that EDF are the legal owners of the electricity that they sell to Jersey Electricity." So this is not an assurance that Jersey will or does get low carbon electricity supplied. What it is is merely a standard contractual term of people who sell people electricity. What it means is they own it.

The Connétable of St. Peter:

Does it also mean this is a contract for continuous supply? In other words, if you cannot get it from one plant you will get it and deliver it to us via another plant?

Mr. P. Garlick:

It means they can supply it from anywhere they wish.

The Connétable of St. Peter:

Yes. Sorry, Paul, I am just trying to understand if you do not mind, is it basically a continuous supply contract? Is this essentially what it is ... it cannot just apply to France?

Mr. P. Garlick:

I do not think it is there in any terms other than legally. It is like a car dealer. A car dealer has to own the car that he is going to sell you and that is all this means is they are legally the owners of the electric

supply which you are going to purchase from them. You could read more about this but let me go on. The fact that the States of Jersey Environment Department used this statement to support their position demonstrates the lack of understanding of the subject. The fact that they continue to use this as evidence to support their position despite being copied the AEA report without challenging the AEA position is staggering. Did they not bother to read the report? Have they failed to understand it? Even without AEA's help, how could you consider that statement as a guarantee or an assurance because this is part of their ... that Jersey would be supplied with low carbon generation. Let us revisit again: "All generation capacity purchased or delivered by them." It is not an issue on which you are getting low carbon or nuclear, it just means you are getting anything the EDF wish to supply you. So, again, I am not necessarily saying ... well, it shows you the level of understanding, or it demonstrates to us the level of understanding. This is perhaps why we just are in the situation where Environment are in one camp and we are in another. We just keep visiting the same debating positions. But when you have somebody with AEA's background in this, it is very difficult to let this argument go. What they are saying, or what they seem to be postulating is: "Well, this is why we got into this." It is nonsense. It is merely a contractual term saying: "You know what I sell you? I own it." Because legally you have to. So, if I may go forward, we are getting close to the end. I am sure you will be happy to hear about that. So, it is not just there. It is not just that we cannot find a criteria where the 0.056 makes any sense. It is not just 4 independent consultants saying no. There are others out there that we have talked to about employing but cannot bring any more meat to the argument. If they do not understand it now, I do not know how I am going to make them understand it. But we have press releases. If we adopted the European average figure it will be consistent with various press releases which are copied in the supporting evidence (and I have highlighted the areas) and reports associated with cabling operation. The States of Guernsey, Greenpeace, G.E.L. and J.E.C. have been quoted in various press reports as alluding to how they are accessing their European mix of generation. In some cases they reinforce the connection to Europe will not promote nuclear power. But these press releases at the time these projects were being put forward, the Environment Department has a completely different view now of what was happening at the time. Item 4.3 of the Environment Department's response to us last week stated: "The construction of the French/Jersey interconnector and the commitment of J.E.C. and G.E.L. to take electricity from EDF, the

15-year period gave EDF a clear signal to build new generation capacity and gave them the security to build it.” Later with reference to this new generation, they called it “principally nuclear”. Again, this is a demonstration of the Environment Department just misunderstanding the contractual terms between J.E.C. and EDF; I have alluded to that just now. EDF did not promise us nuclear electricity at all. Again, it is a demonstration of how naïve the department is. Jersey’s total peak demand as the AEA report says is 0.17 per cent of the French system alone, never mind Europe’s. The AEA report states with regard to how small Jersey’s demand is in relation to the French system, to quote the report: “Hence changes in demand in Jersey will influence the marginal generation.” This is again contrary to the Environment Department’s view. They seem to think that they have gone and built us some generation capacity.

The Deputy of St. John:

Who did you give your presentation to at the Environment?

Mr. P. Garlick:

This latest form of the presentation was given to Andrew Scate, Dr. Magris and Chris Newton only last week. But we have had these debates ...

The Deputy of St. John:

Well, obviously this has been on the table for a while now, so when did you give your first presentation?

