

To be read in conjunction with
the tabled evidence/statement



**HEARD BEFORE DR R SOMERVILLE QC (CHAIR), MRS G BAUMANN,
MR W GARDINER AND DR R CHAPMAN, MEMBERS OF THE BOARD**

MONDAY 29 JUNE 2009

**HELD AT THE WELLINGTON CONVENTION CENTRE,
SQUARE AFFAIRS ROOM, 111 WAKEFIELD STREET, WELLINGTON**

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HEARING OPENED [10 am]

APPEARANCES

Mayor K Prendergast, Mr Z Rissel and Mr B McKay, Wellington City Council

Mr T Robinson, Mr A Sommerville, Mr P MacIntyre and Mr M Chrisp,

Contact Energy Ltd

CHAIR: Well welcome this morning and thank you very much for your submission, we appreciate the time that went into it and look forward to hearing from you. I need to say that everything's being recorded so it may well be that you find what you say on the website actually, so just be aware of that. Now if I could introduce the panel, you probably know the panel but, Mr Gardiner on my left, Mrs Baumann and Prof Chapman on my right and I'm Dr Somerville. We're really in your hands as to how you wish to present your submission, whether you wish to speak to it or read it through. And then we do have some questions because some of the matters you raise are of particular interest to us at this stage, so thank you. If you could just identify yourself when you stand at the lectern for the record's sake.

MAYOR PRENDERGAST: First of all, thank you very much for the opportunity to speak on the proposed National Policy Statement for renewable electricity generation. As I have said, I would like to break down our presentation into four parts. The first part I want to speak about is the benefits of greening New Zealand's electricity supply and why Wellington City Council sees this as an important strategic area. The second area is the need for greater consistency and commitment from local authorities and key stakeholders across New Zealand in relation to encouraging renewable electricity developments. Thirdly, I want to identify some specific issues with the details of the proposed NPS. And lastly, we have some questions about the upcoming RMA review and how they relate, seeing they were announced after the announced NPS proposal.

So first of all, in relation to the national significance of renewable electricity, we are very supportive as a City Council of the intent of the NPS to recognise the national significance of renewable electricity. We believe it's vitally important that key stakeholders do their bit to increase the percentage of New Zealand's electricity supply that comes from

renewable resources. The most important national benefit relates to reducing greenhouse gas emissions, so I've broken down into three areas why we think it's important. For the government to achieve its Kyoto obligations and its target of reducing emissions by 50 percent by 2050, the makeup of New Zealand's electricity supply needs to become more renewable and this needs to be done while demand for electricity steadily grows. For Wellington, we too are reliant on an increase in renewable electricity generation to achieve our own city emission reduction targets. The second key benefit is the fact of reducing New Zealand's reliance on fossil fuel generation from sources such as coal and gas. Right now, we need coal and gas generation for security of supply, but Council's strategic aim is to reduce our dependence on these generation sources to make New Zealand more self sufficient without sacrificing security of supply. In fact, we know that Meridian's new wind farm, when it's fully operational at Makara is going to supply the residential electricity needs of Wellington, Porirua, Upper Hutt and Hutt City. So as a city we are really supportive of renewable resources. Lastly, we think that New Zealand's 100% Purebrand is important to protect. And encouraging more renewable electricity development and being recognised internationally as a country that leads in this area will enhance the 100% PureNew Zealand brand.

Secondly, the second issue I wish to put a little bit more emphasis on is a consistent approach across New Zealand. We are very supportive of the proposed NPS in terms of bringing in a more consistent planning environment across New Zealand for electricity generators and local authorities. We think it is important that consent decisions properly address environmental impacts. There does not seem to be a consistent approach to recognising energy benefits across New Zealand. We were the first local authority in New Zealand to formally recognise the RMA Amendment Bill, which is energy and climate change, through its District Plan. The Council's District Plan Change 32, which was notified in

2004, gives effect to the Act by providing specific policies that encourage the development of renewable energy. We did that as a specific initiative at the time. We thought that if we recognise it in our District Plan, it would make it an easier hurdle for renewable electricity generators to come and look at opportunities within Wellington City. We believe we need government to drive this consistent approach across New Zealand so there is a greater encouragement of renewable electricity development. The National Policy Statement we see as an appropriate tool to achieve this.

The third area I want to concentrate on is specific issues that we have with the proposed NPS. So just to reiterate, we are really supportive of it, both the purpose and the intent. But there are a few detailed comments and concerns relating to the proposal. First, we believe that our District Plan already meets many of the requirements of the proposed NPS. However, it is unclear how the proposed NPS would significantly change Council's existing consenting process. So we are not quite sure of the relationship between the two. We believe we already have it covered, so what is this going to do and how is it going to significantly change our existing consenting process. We think it would be useful if the Board or analysts from the Ministry could give Council guidance on whether the District Plan, our policies, are consistent with the objectives and policies of the proposed NPS. Secondly, Policy 1 of the proposed NPS talks about Councils recognising the national significance of benefits of renewable electricity generation, and it is unclear how councils would weight the national benefits against local costs in a decision making process any differently than it does under our own District Plan Change 32. So while we support the concept of recognising the benefits of renewable electricity, we think the NPS should provide more guidance on the weight applied during consent processes, and specifically outline the benefits that need to be considered. We think that needs to be clear so there is a

prioritisation or a weighting given, so we know what weight and benefits should be given for the NPS over our own planning processes. In relation to the issue of reversibility of renewable electricity developments, we think it is important to be specific. Because the concept of reversibility is open to interpretation, it is important to be clear about which technologies fit into this category. Wind and marine energy are two examples that we think fit the reversibility criteria. Again, you need to be more specific about the ones you think are examples that fit the reversibility criteria. We are also supportive of the intent to promote small scale renewable electricity developments, but think that it is important to point out that in most cases, it's not the local authority consenting processes, but it's currently the cost which is the biggest barrier to uptake. I know there are celebrated cases, including the Meridian one in Makara, where the cost of the consenting process was huge. The reality is that it's the cost of the actual electricity generation that is the biggest barrier and we think the intent to promote small scale renewable electricity developments is great, but in most cases it is not our processes that.

And another, leaving my notes, I've just spent some time in France. I don't know whether some of you have been there, but they've got small wind generation plants, not in every local authority, but where we were in Normandy. They've got 36,000 local authorities in France. The mayor of this tiny authority that has 500 people, it has a mayor and 10 councillors, was telling us that they said yes to three wind turbines, because they got 30,000 Euros a year as the incentive to say yes. He was raising a question that is being raised across France, that because they have been incentivised to say yes, instead of getting one big one, every little authority is saying yes. As we drove around Normandy, there were three little wind turbines in lots of little places which seemed to have a much bigger visual impact from my perspective than maybe one big one in one place that wasn't so obvious. That's just right off my notes, but of interest.

[10.10am]

In relation to the threshold used in the proposed NPS to define community scale, we believe 4 megawatts is too high. Under this threshold a project could include 16 250 watt turbines, which is essentially 16 of our Brooklyn designs. So for those of you who know Wellington, the one that was resisted so much by the community has now become an iconic part of that part of our community. It would mean 16 of those. We still believe that the environmental impact would still need proper consideration and evaluation under this scenario. It might be appropriate to have different thresholds for different technologies, but we still think more work is needed in this area to identify suitable thresholds. I think these thresholds also need to be referenced in the actual policy.

In a separate but related note, in terms of encouraging small scale renewable electricity, could I also suggest that the government consider regulation that gives more incentives for households or businesses to install renewable electricity technology through higher feed-in tariffs? Now I understand that this type of legislation is becoming more common in developed countries. For example, in the Australian Capital Territory, they are paid a tariff of up to three times the retail cost of electricity for the energy they feed back into the grid. An example would be that if someone pays for the cost of having solar or a little wind turbine on their house, the energy that they don't use that is fed back into the grid should be borne at a higher tariff, so they are incentivised to put the technology on their own homes, but when it is fed back, that they get a higher return. Of course that helps overcome the cost boundaries that are there currently for renewable energy installations. So we don't have that legislation at the moment, but we believe it could be successful in encouraging small scale renewable energy projects.

Just finally, we have a question around the impending RMA changes. Now the proposed National Policy Statement was released for discussion well before the election, and obviously before Minister Nick Smith announced the RMA review. We would like some guidance on whether the government anticipates the RMA review will achieve objectives for some of those of the proposed NPS. Moreover, does the Board see most large scale renewable energy consent applications going straight to the Environment Court or an environment protection agency, in order to provide more consistent recognition of the national significance of renewable electricity. If that is going to happen, is the NPS even required. So that's the end result of the question around the impact of the RMA changes. Also, while Wellington City Council already encourages renewable electricity through our District Plan, we also have an obligation to ensure that adverse effects of developments are properly addressed, so we would need adequate assurance from the government that the right balance will be maintained between the national benefits of renewable electricity projects and the localised environmental impacts of those projects.

So finally in conclusion, Council is supportive of the proposed NPS which seeks to establish a more consistent and encouraging planning environment for renewable electricity developments. This is vitally important for our climate change goals, improving our self sufficiency, and enhancing New Zealand's 100% Pureimage. We feel that our existing District Plan policy is sufficient in addressing many of the objectives of the proposed NPS, but we do feel there are some details of the proposal that need more work and more detailed comments can be found in our written submission. So thank you and I won't be able to answer detailed technical questions, but these two experts on my right, will.

CHAIR: Thank you. Perhaps if we could actually get some information about your Plan Change 32. Is that operative yet Mr McKay?

MR MCKAY: It actually becomes operative this evening. That's going through the steps of the Clause 17 process under the Act to get it formally approved. That was after going through a fairly lengthy Environment Court process appeal.

CHAIR: Would you be able to give us a copy of your energy section - is it all to do with energy? Sorry, I'm not aware of your plan change. What's actually contained in that plan?