Mr. P. Garlick:

I have to say that our debating position has gained an awful lot of information but the benchmarks were really, I suppose, February last year the Environment Department started to indicate to us and gave us information about how they came to their assumption. That enabled us to see where they were coming from and then enabled us to put counterarguments up. The first argument was are we part of a grid or not? There were some very basic, what we say are, complete errors of understanding where the Environment Department wanted to continue to believe that the grid system was not acting as a grid

system and this little statement in the EDF contract gave them that assurance. Now we have to try and then take each piece of information away. But another benchmark was really in June/July last year we copied the AEA report and other documentation, all of the 4 comments from the independent consultants. That was another benchmark: "Here it is. These people are challenging your view." They took it away and said: "No, no, we still think we are where we are." Then we came along to a meeting in October 2008 where we were rather hoping to discuss carbon. That is what we thought the meeting was for and we were told: "No, you are not here to discuss carbon, we are here to discuss building regulations. Dr. Magris says this; you say that, it is all too confusing. We are going to get on with the building regulations and what we are going to do is give you an economic impact study." I must admit, our position was that economic impact study will start to look at carbon again. So, this presentation in its form, they have only seen it last week but the information ...

The Deputy of St. John:

But since you started have no politicians been involved in receiving the presentation?

Mr. P. Garlick:

Not in this form. In this form we have done this presentation in Guernsey and Jersey and we think that we are putting our argument across better. But nevertheless the arguments that we are putting across are all put across in these documents ...

The Deputy of St. John:

So at no time have you spoken to politicians per se Jersey; let us leave Guernsey out of the equation at this moment, in the 15 months that you have been ...?

Mr. P. Garlick:

No. In talking to Dr. Magris and Chris Newton they assured us that they are continually updating the politicians (I am not sure that they went as far as the policy camps) and said: "We are more than aware of your arguments. We have briefed them on your arguments but they are not convinced. They are still

of the belief blah blah.” So, no, we have not had access to any politicians but when we came along last October we thought we were going to speak to Senator Cohen about carbon and we were a little bit disappointed when we arrived to talk to him about carbon with a presentation similar to this and were told: “No, we cannot keep going back to this.” Now we do not think we keep going back to it, it is an issue which has to be resolved. It is the cornerstone, unfortunately, of the policy because this is one of the problems. If we revisit this and it is different, well the policy direction is going to need complete revisiting. But unfortunately, no, and I do not know whether that is because we are naïve. We have been told that the dialogue is going on; we have responded to consultations. In one area, but in no way we went to these depths, we came along to the Environment Scrutiny Panel some time ago and that was about wider issues, and I think Deputy Duhamel and Deputy Le Claire were there and subsequently Deputy Le Claire came and visited me and asked about ... I think he was more interested in land use planning issues but he still wanted to know how we were getting on and we made the presentation to him about the carbon issue and then on to Deputy Duhamel. But we have not had access to senior ...

The Deputy of St. John:

To me, just speaking here, I have concerns that we are getting a presentation that the Assistant Planning Minister has not received.

Mr. P. Garlick:

That is true but we had very much this presentation ready to go in October 2008 but we were told in a meeting: “We do not want to talk about this issue.”

The Deputy of St. John:

Yes, I am not having a go at you. It is not your fault. I am just concerned that they have not picked up the invitation and received it.

Mr. P. Garlick:

Again, we have communicated through Dr. Magris and Chris Newton.

The Deputy of St. John:

I can understand where you are coming from there but the Assistant Minister should, in my book, have had the presentation basically prior to us receiving it. This is putting the cart before the horse.

Mr. P. Garlick:

Well, we would love to give this presentation to anybody and everybody who will listen. What we find ourselves is people saying: "I have heard that issue before and I do not want to talk about it." Again, in my mind, I must say, I am the Managing Director of Guernsey Gas and Jersey Gas and sometimes I might get wound up but I cannot believe that senior politicians do not know that we have concerns.

The Deputy of St. John:

So have you put this to your Guernsey politicians?

Mr. P. Garlick:

Yes. We have put it to Commerce and Employment and they looked duly concerned, and they are considering a route for us. We have not heard. They may not be convinced; they might be but shall I ...?