MR MCKAY: It's a separate section of the plan, dealing with the alternative energies, it's not just focussed on wind farms, it covers all alternative energy forms. But it is a series of objectives, policies and rules to do with that particular issue and is slotted into the plan as a separate chapter. A lot of thought was given to how it was going to be included in the plan, because most of these things were going to be, particularly the wind turbines, were obviously going to be in the rural part of the City, and the whole focus of the rural chapter of the plan was to protect the rural character. So there was great difficulty in trying to decide how to fit what people call industrial structures like wind turbines into a rural environment where in essence we sought to keep the green, leafy agricultural type environment. The approach we took was to have a sort of balanced approach, where we'd apply the policies for alternative energy and weigh those against the rural character control, so it wasn't trying to write rules to include turbines into the rural area, it was to have two separate policies and to have those balanced up in individual cases. That was the only way we could see that working really.

CHAIR: Just before I invite my colleagues to discuss these things with you, would it be possible to email the link to your plan, it's on the web is it, to Ms Beruldsen. Because we really would like to see that, and then perhaps we can address the very question which you've raised about whether we believe that this policy would be assistant or not for your plan. The inquiry has been very interested in what use this policy is when it comes to actually planning your next layer of documents, and it is concerning us and it's good to hear that you've actually faced a lot of issues that we're facing on a national basis and we would be very grateful if we could see that.

MAYOR PRENDERGAST: You just mean Chapter 32?

CHAIR: Yes I do, thank you. So I take it that it addresses the demand side as well as the supply side, energy efficiency alternatives, all those sorts of things, as well as generation itself, solar, double glazing, that sort of thing?

MR RISSEL: Yes. I believe the RMA Act requires Councils to give consideration of the efficiency of end use of energy, and renewable energy, so it does address that at a high level. But it has more technical policies, as Brent says, specifically for wind because Wellington has such obvious wind opportunities. And things like hydro or geothermal, obviously we didn't have any specific policies about those, so it's much more technical policies on the wind side and high level statements on supporting energy efficiency and renewable energy. And just one thing I'd like to add is that in our written submission, it feels like we don't actually have to make any plan changes. Plan Change 32 actually addresses a lot of the intent of the objectives of the NPS. So I guess it's a perfect policy if you guys feel the same way at the review Plan Change 32. There's a few maybe, the wider policies I think Policy 5 which is small scale which might need some

alterations to the District Plan, but we think that right now as it stands it looks like it is sufficient for most of the objectives and aims.

CHAIR: Within your structure of your District Plan, do you actually have no-go areas because of landscape values, actually mapped or something?

MR MCKAY: The only areas we have are so called ridgelines on hilltops and I think we are looking at that at the start of wider landscape work that has been sort of cascading down through the Regional Policy Statement that is in the pipeline at the moment, and that will be telling us that we will have to be doing work on the wider landscape issues, and that will be a regional directive that we give effect to. We haven't done that fully as yet, but we have done work and it was related to the wind alternative energy provisions, where we introduced ridgelines and hilltops controls in the City which doesn't prevent development within ridgelines and hilltops, but closer scrutiny is given to development within those areas. It doesn't cover every ridgeline and hilltop in Wellington either, it is only the really important ones that have been identified.

[10.20am]

CHAIR: There is a common theme coming through the submissions, both from generators and local authorities, and that is that rather than expect the local authority to identify opportunities for renewable electricity across that ridge or that ridge, it would be preferable for them to identify the other values, such as outstanding natural landscapes. So everybody knows the inappropriate places, and then the balancing, which clearly you've addressed in your plan which is really helpful, then is assisted when it comes to what is appropriate or not under Section 6 of the RMA. So we would be interested to hear your thoughts on that as well.

MR MCKAY: Well we were asked early on in the process, in fact pre-2004, whether the Council should be identifying the areas within our rural area that was suitable for wind generation. Our view on that generally was that we didn't have the expertise to do that. The wind companies are way up there doing all the testing and it is a hugely expensive business of course. How we did facilitate that, was to give them a slightly easier path for putting up their anemometers for the research work they have to do. So that was a separate part of the rural package as well, to gain access to land to put up their structures to measure the wind and then decide where the best sites were, because the City couldn't do that. Well, we could, but it would be hugely expensive.

DR CHAPMAN: I have a few questions on the written submission statement. I wonder if we could just take them from the top, starting with the objective. The interesting point is made that it is important to reference the real objective for developing the proposed NPS, which is around reducing greenhouse gas emissions while maintaining security of supply. So I take it from this that your view is that you would reorient the objective. You'd suggest that we reorient the objective in the NPS to stress the greenhouse gas reduction rather than the specific 90 percent that's in the objective at the moment.

MR RISSEL: Well, I think maybe the 90 percent is valid but there also seems to be context for why 90 percent is sought because I think if renewable energy and non-renewable energy sources had the same, I guess, effects on the environment we wouldn't care about achieving that 90 percent target, so maybe it's important in the objectives to say, "We want to achieve this target for these reasons." Obviously, that's why we thought it was important to include reference to climate change while maintaining security of supply in the objective.

DR CHAPMAN: So that's almost an additional context, an additional reason.

MR RISSEL: Yes, we thought it was worthwhile to include those, because that's the real reason why you're really trying to increase the percentage of renewable electricity in New Zealand, is for those reasons.

DR CHAPMAN: Do you have any views - a number of submitters have said to us that being specific about the 90 percent was probably not such a good idea. In other words, to talk about the intent but without necessarily being specific about the 90 percent which is after all a number which sits within a particular document, but is subject to change as conditions change.

MR RISSEL: Yes, I guess I possibly share that in terms of, it was a political goal so it can change, and having to go through a process where you have to review everything again because of that target might take quite a lot of time and unnecessary effort really. So it possibly might be easier to reference the national target, whatever it may be, so that that target can be. From what I understand, the National government's thinking about possibly reviewing that target, so it might not even have relevance.

DR CHAPMAN: Yes, I'm not aware of that, but it may change in the future. Now moving to your comments on Policy 1. Plan Change 32 is quite interesting here because it specifically talks about the focus on both continued improvement and energy efficiency and an increase in consumer energy supply. Would you see merit in setting out a similar context in the preamble to the NPS? In other words, being specific for example about energy efficiency, which I don't believe we have words in there at the moment about that.

MR RISSEL: I guess it possibly could, but then it might go beyond the scope of what, because the scope is renewable electricity generation might go

beyond the scope. So I think maybe personally sticking with renewable electricity might just give more clarity and more direction to the NPS. There are other avenues that the government will be taking, both regulatory and non-regulatory, to address efficiency of energy, so I'm not sure if it's that necessary.

DR CHAPMAN: I was interested in the comments about adding one of the national benefit reasons, "The maintenance and enhancement of New Zealand's environmental image." Why do you think that would be a desirable specific point to be set out in the NPS?

MR RISSEL: I think a lot of the reasons why we're doing this are for climate change objectives, for security of supply, and it was just another benefit. New Zealand is known internationally setting very high makeup of its electricity supply from renewable sources, and we rely on our 100% Pure image, and going even further in that direction we could really advocate that for our trading markets and say look how 100% Pure we are. It was just another added benefit, really, to the other two which are probably more specific.

DR CHAPMAN: General reputational benefit.

MR RISSEL: Yes

DR CHAPMAN: Now turning over to your section 5.2, Points of Clarification - this is under the General Comments heading. Just over the page, you say, "Proposed following wording from the (inaudible) Policy 2." And I understand where you're coming from in making the first part explicit. Towards the end your suggested wording says, "Consent authorities should enable well designed and (inaudible) projects to gain consent and ensure that these remain commercially viable." I'd like your views on

whether that runs a risk of going a step too far. Ensuring that projects remain commercially viable is that the role of an NPS?

MR RISSEL: I guess that this wording was based on my experience with the West Wind application. We had to take in their proposal and then we actually had to work with it and look at some of the adverse impacts and we actually could probably talk in more detail about how we balanced some the - we really wanted to go forward and thought we wanted to encourage it, but we also wanted to address the environmental impact, so I guess it wasn't being so restrictive as that you make the project unviable, that was the real intent of those words there.

DR CHAPMAN: Yes, no, I understand that intent.

MR RISSEL: It could possibly be addressed in other ways, but this was just our suggested wording.

DR CHAPMAN: Thank you that's very helpful. Is there anything you wanted to add to that, in terms of that West Wind project?

MR MCKAY: Well obviously on the other hand, I guess they needed, given the cost of setting up that particular development, getting access to the site, all the infrastructure they had to create at huge expense, so obviously they've done their sums to know many turbines they needed to make it pay. And at the end of the day, after all the assessments made and the noise and visual impacts and so on, a number of turbines were dropped off, so it made the thing uneconomic to proceed. Certainly, if the submitters on noise had been given greater support and more turbines had to be dropped off for that reason, or maybe it wouldn't have happened. So essentially they had to build a new wharf around at

Otorohonga Bay to ship in the equipment, it couldn't come through the normal roading system, so, unusual from that point of view.

[10.30am]

And just the creation of the roads around that difficult hill country itself which wasn't really open prior to that. There were farm tracks there but they had to create new roads essentially to get access. I guess there was a break even point there somewhere in terms of the number of turbines that they needed to make it work.

DR CHAPMAN: Yes one of the issues that does confront us is where the balance should be pitched and in this wording that we're proposing or reflecting on. And it's been suggested to us, for example, that wording along the lines that some adverse affects may be more than minor, well I'm not putting it very well but there may have to be wording which suggests that constraints on development is such that it may be necessary to accept that some adverse affects of more than a minor nature are to be accepted. Is that the sort of wording that you would see as desirable in striking that sort of balance or would you not quite go that far in terms of (inaudible)?

CHAIR: Can I just pick up on that is this discretionary activity in your district?

MR MCKAY: Yes, yes discretionary.

CHAIR: So they're more the minor things not?

MR MCKAY: Yes, no they're not limited activities.