The Connétable of St. Peter:

Just one last one, how were you received by the officers Andrew Scate and Chris Newton?

Mr. P. Garlick:

I think Mr. Scate seemed concerned, and this is where we are little bit concerned because we were verbally told there would be an economic impact study. It was verbally suggested a route forward could be to appoint an independent consultant and all fuel companies agree a scope of works for them to work on. Because this is what we are saying and I think this is an area where we have been frustrated by Environment. Environment is saying: "Well, we have a consultancy, or J.E.C. have a consultancy, and

it is B.E.R.R. and they are a reputable consultancy, so you cannot argue with their figure.” We are not arguing with their figure. We are arguing with the convention of which they have produced the figure and is it appropriate to use for policy purposes. What we have even said is we would like to discuss our concerns with B.E.R.R. because we think again something is lost in the translation. The B.E.R.R. wrote me a very strong letter saying: “How dare you.” We are not challenging their little calculated method for J.E.C. I am sure J.E.C. will like to use this and I would not tackle J.E.C. over using that figure for public relations exercises; that is the type of thing you would use it for. But I do not believe that anywhere, and this is the challenge for them, that such a way of arriving at your carbon intensity could be used for policy purposes and that is the difference. Quite often public relations and television advertisements are different from government policy.

The Connétable of St. Peter:

Did you get the same sort of response from both officers or just from Andrew?

Mr. P. Garlick:

Again, I am speaking for them; they really need to answer. Dr. Magris and Chris Newton remained in the position that they are in and this is where we picked up this document and saying this is why we believe it. I might be flattering myself but I think Mr. Scate did offer that but unfortunately (I say unfortunately) I would like to see it in writing before ... To Mr. Scate’s credit he was trying to book an appointment for a meeting and I am saying: “Mr. Scate, we are on a very tight timescale, Mr. Cohen’s interview, we have already gone to Scrutiny.” He was keen to get a meeting early; perhaps he could have defused the situation. He wanted a meeting early but the earliest meeting that could be facilitated was last week, so it may be 2 or 3 things have happened. But we have been completely open with Mr. Scate. We said: “We cannot not go to Scrutiny. We have talked to them, we have sent them a report, we have been invited to meet with them.” But if I ...

The Deputy of St. John:

We are now running into an hour and 10 minutes. I know we have spent some time talking but I have

the gist of what you are ...

Mr. P. Garlick:

Okay. So we are talking about press releases, so not only they are naïve in saying: “We ordered nuclear electricity 15 years ago” this is the sort of thing that they are saying. I know I am going to slow down a little bit but I will get quicker. They were saying: “The construction of the cable into France it gave a commitment to EDF to go and build more nuclear capacity for us. That is what it did.” Well, that is not consistent with the press releases at the time that these cable links were put in. Yes? Also, the Environment Department’s view to give a signal to EDF to build more generation does not tally with that view declared by G.E.L., who at that time were the States electricity board, and J.E.C. Some of the press cuttings you have, and I have highlighted the areas, you will be able to see press cuttings from the time that the cable link was going in. An example, Mr. Liston who was then J.E.C. Managing Director and he is quoted as saying: “We will not be contributing to the need for nuclear power stations.” That is what he was saying at the time. So the Environment Department seem as though they want to change history to support their current stance. Again, this one: “If we choose 0.056 it will not be consistent with the S.E.B. (States Employment Board)” who have now become G.E.L.’s view and that view was put as a Bill to the States.

The Connétable of St. Peter:

Paul, please excuse me for just one second. I think I am really aware of where Paul is coming from.

The Deputy of St. John:

So am I. I have given him a nudge too that we should be ...

The Connétable of St. Peter:

I think, Paul, to be frank, I will just quickly before the next slide is coming up, you are ramming home a point that you have already pushed home.

Mr. P. Garlick:

Unfortunately, we have had to push it home ...

The Connétable of St. Peter:

Absolutely.

Mr. P. Garlick:

I am not saying here but we have made this presentation so step by step and again I am not sure whether the Environment Department has dealt with it. Well, the next slides ...

The Connétable of St. Peter:

Can I suggest a 5-minute recess?