CHAIR: Okay that's fine.

DR CHAPMAN: On the reversibility issue in your section 6 do you have specific words in mind around defining what is reversible?

MR RISSEL: We can get back to you on that, I'd have to think about it but we just thought it was important you could measure reversibility without being quite specific about what the technologies government sees as being reversible are then it's hard for planning authorities to make effective considerations. So we can give thought to that and make some recommendations.

DR CHAPMAN: Thank you. Just thinking about your comments on Policy 4 and this brings us to the issue that you touched on before, you say that the Council believes that further amendment to the District Plan is not required and so on. So would you seek a change in Policy 4 say along the lines of the words that you've got there, you say, "Support the intent of the second bullet of Policy 4 and look for opportunities to strengthen the District Plan in relation to emerging renewables." Would you - what sort of wording would you be looking for there?

MR RISSEL: Well I guess the real comments around Policy 4 especially the first part was that we just feel that we have this covered for our District Plan in terms of the testing is necessary to see if those technologies are viable. And then I guess that goes down to some of the original themes of our original submission. We think we've addressed these concerns about recognising renewable electricity benefits and also encouraging them, enabling them so we think this is sufficient and if you give us advice that is whether there's anything additional that you think that Wellington City Council in particular could do. And we don't have any particular wording on the spot about how we could address the second bullet of Policy 4 but again we could give some thought to it.

DR CHAPMAN: Yes one of the issues potentially in there is that some councils may take a proactive approach and some may not and it may be desirable to have wording that allows for pulling along the councils that are dragging the chain a bit there.

MR RISSEL: Yes I think I said (inaudible) at a high level it's important to have consistency across the country so that one city or one region who might be really having the encouraging planning policies isn't just taking everything on their back where other regions are just solely focused on their localised costs. So we think we've got to a place where we're properly recognising the national significance of these projects and also address localised costs so that really needs to be consistent. It's a difficult thing to do no doubt but I think a lot of effort needs to go into it.

DR CHAPMAN: And I guess my last question was just following remarks that the Mayor made about consenting costs and the real barriers being the cost of resource, the technology I guess. Can you give us any examples of consenting costs in the Wellington context and how those do stack up against overall costs of development, can you give us a sense of (inaudible) magnitude I guess, those potential barriers?

MR RISSEL: I can't comment on anything large scale (inaudible) might be able to, but off the top of my head I can't for small scale domestic commercial application. I guess what we were trying to say is that for some, for example, of solar PV array on a house might cost between 20, 30, 40 thousand dollars. Payback might be 50 or 60 years, so that's right there that cost before anything above consent (inaudible) is already prohibitive so if there were more policies to encourage or provide some subsidy incentives to reduce that cost for them, for that household or business then that would probably be more important than planning.

DR CHAPMAN: I absolutely accept that.

MR RISSEL: So that's what we're trying to do, we can go back and look at those costs and be intuitive.

DR CHAPMAN: What would it typically cost to consent a PV array on a (inaudible) photovoltaic?

MAYOR PRENDERGAST: Not much, and as a council we have looked at whether there was a way of forgiving those costs, but the biggest cost barrier is in fact the technology so we haven't gone that way yet.

DR CHAPMAN: Could you give us an order of magnitude on consenting costs?

MAYOR PRENDERGAST: We can come back to you on exactly what it costs.

MR MCKAY: But a notifying consent on them is about a thousand dollars isn't it? Something in that order.

MR RISSEL: The council does have, on a different consenting stability consent, we give grants out to sustainable energy technologies so if they go through a building consent process and they do everything properly and get the code of compliance certificate then we'll issue them a small grant which should cover the building consent fee.

DR CHAPMAN: Thank you.

MR GARDINER: Thank you very much Mr Chair. The Makara wind farm, the Mayor was indicating that it would meet the domestic needs of the city. Is there further capacity as the demand of the city increases? Presumably if that's going to meet the demands of the city as it currently stands, is that - as the city increases I'm assuming it will look for more opportunities for renewable energy sources? Is there more capacity in and around the hills of Wellington to service that need?

MAYOR PRENDERGAST: It's actually going to meet the needs not just of the city but the full metro city residential needs, but there is another application in for another one near Long Gulley.

MR MCKAY: There's Mill Creek for another 30 or so and then another one along the gully. So there is potential for more to meet the growing demand which is really my issue?

MR RISSEL: And then we have Cook Strait as well.

MAYOR PRENDERGAST: And the Regional Council is looking at one as well.

MR GARDINER: Yes I noticed that and I noticed that you're saying that the marine issue is a Regional Council matter under section 7, I think it is. Do you have do you link with them of their planning around marine, Cook Strait, potential for generating renewable energy out of that or is that just something that you note and that's the Regional Council's problem, or not problem, challenge?

MR RISSEL: Maybe Brent can comment after I've finish but I know they look at the specific environmental affects, because Neptune they went through recently, I'm not sure what stage it's at. But we're working with them as the technology meets the shore, so when it crosses over to our boundary obviously looking at it and it will be covered under the DP 32 because it is a renewable electricity activity so that's where our District Plan Policies or planning policies in around something - a marine application.

MR GARDINER: One of things we've observed over the last few weeks is there's a kind of notorious reliability of the experience in wave technology and we've seen some examples in Christchurch someone showed the (inaudible) under the sea and some a big sausage going on top of the ocean. And therefore I'm just wondering about the efficacy of the planning for Cook Strait, for example, and the stability of providing marine with renewables sources energy out of that. Is that something the Regional Council will be looking at or is that something that we're waited for the technology to develop further elsewhere then we'll have a think about it? Just a general question.

[10.40am]

MR RISSEL: I think it goes back to what Brent was saying earlier where I guess we're more reliant on the energy generators or the people who are in the

R&D space to be testing these things as they become more viable and they're tested. I believe the Neptune is actually a trial and it will be providing a substantial amount of electricity but it is a trial for that technology. So we don't see ourselves really in the technology testing.

MR GARDINER: Okay. Just a small matter, I've been listening to the debate around the smart meters and smart technologies for making households more efficient. Because clearly we need to look for renewable sources but at the same time look at economising on the energy that we use. Does the city have a position on those or that's just the line companies putting them in and it's a matter between them and the households?

MR RISSEL: On the smart meters?

MR GARDINER: Yeah.

MR RISSEL: Yeah I did read some of the stuff from the Parliamentary Commissioner recently, I'll probably have to do more thinking about that and I'm aware of the smart meter technology, aware that some factories are trialling it and it is providing positive results for households and businesses. Probably have to do more thinking and get back to you on that once specifically.

MR GARDINER: And my final question's around NPS 5 which I've been really interested in because it kind of addresses isolated communities across the country in the North and the East Coast. But I just wondered whether in Wellington City, with that kind of policy, I know you're supportive of it, whether there is in fact utility of its application inside the confines of the city?

MR RISSEL: Correct me if I'm wrong here both of you, but I think everyone in Wellington City has access to electricity supply so we don't have the same situation as like Stuart Island or an isolated rural community so we focussed our comments more about small scale application on a

household or to provide for specific development, so that's where we saw our comments engaging.

MR GARDINER: Okay thanks for that.

MRS BAUMANN: I don't have any questions thank you.

CHAIR: Thank you. If I can just get some help from you because this is very useful this, particularly when you've gone through the process at a city level. You mentioned the reversibility issue with Policy 3 and the second line, do you have the policy statement with you? If you look at Policy 3, and the reason for my question here by the way is to work out whether this would have been any use to you whatsoever if you had been undertaking your development work on your own plan change. The words that we're having some difficulty with is, in the second line, "Decision makers must have particular regard to the relative degree of reversibility." Now are those words of any use to you as somebody developing a plan? Would they be of any assistance to you at all?

MR RISSEL: I guess one of the issues is that it can be all relative.

CHAIR: Yes exactly.

MR RISSEL: And I think it might be important to be more specific. I think wind energy has potential to be a transitional technology so in 80 or 90 years time we might find that sea-wind energy developments around the globe so much there might be other technologies that are far more cost effective and don't have the same kind of visual impacts. So it is important to recognise the transitional nature of some technologies. Right now, in terms of the renewable energy fold, it's up there as being one of the more cost effective and obviously with companies seriously investigating and investing in it and obviously it's something we need to plan for and accommodate. But it does have a degree of reversibility to it so it might

be more - and we can probably work on some wording to get back to you on.

CHAIR: Well that would be lovely if you could. My concern is that if you received this in the post and you tried to work out your plan whether it really does assist you or whether it just causes difficulties because of the qualitative nature of the land.

The other one is Policy 4 at the second line where its got “where appropriate”. We’ve had some comment from mainly the planners who are concerned with words such as that when it comes to building up what you need to do to comply with the policy when developing your instruments.

MR RISSEL: We thought that “where appropriate” was that if you already had methods and policy statements in there, which we do, about 4.1, so identifying policies that can help assist generators with the testing they need to do for renewable energy. We thought that was where it was - so that was where - did we misinterpret that is, that what it meant? So if we needed to put it in -

MAYOR PRENDERGAST: I think you just identified the problem. If we’re having to interpret it one way, that means that there are a number of interpretations.

CHAIR: Yes exactly and we don’t want uncertainty, particularly when you’re developing a statutory instrument where you’re bound to -

MR RISSEL: Maybe just (inaudible) then don’t worry about it, if you don’t have anything then you might need to consider it.

CHAIR: Yes, when you’re giving effect to something and it’s hard to say what you’re giving effect to.

Now the other thing I was particularly interested in was because of your experience and your city within your city boundary, is the cumulative effects issue. In the Manawatu area we had a lot of submissions on this aggregation of the number of wind farms across the Ruahine's and so forth. Within your plan change do you address cumulative affects for wind farms in the way of setting criteria?

MR MCKAY: That is an RMA requirement to take that on board but I guess it will be an issue that will be highlighted over time and as things come to play when the first one is up and running and everyone's quite excited about that and then Mill Creek will come along and then maybe Long Gully and then people will start to say, "Well maybe some can go to Porirua or Upper Hutt or something like that."