The Deputy of St. John:

Yes, if you would.

Mr. P. Garlick:

Well, the next slides really do speed up when we are going through some of the impacts because this is not just a ...

The Deputy of St. John:

Well, we are now well over the hour and 10 minutes and we had originally said an hour and your presentation in fact is running on and we still have a number of slides to go. We are going to have a recess anyway for 5 minutes. You will have 10 minutes to wrap it all up after that.

Mr. P. Garlick:

Ten minutes will be fine. Thank you.

The Connétable of St. Peter:

Please do not misunderstand me. You have made your point and I hear your point very loud and clear.

Mr. P. Garlick:

Thank you.

The Deputy of St. John:

Just grab yourself a cup of tea or coffee if there is some there and we will recess for 5 minutes. Thank you.

The Deputy of St. John:

Right. When you are ready we will ...

Mr. P. Garlick:

Thank you. So, in case we all think this is just an arithmetic or a mathematical problem that we are talking about, it is not. What this could lead to is very quickly us getting no new connections, we could start to see our existing customer base being eroded, we have 9,000 customers, we made this point to people in the past. We cannot stay in business until the last customer disappears. The sort of economics that we have at our current tariff levels, if we lose 20 per cent of our customers we stop making a profit. So very quickly because some people have said: "Well, you looked as though you could be going out of business; you will have no customers in 20 to 30 years" but as soon as we lose about 20 per cent we start to look ... well, we are not economically viable and tariffs might go up and drive the customers away. We are saying on a straight line of regression you could put us out of business in 5 years, so it is a really serious matter. So, how does that look? Well, we think that it undermines many of the objectives set by the energy policy. It is going to jeopardise the security of supply. We think it will jeopardise security of supply if you start to push gas and heating right out of the market because you can rely on one type of energy, electricity, and because of the way that you want to claim carbon credit you better keep on getting it from EDF. So how secure is that: one supplier; one type of fuel. Reduced diversity, that is

going to impact upon customers on their choice and competition. You are going to have one supplier for sure; current tariff levels will increase. Gas now is competitive versus electricity for heating. Heating oil has been; always will be. So, if the whole of the public realise that their energy bills are set to go up significantly in the next 5 to 10 years - why? If you said you were saving the planet they might - I do not think they would - but they might sympathise. But if you see this argument and you say: "Well, we are going to add to the planet's problems; this is madness." We have not calculated it for Jersey; we did do for Guernsey. But if you imagine if you back up heating oil and gas, your peak load for electricity ... we have asked Jersey Electricity; they have not given us an answer. We asked the Environment Department; they have not given us an answer. But we are saying that your peak load will go up about 4 times because although electricity might supply quite a lot of the energy on the Island, gas and heating oil are very peaky. Our consumption, when it is cold it gets used. So we have just overlaid our annual profile on to J.E.C.'s along with heating oils and what you are going to need is more cables for France. Your peak load is going to go up 3 times; you are going to need 6 cables to France not just 2. If you ever think about when J.E.C. want to reinforce this cable, that cable because there is a new load going on, the electric infrastructure is going to have to take 3 times the amount of power down there just for those one or 2 periods when it is cold and people want it. So you are going to dig up just about every road and you are going to reinforce the whole network and I am not kidding, I am willing to give you figures, you are talking hundreds of millions of pounds. The J.E.C. have 1,400 kilometres of cable and each kilometre will be about £70 or £80 per metre. We asked them for the figures; they have not provided them and we made these assessments in Guernsey and nobody has come back and said: "Your assessments are wrong." In fact, what we think we have done in Guernsey is underestimated significantly. So, you are talking hundreds of millions of pounds of infrastructure which may be required very quickly if you are going to start to move down this road because I am sure the heating oil people are going to say: "We cannot be bothered with this business, we are losing customers." Five to 7 years we are saying. Again on top of that, of course, if we withdraw gas and heating oil from the market, customers are not only going to have to pay more for their heating, they are also going to have to pay to remove existing appliances and it is going to be disruptive in their homes. The number of roadworks the Island sees are going to increase significantly if J.E.C. are forced to reinforce their