CHAIR: Well some local authorities, and admittedly the smaller ones who really are struggling with addressing these, have raised this issue about whether or not densities, separation distances, that sort of thing should be included in a plan rather than relying on the hearing panel of Commissioners to try and work out on the day, particularly if you start to get add-ons. And so that's something you might like to think about it's pretty directive of a policy statement to put to that level specificity and some would suggest it would be better addressed through a National Environmental Standard or something like that. But we would be grateful if you could think about that and get back to us because yours, again, is an area where you're confronted with cumulative effects. And we may get some guidance from the Environment Court with the Project Hayes one, for instance, or with the Mahingarangi one as well.

Now you did raise with us this issue of the implications of the reforms. We need to tell you that we've actually asked for the officials to come back in another week and we have a list of questions and that would be one of

them. The issue of, particularly when it comes to water and hydro and Regional Council responsibility over a number of districts, this issue of if there's going to be an EPA then the Regional Councils aren't going to be dealing with (inaudible) for example, how would that affect our policy statement. That's a case of us getting back to you, I suspect.

But also, just finally, this document at the moment, in its current form, I understand your support of it as a national document particularly for local authorities that aren't as far advanced as yours. If you had have received this at the time you were developing your Plan Change 32, would you have added any more to your Plan Change 32 or less? Would it have it influenced you in any way at all? I'd be grateful if you'd be candid about that, because that's what we're trying to address.

[10.50am]

MR RISSEL: It's hard to say really because the four policies that - the first four policies we think our plan change addresses that so it's hard to say how -

MAYOR PRENDERGAST: He's asking the other question is, would we have done the plan change?

MR RISSEL: I think, possibly in regards to the small scale stuff that is something we were already considering with the second generation plan review. And so something like this probably would have been of assistance to say, there probably needs to be more guidance in the District Plan about small scale generation.

MAYOR PRENDERGAST: Would we have done a plan change?

MR MCKAY: Oh we would have done a plan change, we would have done it differently.

MAYOR PRENDERGAST: Exactly.

MR MCKAY: And I think well the time it was done it was getting a balance in that rural area because we'd been through a community - well a rural planning review, sort of in 2000/2001 and the message out of that was loud and clear that the residents in the rural areas want to protect their rural character. That was all at that sort - particular in the green agricultural-type environment and then there was hints of wind turbines at that stage and they were trying to get words into the community planning, the review for the rural areas to exclude turbines and they made that quite clear through that phase. But when council was determined to be positive about it, put specific provisions in the plan, that's when we had to decide, well just how do we deal with this? And we knew it was going to be a little bit of a hot potato when it came to individual consents but it clearly would have failed if we had made no provision and tried to deal with them as a non-rural activity in the rural zone. Because there was an argument that our rural rules did provide the opportunity for making consents for wind turbines, because the structure of our plan - no use is prohibited. And we do have a general category of non-rural activity being discretionary. But we didn't feel that was really going to be strong enough to support a wind turbine application.

CHAIR: You had no policy content?

MR MCKAY: We had no real policy content, so the thought was to beef it up and to have the two running side by side so they could develop.

CHAIR: What stage is your review at? This was a plan change I see, how's the city plan going?

MR MCKAY: Well the plan became operative in 2000.

CHAIR: 2000?

MR MCKAY: Yeah subject to what the law says under the Amendment Bill, is due for review next year.

CHAIR: Yes, this draft policy statement has a reporting date for changes and so forth, do you have a comment on that? Again this policy -

MR RISSEL: Wasn't it 2012? Yeah, well we thought with the second generation plan review we've had time to (inaudible) I mean basically, correct me if I'm wrong, but it opens up basically your whole district plan to look at some of the concerns from the community.

MR MCKAY: Well the RMA process, we have to commence the review ten years after the plan's operative. The Act doesn't tell us how long that review takes apart from a provision in the Act that says we will avoid unreasonable delay. Under review could take a couple of years by the time you go through all the -

CHAIR: Yes. So that's not too difficult for you 2012, or to be better 2014 or something?

MR MCKAY: We've got the same issue with the Regional Council over the region's policy statement. They're saying all these issues have to be given effect to and we're sort of saying, well when, at what stage do we have to do these things? And some of them will involve fairly hefty work loads in terms of investigation and research and analysis, so we're try to get a steer from them about what their expectation is about when these things happen.

CHAIR: Just following up on that, you mentioned the regional council's doing some high level work on landscape, for instance, within your area. Does that mean that when it comes to identifying outstanding natural landscapes in the coastal zone and so forth that the regional council's doing that work or are you doing it as a city council?

MR MCKAY: No they're telling us that we have to do --

CHAIR: They're telling you, you have to do it rather than doing it?

MR MCKAY: -- landscape work, they're doing some high level work to establish some sort of base information for everyone to use, but at the moment it will be over to each territorial authority to do their own work.

CHAIR: So it's very high level, because land use is your special problem.

MR MCKAY: So we are sort of thinking well if it's going to happen it has to be coordinated. It's a cross-council issue really because the landscapes don't stop at our border, with Porirua for example, it's a similar sort of country. So what we do or what Porirua is doing should be married together.

CHAIR: Well Your Worship, gentleman we will have a look at your plan change and we're very grateful to you because not only do you have the wind farms, but also you've got a coastal area as well and you've a lot of the issues you're dealing with are a lot of the issues that we have to deal with on a national basis so we're much obliged. And if you could keep in touch with Ms Beruldsen and we may get back to you, because we're coming back to Wellington to hear the officials, so if there's anything else we need, we'll talk to you. But many thanks for that.

ADJOURNED [10.53 am]

Audio file: 29June2

RESUMED [11.15am]

CHAIR: Right Mr Robinson, is it? Welcome. Just before you commence I just need to let you know that we're recording the submissions and the presentations and eventually your words will find their way onto the website. Also, I believe probably and your client, is well aware of who the members of the panel are, so I won't introduce them. And, how you present your case is entirely for you but I need to tell you we have read the pre-circulated material. We're very grateful to Contact for the work that's gone into that material. Thank you.

MR ROBINSON: Thank you Mr. Chairman. If I could ask the executive officer to hand out a relatively brief written submission that I've prepared. So, if I could introduce, first of all before I present this presentation if I can introduce the team from Contact. You have Ms Dickson next to me, also counsel for Contact. Next to her is Mr MacIntyre one of my witnesses Contact's Regulatory Affairs Manager. Behind Ms Dickson, Mr Chrisp who's evidence has been pre-circulated, Specialist Planner. At the far end Mr Sommerville Contact's Senior Environmental Advisor, who will also be giving evidence. We have observed the material that's already been given to the Board. So, we've tried to keep Contact presentation as succinct as we can. I think that the Board has already received a lot of material but if I could commence by addressing my submissions.

Firstly, to introduce Contact, the Board is probably well aware that Contact is one of the largest electricity generators in the country. Operating a diversified portfolio of geothermal, hydro and thermal generation plants that between them supply approximately 28% of New Zealand's annual

electricity demand. Mr Sommerville will describe the nature of its operations in greater detail.

For present purposes, the significant point is that approximately half of Contact's annual generation is from renewable sources being hydro and geothermal. In addition, it's pursuing an active policy of development of additional renewable energy developments with projects covering the entire span from consented and under construction and new geothermal binary plant near Taupo. Through to initial scoping of development options for further hydro stations on the Clutha River.

Through the process of re-consenting its existing renewable stations and consenting proposed new developments, Contact has acquired considerable experience in the operation of the RMA as it relates to renewable energy developments. Some of that experience has been positive and some of it less so.

In the last 13 years Contact has also consented over a 1,000 megawatts of new thermal gas-fired generation capacity. And as Mr Sommerville will outline, it's notable that consenting a new thermal station is generally easier and quicker than consenting a new renewable project. They attract less opposition and the issues are narrower. Some might see that as ironic. Contact sees it as indicative of a defect of the RMA that this should be the case and that one of the key roles that the National Policy Statement is to make applications for renewable generation plant less fraught for applicants than is currently the case.

It's important to emphasize this is quite a different thing from saying that all consent applications for renewable electricity generation should necessarily be granted. Manifestly, that's not correct and would be inconsistent with the RMA.

Contact would say however, that somewhere along the line a sense of perspective has been lost and some redressing of the balance is required. It's not intended in these submissions to discuss in detail how Contact suggests the National Policy Statement might be amended to better achieve that outcome. Mr Chrisp's evidence already circulated, discusses Contact's relief and the reasons why amendments to the proposed National Policy Statement is suggested.

Rather I propose today to look more broadly at what the National Policy Statement is seeking to achieve and how it might best be framed for that purpose. So, posing the rhetorical question; why does New Zealand need renewable electricity generation? I think it's generally accepted that New Zealand depends on a secure electricity supply for its social and economic well being. Therefore, squarely coming within section 5, quoting from the Environment Court's decision in the Owhitu (ph) Wind Farm case: "emphasising how vital electricity is for New Zealand and its link to sustainable management".

It's also beyond dispute, as recorded in the preamble to the proposed National Policy Statement that electricity demand has steadily increased over a number of years and can be expected to continue to increase. I quote from a decision of Justice Fogarty's, talking about: "the notorious fact that there's ongoing risk of the demand for electricity not being matched for supply". Emphasise in particular the last two sentences: "for these reasons it's in the public interest for power supply companies to increase generation capacity. The question is not whether generating capacity should be increased but rather by what means and where".

Now in answering Justice Fogarty's question; global climate change is clearly a factor pointing firmly towards renewable energy sources as the

preferred means to meet future electricity demand. While debate continues as to the nature and scale of likely climate change, in its decision on the Project Westwind the Environment Court quoted expert evidence to the effect that RMA decision makers needed to recognise that climate change is a reality and respond to that fact.

Now, that's not to say that thermal generation does not have a role, as Mr Sommerville will discuss in his evidence, Contact is in the process of constructing a fast start thermal station at Stratford which will provide peaking capacity to fill in the gaps in the output from renewable hydro and wind plants.

But even if climate change were not a factor the practical reality, as Mr Sommerville discusses, is that with Maui now rapidly running down, gas does not provide a viable option at present to provide the base load capacity required to meet increased and increasing electricity demand. Renewable generation is therefore both the best option from a climate change perspective, and the most economic option.

Now posing the second question; what sort of renewable generation does New Zealand need? Some of the submissions to the Board of Inquiry seek to advance a case for particular types of renewable generation, either explicitly or implicitly. This is done in a variety of ways. Some submissions take an overt position opposing use of particular renewable resources. The anti-hydro submissions are the clearest example of this. Some advance positions that would less directly have this kind of effect - for example, those seeking to favour only those generation sources producing no greenhouse gases when in operation, which would exclude geothermal generation. The proposed National Policy Statement itself takes this kind of approach by pushing reversibility as a key issue, thereby

favouring wind over hydro and to a lesser extent geothermal. Mr MacIntyre addresses this issue in his evidence.

In summary, New Zealand cannot afford to pick winners in this process. It needs a mix of renewable generation types to meet its future electricity needs. It needs significant new wind, geothermal and hydro generation sources, and if that new generation cannot be consented, the country will inevitably turn to new thermal generation, and in the absence of major domestic gas discoveries, that means imported gas, coal or lignite fuelled plants.

[11.25am]

So why does renewable generation need a National Policy Statement? One of the characteristics of renewable electricity generation plants is that they're typically built on a large scale and give rise to significant adverse effects of many different kinds. Moreover, because such plants have to harness natural resources wherever they can be found, these adverse effects are typically adverse effects on the natural environment.

Thus it is simply not possible to convert large amounts of kinetic energy in a watercourse to electrical energy without significant effects on the natural character of the watercourse, and probably also on its ecological and cultural values.

Geothermal plants rely on large numbers of deep wells connected by large gleaming above-ground pipes. In one Contact hearing several years ago, one of the hearing panel described the Wairakei Steamfield as a plumber's nightmare. The drilling process is messy and noisy, and the power station discharges hydrogen sulphide, the characteristic rotten egg smell well known to Rotorua visitors, which can affect the local amenity.

Lastly, the wind farm that does not have a significant effect on natural character from a visual perspective is probably yet to be built. Less inevitably, but still likely, any viable wind farm site of any size will be in the clear view of a greater or lesser number of neighbouring residents, reducing the quality of their amenity to at least some degree. If there were no neighbours, the site would probably be unsuitable because of its wilderness qualities. Any renewable generation plant of any size is inevitably going to run contrary to a number of section 6 and 7 matters and potentially to section 8 as well.

Moreover, it will also inevitably run contrary to objectives and policies in relevant regional and district plans, which will faithfully recognise and provide for section 6 matters, have particular regard to section 7 matters and take account of the principles of the Treaty of Waitangi.

The enactment of section 7(j) was intended to alter that imbalance and it has done so to a degree. Ultimately, however, the RMA is an effects-based statute, and while the definition of effects encompasses both positive and negative effects, in practice the primary focus of decision-making is on adverse effects and how those effects might be avoided, remedied or mitigated. That is particularly evident in the formulation of Policy Statements and Plans, which provide the framework for consent decisions.

Policy Statements and plans turn in practice on the specification of issues. Objectives, policies and rules set out in such documents are the means to express and achieve desired environmental outcomes in relation to the issues as defined. Local and regional authority planners have largely regarded the specification of issues as being a process whereby environmental problems are identified, that is to say, areas where adverse

effects on the environment are occurring or could occur and where regulatory action is required. It has proven extraordinarily difficult to gain material recognition in Policy Statements and plans of the beneficial effect of commercial activity in general and renewable electricity generation in particular.

In summary, because it is not perceived as a problem, a typical RMA Policy Statement or plan will at best discuss the positive contribution of industry generally and electricity generation in particular, in the context of a background overview discussion. It has proven very difficult to persuade local or regional authorities to define issues, objectives, policies and methods related to continuing provision of the benefits renewable electricity generation provides which might then be of real assistance in a subsequent consent application process.

And without some positive recognition in relevant Policy Statements and Plans, an applicant for a substantial renewable generation project faces an uphill battle. Ultimately dependent on a positive balancing or integration of considerations in the application of section 5. That situation creates substantial risks for applicants in the context of projects that typically require several years of analysis of effects and the associated costs before an application can even be submitted.

Obviously there are exceptions. The one Contact is most familiar with is the Policy Statement and plan provisions governing geothermal development in the Waikato Region. Those provisions provide clearly for development of nominated geothermal systems and an acceptance that in such systems, adverse serious effects cannot be expected to be avoided or remedied. But those provisions were only put in place after a nine week hearing in the Environment Court and a multi-month mediation process, guided by an experienced Environment Commissioner.

Contact's submission is that if the required new renewable generation projects are to be put in place, a National Policy Statement stating clearly that consenting of renewable electricity generation of all kinds is a matter of national importance.

Some submitters will doubtless say that the arguments I have presented only apply to large renewable projects and that small distributed generation does not raise the same issues, which is true to a degree. It is also true, however, that New Zealand is now an urbanised society and the electricity demands of its cities will not be met by a myriad of micro hydro and small scale wind farms.

This is why Contact has sought amendments to proposed Policy 1 to make it clear that the significance of renewable generation projects is a function of size. Small scale renewable projects are only significant when viewed cumulatively. If New Zealand is to meet its electricity needs that will only occur if larger projects are put in place and in my submission, the National Policy Statement needs to support larger projects as much, if not more, than the small ones.

So, going on to pose the question; what needs to be in a National Policy Statement? I put this question in the positive. It might equally put in reverse – what's not needed? The first thing that's not needed is policies that can be used as a basis to oppose new renewable projects. Policy 3 is clearly in this category. It may not have been intended as an anti-hydro and anti-geothermal policy, but that is how it will be read by those seeking to oppose hydro and geothermal consent applications.

One has only to look at the reasoning of the High Court in the Greenpeace decision related to the interpretation of section 104 (e) to see the line of

logic which could be applied. As Mr Chrisp will discuss, if this policy is to remain, it should be drafted in the same way as section 104 (e) of the Act, so that the reversibility of wind farms is a positive. But the impractical irreversibility of large hydro is a neutral not a negative.

The National Policy Statement does not need new policies which would pose additional effects-based tests that would qualify the objectives and policies to the point where no or very little new renewable generation project could in fact satisfy all their elements. The reality is that Part 2 of the RMA and existing Policy Statements and Plans throughout the country are full of effects-based tests already.

Some would say that without such qualifications the National Policy Statement will tilt the playing field, which is true to an extent. Ultimately though, I pose the rhetorical question; if the purpose of this exercise is not to tilt the playing field a little, then what is it? It's only tilting what I would submit to be a playing field which is already out of balance.

The National Policy Statement does not need, in my submission, policies framed like the present Policy 2, which require particular regard to be had to a range of considerations. But give little guidance as to whether the regard required to be had is intended to make it easier to consent new renewable projects or harder. It is submitted that some plain English drafting is required in this regard.

Which brings me to the most important point. It is submitted that what is most required in the National Policy Statement is a clear policy that says in unambiguous language that consenting of new renewable projects is a desirable thing. Not something to be achieved at all costs, or irrespective of effects, but a desirable thing.

It is submitted that such a policy is required to address the NIMBY (ph) mentality seen in virtually every renewable consent hearing. This is the type of thinking that has recently seen Contact's proposals for a wind farm on the West Waikato Coast greeted by submissions that Contact should be pursuing its Clutha hydro options, currently the subject of preliminary consultation. And which will doubtless see any Clutha hydro applications Contact may file greeted by submissions that it should be looking at renewable development options closer to the major demand centres in the North Island.

Contact has also sought additional policies in its submission to address particular issues it has found with re-consenting existing renewable plant, with transmission developments which are a necessary adjunct to renewable developments and to address reverse sensitivity issues. Mr Chrisp explains the relief sought in his evidence, and the rationale for it.

[11.35am]

Aside from Mr Chrisp, as I've already said Contact's submissions are supported by evidence from Mr MacIntyre and Mr Sommerville. And, finally, Contact would extend an invitation to the Board of Inquiry to tour its renewable generation stations if that would assist the Board in its deliberations.

As I say, those are my submissions I'm very happy to answer questions.

CHAIR: Thank you very much Mr Robinson. What we might do is come back to you at the end if that's all right, because you raise a number of matters and we would be grateful for any assistance on the wording issue that you raise. And it may even be that after you've made your presentation and

heard our questions that you want to reflect on those and come back to us. We will be back in Wellington later on to discuss this with officials who are making further presentations to us and we'd look forward to hearing from you then, if necessary.

MR ROBINSON: Thanks. Well in that case I'll ask Mr Sommerville to step forward and submit his evidence.

MR SOMMERVILLE: Good morning. You'll note that I've tried to not to tie up too much carbon in this paper by double-siding it for you. My full name is Andrew John Sommerville and I'm employed as the Senior Environmental Advisor to Contact. I'm a member of IPENZ, been qualified with Bachelor of Engineering as a Mechanical Engineer and have been employed in a number of different roles in the electricity business in the past 31 years. In the past 16 I've done predominantly environmental and property work.

At various stages and to varying degrees I have worked on all of Contact's electricity generating sites and been involved with many of Contact's development projects. I have been mostly involved in working on Contact's thermal power stations. In this evidence I will outline Contact, its existing generation facilities, and its new generation projects.

Contact has been operating as an electricity generator since 1996, when it acquired a portfolio of electricity and gas assets from ECNZ. It is now one of New Zealand's largest energy companies, generating 28% of the country's total electricity, with nearly 2,000 megawatts of installed capacity.