network. Now that is bad enough if you are doing some local good but as we have said we do not think that we are. We think we will put ourselves to that inconvenience and cost for no reason. In fact, we could even add to carbon dioxide emissions directionally. So the choice of a carbon intensity figure for imported electricity is a very serious matter, not only for the Jersey energy market but for all customers, businesses and the public. Everybody would be affected if gas and heating oil are withdrawn from this marketplace too early. If the States of Jersey energy policy adopts 0.056 kilograms of CO₂ per kilowatt-hour for electricity the consequences are serious. Significant financial implications for the Island, the security and diversity of the Island's energy supplies could be jeopardised in the short-term and also we think the Island could be embarrassed on the international stage for not being a responsible global player with regard to addressing climate change. Again, a quotation taken from the AEA report, the executive summary under the heading Building Policies: "Neither the French nor the U.K. Governments are pursuing policies that aim to cut carbon dioxide emissions by increasing electricity demand e.g. through increasing electricity heating." There are some novel technologies, and I want to remain unbiased, using electricity, ground source heat pumps where they do become carbon beneficial but the sort of heating systems we are seeing going in in Jersey are just standard electric heating systems and they are going to add to global carbon dioxide emissions. So, the adoption of that figure is going to have significant widespread effects from the energy policy directive. We believe as a result that other technologies have been overlooked. We think that the energy policy people have just jumped to the conclusion that they know the answer and as a result other technologies have been overlooked and dismissed. One thing that we talked about earlier was the option of providing a natural gas and fuel oil pipeline connection to Europe. We are not saying that this must go; we are not putting this forward, but we do not think it has been given anywhere near enough consideration. In the development of the States of Jersey energy policy they commissioned a feasibility study to look at a hydrocarbon pipeline and a copy of that report is in your folders, a report commissioned by the States of Jersey. The report concluded with regard to a dual lay option (that is gas and oil piped together) that there is a net benefit of £1.5 million compared with doing nothing. We thought that that outcome should have triggered a further analysis and work with the stakeholders in the energy market. If this were to have happened, we could have commented that the report, the *Poyry Report*; it is in the files, has overlooked significant economic benefits. So

there are many more benefits than they identified. That is not a criticism of Poyry, a lot of them are land use planning benefits and you have to go beyond the environment, you have to talk with stakeholders and Planning about it. We believe that a proper appraisal would be economically viable. This is just an illustration of some of the things that have perhaps been overlooked too quickly. Economic benefits underestimated are not included in the *Poyry Report*. Economic benefits not included, land made available by removing the gas-holder at Tunnell Street. Now that is our land but as a stakeholder we may well say for the greater good if we are interested in this project we may well sit down and start to negotiate some position over the benefits. Land made available for more efficient use at St. John's site. Now this is a little bit more remote because we do not own St. John's, we have a lease, but there is an area of it, if you like, land that is not as efficiently used as it maybe could have been. Land made available for alternative or more efficient use at the Jersey Gas Tunnell Street site because this is one that attracted Deputy Le Claire is we would not have the need for that office or site if we were in a natural gas business, our land footprint would shrink. You would have a higher efficiency, better product and a more efficient business and we would not need these land parcels. Okay, that is our land parcel but if somebody came along to us and said: "Are you interested in this project? What could you offer as a benefit?" it may well be, but that did not happen. The avoided costs. Hazard Review Group, I believe, at La Collette I think that one of the outcomes is it is very likely that the Jersey Gas and the Rubis fuel depots will be moved further down the La Collette site at some point in the future. The avoided cost of that, the cost of moving Jersey Gas to the La Collette site, is about £20 million. You start to factor those into the *Poyry Report* and that is "more" benefit suddenly looks "significant" benefits. The underestimated. Examples: the value of the land occupied by Jersey Gas at La Collette because we would not need the La Collette site if we had a natural gas supply. The benefits were assessed as twice the cost of the lease. The report even says: "This is a very conservative, simple estimate" and it is. It is not Poyry who really try and determine land use planning. The pipeline project would reduce their hydrocarbon storage at La Collette. Ours would be wiped out; Rubis' probably could be reduced significantly. As a result, it is going to have a significant impact upon the land planning restrictions in the area. Consequently, the site at La Collette and the surrounding area ... because these sites have an effect on the surrounding area and what can be done there. Basically you could start with a