As at the end of its last financial year Contact had around 650,000 customers to which it supplied electricity and gas products and services.

It is listed on the NZ Stock Exchange and has about 84,000 New Zealand shareholders, and has about a 1,000 staff located around the country.

In 7, I include a map of New Zealand with facilities in New Zealand on it. I should point too that Contact has interest in a power station in Queensland, Devoki (ph).

Paragraph 8; Contact's electricity generating stations are diverse and consist of firstly, we have base load thermal power stations in the form of gas fired Otahuhu B and the TCC power stations at Otahuhu and Stratford. We have the renewable generation stations of Wairakei, Poihipi and Ohaaki, these being geothermal power stations. And we have Clyde and Roxborough; hydros on the Clutha River.

Between them, these power stations deliver approximately 28% of New Zealand's electricity and our renewable power stations in a normal year deliver about 52% of Contact's generation and therefore our renewable generation supply is about 14% of New Zealand's electricity demand.

Contact also owns gas-fired New Plymouth power station. This station is in the process of being decommissioned but given time and money could still generate up to 100 megawatt if there was need for its output to meet security of supply. However, I don't think that capability will last for long.

Otahuhu B and TCC are both modern combined cycle power stations and discharge significantly less CO₂ per unit of output than typical coal-fired thermal power stations. Whilst they can operate down to lower levels than their normal full load output, these stations are best operated at a relatively constant load.

Otahuhu B is particularly well sited to meet the Auckland's power needs as it is located close to that electricity demand. When compared to generation located in the far south of the country, having generation close to the major demand centre of Auckland reduces the losses associated with transporting electricity long distances. As the average loss across the New Zealand grid network in New Zealand accounts for approximately 3.7% of the total generation, being located within the area of demand makes very good sense. A similar quantity of generation is lost through the distribution systems, that's from the TransPower network through to the final consumer. And that brings the total transmission and distribution losses to about that consumed by the entire Canterbury region.

Also sited on the Otahuhu site is the old Otahuhu A open cycle gas turbine power station. This station no longer generates electricity but five of the original six units are now used as synchronous compensators to provide voltage support to the national grid and as such, these provide valuable service by reducing losses in the system.

Section 2 of the RMA includes geothermal within the definition of renewable electricity generation. Contact has the largest geothermal electricity generation profile in New Zealand. Generally the geothermal stations are well suited to steady base load operation as the geothermal wet steam wells that supply the energy to the stations do not take well to having their output varied to cope with any variation in electricity demand. As a consequence, the geothermal power stations tend to have a relatively high capacity factor; that is very simply that being the fraction of the time that they operate at the equivalent of full output.

Contact also has the Clutha and Roxborough hydro electricity generating stations located on the Clutha River - that should have been Clyde, actually, Clyde and the Roxborough. Although now constrained to some

degree by the combined effect of other generation south of Clyde and electricity transmission limitations north of that power station, these stations generate a considerable quantity of electricity. For instance, in the 2008 year which was reasonably typical, these stations generated 3500 gigawatt hours. Which, that is nearly 9% of the total, New Zealand's total electricity usage.

The Clutha River power stations have very limited storage behind their dams. For instance, the normal operating range of Lake Dunstan, formed by the Clyde Dam, is only a metre and that of Roxborough 1.85 metres. And that means that they can only cycle their output on an intra day basis. They therefore operate as largely run of the river hydro generators.

To counter that, Contact owns the Hawea storage dam on the Hawea River, a tributary of the Clutha River upstream of Lake Dunstan. This is Contact's only controlled hydro storage and is typically used to augment flows to the downstream power stations in late autumn and winter, when the natural inflows are lower.

Contact also owns and maintains the Whirinaki Power Station, in the Hawke's Bay, on the Crown's behalf. This plant is a diesel-fired open cycle gas turbine plant which provides reserve generation capacity. Being driven by an aero derivative gas turbine it has good fast start capability and is well suited to providing what we term a peaking role; ie that it generates only in times when there is insufficient electricity being generated elsewhere as demonstrated in this case anyway, by the price of electricity in the market. Those times of insufficient generation can be caused by a number of factors that can include being a dry year, plant generating or transmission plant failure or other plant outages or a combination of these.

Contact's renewable electricity generation Projects; Contact has an active policy of supporting renewable generation as a means to reduce greenhouse gas emissions from electricity generation. It believes that a reduction of 40% by 2014 is possible if all electricity generators adopt this similar stance. It is leading the way by publicly stating that, given the appropriate policy settings, it will invest up to \$2 billion in renewable electricity generation.

Contact's new renewable development projects include two major wind farms and a new geothermal generation. The wind farm projects are the Hauāuru mā raki and the Waitahora wind farms. The larger of the two of these is the proposed Hauāuru mā raki wind farm, located on the west Waikato coast. If approved, it will have an installed capacity of up to 540 megawatts and using the expected average wind run, has been estimated to generate an annual power output of around 1,600 gigawatt hours.

This is slightly more than Contact's Roxborough hydro power station generated in the 2007-08 year. Or nearly 15% of Contact's total generation in that year. The Waitahora wind farm site is located south of Dannevirke and the proposed wind farm has a maximum capacity of 177 megawatts.

[11.45am]

Contact's consent applications for Waitahora were declined at the first instance and Contact has appealed that decision to the Environment Court. The applications for Hauāuru mā raki were called in and the Board of Inquiry has granted Contact an adjournment for a year, to refine its applications and obtain further information about potential ecological effects.

The proposed new geothermal development projects consist of Contact's Te Mihi project and its two Tauhara projects, both located around Taupo. The resource consents for the Te Mihi project were the first called in consents to go through the system since the PCC call in, which I believe you are both very familiar with. It is planned that the Te Mihi station will eventually replace the Wairakei Power Station. As such it will be able to use the steam more efficiently and it'll gain approximately another 60 megawatts of output. However, the global economic position has delayed progress, but Contact is still very positive about its Te Mihi project and it will proceed as soon as the project economics are favourable.

The Tauhara projects consist of the 23 megawatt Tauhara Binary Plant, which is currently being built and another geothermal plant of around 200 to 250 megawatts, for which it is planned to file applications for resource consents later this year.

Contact has also obtained consents for a 17 megawatt hydro generation plant proposed to be constructed at the existing Hawea Dam Site.

In the past few months Contact has announced its desire to develop further the Clutha River Hydro, and sought public input on four potential generation options. Even in this early consultation phase strong opposition is being experienced to any further development at any point along the Clutha.

I'll now discuss peaking plant. Renewable electricity generation that does not rely upon climatic effects, that is geothermal and tidal have a very predictable generation profile. Geothermal tends to operate best at a stable output, as varying output from the wells can be detrimental to their long term capability to produce steam. The variation in output that is seen from tidal generators is predictable. And other forms of generation

can be scheduled to pick up the load during the tidal slack periods. Renewable electricity generators that rely upon climatic effects, that is wind, wave, solar and hydro power stations, all have a very variable output. Wind farms tend to have a short term variability, but are more dependable on a long term basis. Hydro power stations are the opposite, with long term variability, but are quite predictable on a short term basis. To support the short and long term unpredictability of its output in the electricity system, there is need for fast starting but reasonably efficient peak loading electricity generating plant. This so called peaker plant must be of low capital cost, as getting an economic return is still a requirement, and it needs a fast start capability. It is useful if it can also operate on a broad range of outputs, with an ability to vary that output reasonably quickly. Hence hydro, or open cycle gas turbine plant can be used as good peaking plant. However a lot of New Zealand's hydro plant is run of river, with limited storage associated with it and this provides limited short term peaking capability. Gas turbine plants however are very well suited to this role for both short term, that provides cover for wind and long term which provides cover for hydro peaking operation. So whilst this might sound perverse, the inherited characteristics of gas turbine peaking plants can play a very important role in allowing the best use to be made of the available renewable generation. The confidence gained from knowing that these power stations are available, allows hydro power station operators when the hydro storage is trending low, to run their storage lakes lower. Further, to support wind power stations when the wind energy is not available the fast start and loading capability of peaking plant allows it to pick up, or shed load, mirroring the output from the wind farms and thus allow the overall electrical generation to continuously match demand.

Contact has consented and is currently constructing a 200 megawatt open cycle gas turbine plant at Stratford to provide this kind of generation support to renewable generation developments. It is specifically designed

and installed to provide for the short and long term vagaries of the weather. This station will be able to start quickly to cover for short term wind loss or will be able to operate for longer periods to cover for the less frequent, but longer term hydro shortages, such as New Zealand's experienced over this year's winter - last year's winter that should be.

The Stratford peaker plant is being built on the site of the original Stratford power station. Similarly to the original plant, which was decommissioned in 2001, this is a gas fired open cycle plant, however, it differs in consisting of two units, rather than four and these two units being of much higher efficiency than the original – round about 38% versus the 24 of the original plant.

Contact's other development options; Contact also has land resource consents for a number of thermal station options. These stations include Otahuhu C, this a combined cycle power station similar to the existing Otahuhu B with a capacity of up to 400 megawatts. Being located near to the demand centre, this power station is an attractive option. Otahuhu A; as noted above the original Otahuhu A power station no longer generates, but being located near New Zealand's major load centre, is an ideal site on which to locate a peaker unit. Contact holds resource consents for 120 megawatts of open cycle gas turbine generation, to replace the previous units 1 and 2.

Taranaki combined cycle number 2; Contact holds resource consents for a second combined cycle, a station of up to 500 megawatt capacity. This one being adjacent to the existing TC power station. Although the proportion of New Zealand's electricity demand from thermal, or mostly gas fuelled generation has increased significantly in recent years, this trend is unlikely to continue. Maui is now rapidly running down, and the gas fields developed to replace it have neither the capacity, nor flexibility

of output, which Maui has provided for many years. As a result, there is considerable uncertainty as to whether there will be sufficient gas available to power another combined cycle plant, for base load operation. And even more uncertainty as to what the gas price might be into the future. Contact tested the market last year, and found no gas suppliers willing to quote for long term gas supply. Overlaid on the uncertainty this creates is the uncertainty regarding the future price of carbon. As a result, new base load generation dependant on domestic gas, is unlikely to prove viable unless there are major new discoveries of gas at a sufficiently attractive landed price in the relatively near future.