blank piece of paper from a hazard perspective at La Collette, so therefore the land user in and around La Collette, not just the site, would escalate in our opinions. If these benefits were taken into account a joint lay project looks economically viable. We believe further cost reductions could be made if it was promoted as a Channel Islands initiative. So, all the benefits, the fuel oil and natural gas pipeline, when you think of the words used in the energy policy: “Secure, affordable and sustainable.” Energy policy issue: you are going to get affordable energy. Natural gas is a cheaper product. In the example, the Isle of Man gas tariffs are much lower than L.P.G. But it really does depend upon how you want to split the benefit. It may be that the States of Jersey say: “Look, if I am paying for this pipeline ...” Yes? Sorry ... now?

The Deputy of St. John:

Well, I did say by 4.00 p.m. It is after 4.00 p.m. If you can just sum it up in a minute.

Mr. P. Garlick:

Okay. Security of supply. We believe the pipelines offer a high level of security of supply. You have seen the shipping problems that happened in Guernsey. The Channel Islands’ port facilities are not brilliant, so it would help out there. You do genuinely access a low carbon fuel. Affordable and secure energy is supplied; it could be used to generate an on-Island electricity, so you are going to build yourself some sort of hedge against EDF’s future electricity prices. Also, there are zero negative carbon technologies associated with natural gas: biogas where you either take in methane from sewerage or decomposing vegetable matter and injecting that into your gas main. It can only work with natural gas because it is predominantly methane. These are zero or negative technologies because methane, if emitted to the atmosphere, is 23 times more potent to greenhouse gas. So these technologies you are going to preclude yourself from ...

The Deputy of St. John:

Yes. Well, your time is now up.

Mr. P. Garlick:

Okay.

The Deputy of St. John:

Thank you.

Mr. P. Garlick:

Thank you.

The Deputy of St. John:

Because you have been pushing the envelope for an hour.

The Connétable of St. Peter:

Yes, and you are pushing against an open door, I think, Paul, anyway.

The Deputy of St. John:

Can I personally say thank you very much for this presentation. But I will say that I think you started at the wrong end coming to the Environment Scrutiny Panel. I think personally you should have started at the top end and I know you used the word, shall we say, “senior” politicians. It does not matter; all politicians have one vote and I personally think if Senator Cohen was not able to listen to you, you could have given this presentation to all States Members. You still can in some other forum; some other place, just by inviting them along to give them this presentation for what it is worth. It is still not too late to do that because I think there are merits on what you have been saying. I think also that your presentation is too long to keep somebody focussed and if your presentation was given in half the time you could just about keep everyone’s attention. Because John’s background obviously in the fire service and my background as an installer, a lot of these things you were repetitive in a number of areas, so I think you could do something there. I still think you have to move forward with what you are doing here because I think it is beneficial to the Island. John do you have any comments?

The Connétable of St. Peter:

No. I think just from my point of view, Paul, I was not aware of the arguments that you were going to be putting forward today and certainly as far as I am concerned you are pushing against an open door. There are some questions to be answered within the Planning Department and I think just reiterating what the Chairman said, if you could encapsulate really the headline points in your presentation. States Members have a very short timespan of attention; 3 hours and they are dead on their feet as we heard one speaker did and he lost his vote, so take heed from that.

Mr. P. Garlick:

Okay.

The Connétable of St. Peter:

I think reiterating going into what you are doing now, into the dual pipeline, is another argument. I can see your arguments but I think it is another argument for another day. If I were to suggest anything I would concentrate on your primary argument about the CO₂, about what the J.E.C. have come to compared to gas figures and concentrate those in isolation at this time. We will come to a dual pipeline another time. I know Deputy Le Claire has a proposition coming in shortly on that one but that is perhaps a different forum. Where do you go from here?