New thermal relies on imported gas is a possibility and Contact is in a joint venture with Genesis investigating this option. The international gas price tends to track the crude oil price, and so committing to this option would have significant long term implications for the New Zealand economy. Quite apart from the very significant costs of establishing a terminal for landing the gas.

Lastly, although Contact has not investigated this option itself, it is well known that New Zealand has large reserves of coal and lignite, which might be used for electricity generation. The significant point for present purposes is that unless electricity demand can be met from renewable sources, New Zealand will have to look to thermal options and at present that means importing gas, or coal, or lignite. Imported gas would be better than coal from a greenhouse gas perspective, but would have the economic implications already noted. Clearly it would be preferable if New Zealand committed whole heartedly to a renewable electricity future.

Consenting experience; I have been closely involved with consent applications for both thermal and renewable plants, with some notable exceptions, it has been my experience that thermal plants are easier to

consent than renewable plants. They occupy a smaller footprint, they are less visible and are most attractive from a generator's perspective; they can be located right next to major load centres, and therefore to existing transmission infrastructure. Thus the consent applications for the Otahuhu B combined cycle plant were filed at practically the same time as those for what is now the Tauhara Binary plant in 1996. The Otahuhu B first instance hearing occurred in late 1996, consents were granted, and there were two substantive appeals, both on greenhouse gas issues. Both appeals were settled and construction of the 380 megawatt power station started mid 1997. By contrast, Contact's Tauhara applications attracted approximately 1500 submissions, which were heard over four weeks, in the second half of 1997. Consents were declined and Contact appealed on the basis of a reduced scale proposal. The Environment Court granted consent, after a three week hearing in an interim decision released in January 2000. Negotiation of conditions took the best part of another twelve months. Construction of the 23 megawatt plant is now underway, with an estimated commissioning date of late 2010. Contact's Otahuhu C applications followed a similar track to those of Otahuhu B, with a short first instance hearing, and only one appeal, again on greenhouse gas emissions issues. And that took up less than a week of hearing time. No submitters heard by the Environment Court were raising local issues. Again by contrast, Contact's applications to re-consent Wairakei Power Station and the Clutha Hydro Power Stations were filed in March 2001. Wairakei attracted just under 200 submissions and the Clutha stations just over 400. Consents for both were eventually granted in 2007.

[11.55am]

I appreciate that a National Policy Statement cannot clear delays in the consenting processes of this type. I refer to Contact's experience as

being indicative of the character of consent processes for renewable generation plants, even those already in existence, showing just how hard it can be to get to the finish line. Especially when compared with consents for thermal stations.

Contact respects the right of interested stakeholders to be heard in relation to consent applications for renewable generation plants. My experience is that such stakeholders almost invariably say they support renewable generation in principal, certainly in preference to thermal generation. Typically however, stakeholders will firstly oppose the type of renewable generation for which consent is sought, oppose the location of the proposed plant, and/or, seek conditions to assure no adverse effects on themselves. “The wind farm is fine provided I can’t see, or hear it.”

This is very much the pattern of opposition at the recent hearing of Contact’s Waitahora wind farm applications in Dannevirke. Part 2 of the RMA ensures these concerns are heard and factored into the decision making process. In my view the decision making process also needs to factor in the practical reality, that if New Zealand electricity generation companies cannot get resource consents for the renewable electricity generating plant, then other sources of electrical energy will need to be sought. This means in practice, fossil fuelled generating plants.

Thank you.

CHAIR: Thank you Mr Sommerville. If I could ask Mrs Baumann to ask you some questions.

MRS BAUMANN: I don’t have many. The one area I wanted to open up with you, with your experience is in respect of re-consenting, if I may call it that. And for you to share with the panel your views about how they should -

your experience for a start, and any views, how we could intervene in that area of issues.

MR SOMMERVILLE: Good question. Re-consenting is a different situation in consenting new plant, in that you know what the adverse effects are, or what all the effects are. They're readily apparent. The experience that Contact had at Wairakei and Clutha, are cases in point, the effects were relatively easily identified. In fact, it's probably a better question put to Trevor, who was deeply involved with those. My direct experience has been with the re-consenting of thermal power stations, of course that's been no problem at all. That included New Plymouth, Stratford, the old Whirinaki plant, and the old Otahuhu A plant, and again, the effects were well understood and, to my mind, it should be a lot easier to re-consent something that's an existing physical resource. And perhaps Trevor might be better placed to answer that one.

MRS BAUMANN: He can answer it now if he wants to while we're on the topic.

MR ROBINSON: Certainly, I think the - arguably the Clutha re-consenting was atypical, because the argument there was that, because the original stations had been consented in the case of Roxborough and Hawea by orders under the Public Works Act, and in the case of Clyde, was one of (inaudible) Act. The community felt that this was the first chance they'd really had to have crack, so to speak. I think with Wairakei, although it was also a Public Works Act, it had been through environmental consent processes, and there wasn't the same dynamic, but even so it was extraordinarily difficult, and particularly on the Clutha it got into very difficult issues about what the - what I'd call the counter-factual is. What the reference point is to establish, well an environmental effect is an effect on something, or someone, but when you have like Lake Dunstan sitting there, what is your comparative? Do you assume that the lake's not there,

because those are the consents you're seeking? Or do you assume it's there, in which case if you're not proposing to change the mode of operation, by definition there are no effects. So it went round and round in arcane issues like that and part of that was at least theoretically it was open for the consents to be declined, however ridiculous in any practical reality that was. And in fact some of the submitters did actually seek that those consents be declined. So one of the reliefs that Mr Chrisp will address that Contact's suggesting is that re consenting existing renewables should be a controlled activity, which is to say focus the debate on ongoing operating conditions and not get into incredibly interesting, but ultimately very arcane issues of what if it's declined. The reality is that given the objective of this Policy Statement which is driving towards more renewable, my submission that New Zealand certainly needs all the renewables that it's already got, we don't want to lose any of them. But so ultimately, in terms of your question Commissioner I would say a controlled activity status would be a good start.

MRS BAUMANN: Thank you this again, Mr Sommerville maybe something that one of your colleagues may better be able to answer. But you do make a point in your paragraph 40 about how long these are taking. I don't know whether you want to speculate whether the changes to the RMA which are being currently considered in parliament would answer some of those questions?

MR SOMMERVILLE: The call-in process I think generally when applied I think has that result. Now Te Mihi, he is an example of that which went I think around about nine months from an application to getting the final decision. The call-in I think is the best way to go for those larger projects.

MRS BAUMANN: You do go into the future of thermal, may I put it that way, and discuss the issue of what would fuel thermals and gas availability. Do you

have any views about the announcement about possible more gas out of Maui, would that change your views on -

MR SOMMERVILLE: I don't know the full extent of that, that possible extra gas I know they are doing extra drilling up there to make it easy to extract more gas out of it. Contact, as I said in my submissions, we asked for expressions of interest and we had no interest at all. Again, it's an area of not of my expertise.

MRS BAUMANN: No you just did mention that there didn't seem to be a lot of gas guys falling over themselves to run your stations.

MR SOMMERVILLE: They're not.

DR CHAPMAN: Yes thanks for your submission. Just a few points, your para 19 you state that: "Contact believes that a reduction by 40% by 2014 is possible if all electricity generators have got the same stance". Now, I remember a statement made by Contact at the time, this initiative was being launched but I don't recall now what base line that was against that 40% by 2014 was that against a?

MR SOMMERVILLE: I think it's current.

DR CHAPMAN: Oh so 2005 or thereabouts?

MR SOMMERVILLE: Yes round about that, yeah at the time of the Energy Strategy. We accept that it is a stretch.

DR CHAPMAN: Yes, yes I remember that yeah, and very much depends on everybody playing the game.

MR SOMMERVILLE: Yes, that's right.

DR CHAPMAN: Do you remember an assumption about a carbon price in there?

MR SOMMERVILLE: I think it's about \$15 or \$25, something like that. That's just a guess I think.

[12.05pm]

DR CHAPMAN: I guess that's the right place for me to ask whether you have any comments or a more general comment I guess about the attainability of the 90% given the sort of evidence that we've heard going round the country from people such as Mighty River Power and so on. They talked about - well, Meridian talked about an additional 19,000 gigawatt hours being sort of a number you know roughly speaking.

MR SOMMERVILLE: 90,000?

DR CHAPMAN: 19,000.

MR SOMMERVILLE: 19, that's about half again.

DR CHAPMAN: Yeah that's right. And Mighty River Power was putting it a bit more than that and pointing I guess to the issue of substitution, for example movement away from certain forms of heating towards electricity with heat pumps and so on. And also the possible conversion of vehicles to electric vehicles. Have you done any work to look at those sorts of prospects and the sort of assumptions that would lie behind particular objections?

MR SOMMERVILLE: No I haven't. No Peter have you - it might be a question.

MR MACINTYRE: I'm aware of some of the –

MR SOMMERVILLE: Might be a question you could put to Peter later on?

DR CHAPMAN: Yeah, happy to follow up on that one or would you like to answer it now or?

MR MACINTYRE: Well I know that the electricity (inaudible).

DR CHAPMAN: Yes, yes okay perhaps this is adequately covered in your evidence later is it?

MR MACINTYRE: I could cover it at the end of it if I don't cover electric vehicles in my evidence, but perhaps you should ask me now.

DR CHAPMAN: Okay well on that matter of substitution and the effect that increased demand from other sources might add to electricity demand, could you give us a sense of the sort of gigawatt hourage, if you could put it that way you might be talking about?