The Deputy of St. John:

Well, you have the other forum which you brought in at the end which, in fact, you probably should have declared early on is the life of your business 5 years down the road would be gone if this gets adopted and I can understand that. I think that is a very powerful argument that you should be coming in in the very early part of your presentation because - yourself and the oil companies - it is other strings to the bow. We have seen what having one string to our bow does with the finance industry at the moment and this is exactly the same kind of scenario that will be getting played out with our energy. Therefore, I think you need to play with that, how you are going to give that presentation in the future.

If you continue to do this you need to put that early on. It is part and parcel of the bigger picture also. Now, Mike, as our officer, do you have any comments on the presentation we received?

Mr. M. Haden:

If I can say again I think it does need to be briefer and crisper; that was the key thing.

The Deputy of St. John:

I made quite a number of notes on the way through and obviously I will do a bit more research myself, and the panel, on this. In fact, in one of the notes I made earlier on you will find a rearguard action because of the way this has been dealt with and your coming in at the late end. I still cannot understand why if you managed to get to the politicians in Guernsey you could not get to them in Jersey by being persistent.

Mr. P. Garlick:

Yes. Well, we went to all of the politicians in Guernsey only as a ... we see trying to lobby all the politicians as very much an aggressive backstop rearguard action. While there is dialogue we were for ever hopeful. The reason we went to all Guernsey politicians is because despite all the dialogue we had with the energy policy, and we were concerned it might happen here, one day we just found it published without any prior consultation. We found that gas and heating oil, those were the words used, would have no future in Guernsey in the next 20 years. So we have gone from just dialogue like we are having to this point. We did that and we have been accused of doing it because we went to each States Member and tried to put on presentations. We have recently been told that this was a very aggressive stance to take and we do not want to cause undue debate where it is not necessary. Unfortunately, we thought we were going through the correct channels in trying to not take the debate to States Members. We saw that as a last resort.

The Deputy of St. John:

Well, I personally I think you missed the boat by not doing it the other way around. Taking it to civil

servants is fine but if it is not getting where it should be getting, then you go above them and go to the politicians. I personally think the presentation I had and within a very short period of time of what you are telling me here, I thought: “Yes, other people need to be listening to this, not only myself and my colleagues. This needs to be going out to the wider forum of the elected representatives of the Island.”

The Connétable of St. Peter:

I think the J.E.P. (*Jersey Evening Post*) headline saying something like: “Jersey Gas could fall within 5 years due to States policy” would certainly attract a level of attention.

Mr. P. Garlick:

Again, that was something that we have been very sensitive to. We do not want our customers to think that we might be going out of business as well.

The Connétable of St. Peter:

No ...

Mr. P. Garlick:

It can be a self-fulfilling prophecy, so that is why we have been very guarded. As for the length of the carbon debate, unfortunately, we had a very punchy presentation to States Members in Guernsey and I think we won them over on the economics score and we won them over on the security of supply but we did not win hearts and minds on carbon because, again, people believe: “Well, it is a nuclear power station” and that is it. So I do apologise, it is good to get feedback because maybe we have pitched it too long on the area where we did not think we were going to ...

The Deputy of St. John:

I think you still have a lot more work to do obviously to get to the politicians now. Because that is the way ... obviously whatever we do we will do, but I think you still have to be progressing this to get to where you want to go.

Mr. P. Garlick:

Okay. Well, again, it was seen as a backstop because if, for example, Mr. Scate has decided that he will look at in terms of ... because we are always scrambling around and getting some signal that people were considering which has kept us from taking the next step but perhaps we should take more of what they are saying and just announce to people that unless there is some positive action we will take this debate to all States Members and the public.

The Deputy of St. John:

Well, I am hoping that we will decide afterwards that we are able to move forward in certain areas and see if we cannot get this opened up into the wider forum for you but I would be expecting you to be progressing your own way forward because ... I will not say more than that at this moment until we have had our meeting afterwards. Can I thank you for the presentation and thank you for the time. If you are going to do it again, do it in half the time and you will keep everyone's attention.

Mr. P. Garlick:

My wife has lived with this for 18 months but, yes, thank you very much for listening to us.

The Deputy of St. John:

Thank you.