MR MACINTYRE: No I can't give you specifically that material, but I know the Electricity Commission have done work on it and we have as well and from memory what we found was very similar. And it was a relatively small amount relative to total energy demand in New Zealand. I was surprised anyway by how small it was.

DR CHAPMAN: Okay are you aware of the work done by Mike Duke at Waikato who recently published an estimate of around 20% of extra capacity being required?

MR MACINTYRE: No I'm not, but it very much depends on the assumptions that you're putting in there as to take up of electric vehicles, turnover of existing fossil fuel power vehicles and all that sort of thing. So yeah I can imagine that numbers like that are possible.

DR CHAPMAN: He was talking in the vicinity of 8,000 gigawatt hours, so that sort of number might be in the ball park, you mightn't think it -

MR MACINTYRE: I think so yeah.

DR CHAPMAN: I don't know whether to do it here or later when you've given your evidence, but do you have any, if you like, preferred assumptions around the carbon price track that would affect electricity demand?

MR MACINTYRE: The critical issue with the price of carbon is the way that it affects Huntly and the way Huntly operates and the way that it would switch the short run marginal cost of electricity generation in the wholesale market between gas and coal. So it's that price that is really critical to your first steps towards reducing emissions from the sector.

DR CHAPMAN: And is there a particular tipping point that you tend to look to?

MR MACINTYRE: Yes our work I think sort of identified in the 10 - sorry in the 20 to 25 dollars category as being a tonne.

DR CHAPMAN: That's dollars per tonne, so you need to -

MR MACINTYRE: Yeah, it's been the critical sort of factor there.

DR CHAPMAN: And I guess a similar sort of question is around the gas price and I'm referring here, or thinking here of the sort of projections that Meridian supplied us with which were quite helpful. And they provided projections which related to the assumption around the gas price in terms of dollars petajoule. Have you had a look at those projections and if so would you have any comment on them and if not, do you have anyway a view on what sort of critical gas price consumptions would lead to increments, if you like, of supply or decrements in supply.

MR MACINTYRE: I cover that in my evidence.

DR CHAPMAN: Just around para 25 just that "another geothermal plant of around 200 to 250 megawatts", does this have the name or?

MR SOMMERVILLE: That's Tauhara.

DR CHAPMAN: It's another Tauhara one?

MR SOMMERVILLE: Another Tauhara, yes.

DR CHAPMAN: Tauhara C or?

MR SOMMERVILLE: Tauhara 2 is it. Stage two yeah. It's a more conventional plant than the binary.

DR CHAPMAN: It's certainly a major plant. And around your para 32 you talked about the CCGT at Stratford - oh sorry it's an open cycle. How much wind generation would that cover off, or you know, if it could be put crudely like that.

MR SOMMERVILLE: Because it's working on a megawatt basis, not a power output basis it will obviously cover for 200 megawatts variation in output from the wind farm.

DR CHAPMAN: Right so it's a one-for-one sort of covers?

MR SOMMERVILLE: Yeah, obviously other plants can pick up all the shared load as well.

DR CHAPMAN: We were given quite a lot of evidence from Mr Leyland in Auckland recently about the limited capacity that wind generates usefully. And the load factors in practice, do you have any comment on the sort of load factors?

MR SOMMERVILLE: No we don't have any wind farms as such, but I understand that the ones in the Manawatu are getting around about 40% capacity factor which is - and the New Zealand ones are internationally leading plant. And that's not a lot worse than the hydro's, some of the hydro's are around 55, 60%.

DR CHAPMAN: Yes, as I recall, Mr Leyland led us to believe that in practice they were quite a lot lower than that 40% number that everyone thought -

MR SOMMERVILLE: I've got no basis to question or contest that, but my understanding is that they're actually operating at very good capacity practice.

DR CHAPMAN: And just a point of information around the Waitahora wind farm at Dannevirke and I wonder if you could clarify for us what the grounds the declining of that consent was?

MR SOMMERVILLE: There were two grounds, one is that the Commissioners decided they needed more resource consents for water discharges from regional council and the land use consents was on visual aspects and I think there might have been some noise in there too.

MR GARDINER: I'm interested in your paragraph 5 where you say "Contact meets 28% of the electricity demands of the nation". With your existing assets and the upgrading of them, plus the new generation projects you have underway, are you able to maintain that market position over the last decade or so or do you need to -

MR SOMMERVILLE: I would expect so.

MR GARDINER: One of the things we heard, I can't quite recall when it was, that over the next 18 years we need to almost replicate the existing assets that we have to keep track with demand. And therefore, if one of the major generators like yourself falls below its ability to service its current needs, then the graph of course widens between the demand and supply. So you're confident that with all the stuff that's going on now, which is why I presume the request is for a policy that's pro-development rather than putting in some negatives. The second issue is I notice your map 7 on paragraph 7, I'm not too sure you've read the Dominion this morning which indicates that the central North Island settlement group are predatory in their geothermal projects and I'm just wondering what potential impact that might have on your patch in that area around Taupo in the central North Island?

[12.15pm]

MR SOMMERVILLE: I haven't read that before.

MR GARDINER: You haven't read that?

MR SOMMERVILLE: No.

MR GARDINER: Well I think they're contemplating spending two billion dollars on geothermal.

MR SOMMERVILLE: Oh that's good around, Taupo?

MR GARDINER: There was just a general, so I just think whether you might have some interest in that it's led by Tuwharetoa and given that you are around (inaudible) and other places like that it might have some impact on you.

MR SOMMERVILLE: They weren't looking for development in the south of Taupo, the lake around Turangi?

MR GARDINER: I don't know, but the size of the potential investment seemed to be quite significant given you've said that you're going to spend three billion on your upgrades and new generation and they're contemplating that much, it seems to be fairly ambitious but never the less.

MR SOMMERVILLE: It does seem like quite a large investment.

MR GARDINER: Yes, the third issue which is I notice none of the generators seem to mention is, except one did mention it, as a sentence at the end is paragraph 39 and I notice you haven't mentioned nuclear power as a potential, is that just it's too expensive or you decided that's really not -

MR SOMMERVILLE: It's not on our radar.

MR GARDINER: Not a goer?

MR SOMMERVILLE: No. I think the practical difficulties of achieving it just make it not something we're looking at.

MR GARDINER: At the moment?

MR SOMMERVILLE: If fusion became a practical reality we might look at it then, but not the –

MR GARDINER: In your paragraph 39 you're indicating that if we don't - if we're not able to do the things that you want to do and the policies are not proactive towards those, then clearly the need for thermal back up and top ups becomes a significant issue. And all I'm just raising is, I don't have a view about it, I just notice it's not doesn't appear on the - except one submitter told us that 80% of Frances needs are met by nuclear.

MR SOMMERVILLE: My understanding is that the smaller size units of nuclear are too big for the New Zealand system. If you were to have an out - one trip, the spinning reserve requirements for it would be too much for the New Zealand system to be able to manage.

CHAIR: Mr Sommerville, on the re-consenting issue, looking at your paragraph 7 your map just, turning to Clyde for a moment you've now have your resource consents in place for a reasonable term probably.

MR SOMMERVILLE: Yes.

CHAIR: How long do they last for?

MR SOMMERVILLE: I think they've got 35 years on them.

CHAIR: 35.

MR SOMMERVILLE: Yes from 2007.

CHAIR: In terms of our policy statement, Roxborough what's the position?

MR SOMMERVILLE: The same.

CHAIR: 35 years, so they're in place?

MR SOMMERVILLE: They're in place yes.

CHAIR: Now how about your North Island facilities on re-consenting?

MR SOMMERVILLE: I can't remember what we've got at Wairakei. Do you remember?

MR ROBINSON: 2026.

CHAIR: 2026 for how many?

MR SOMMERVILLE: That's for Wairakei and I can't tell you what Ohaaki or -

CHAIR: Could you get that information?

MR SOMMERVILLE: Yes.

MR ROBINSON: 2012 for Ohaaki.

MR SOMMERVILLE: Thank you Trevor.

CHAIR: Yes you'll see that we're just where you are in relation to 2025, could you get us details on where you are with re-consenting as opposed to new development.

MR SOMMERVILLE: We can do that.

CHAIR: Now with the Clyde project that Mr Robinson's referred to, we've had submissions in respect of Policy 3 which is the reversible one where there's been suggestions ranging from bonds to - well, other instruments. In the Clyde consent we heard there was a bond in relation to flooding or something, can you enlighten us on that please?

MR ROBINSON: The position when the - the outcome, I think what you're getting at, is the outcome of the Clutha consents are actually consents on the Roxborough dam and consent, put it - the Environment Court

incentivised Contact to volunteer a detailed compensation provision where in effect Contact stands as insurer for the Alexandra community against flooding damage. There's also, in terms of bonds, there's also a provision in all of the Clutha consents in effect are shut down provision whereby if no application is made to re-consent the hydro's at the end of the 35 year term, there is a consent condition review in order to require in effect a managed shutdown.

CHAIR: Now in respect of the Waikato planning process that was referred to in Mr Robinson's submission. If there had been a policy statement of the type that we're looking at, would that have assisted your submissions in any way with the way it happened?

MR SOMMERVILLE: Yes Mr Chrisp may -

CHAIR: Well if Mr Chrisp can be aware of that, we'd be interested. With the wind farm applications have you had any where the wind farm is a non-compliant activity or were they all discretionary? Mr Chrisp again?

MR SOMMERVILLE: Yes.

MR CHRISP: The answer's yes.

CHAIR: The answer is yes, there was a non-complying activity site?

MR CHRISP: Yes.

CHAIR: And this maybe for Mr MacIntyre, with your projections as to the needs of the supply side through to 2025, what's your calculation as to the growth rate in GDP over that period, is it 2% of 1.5 or what is it? Do you know that Mr Sommerville?

MR SOMMERVILLE: I don't know that no.

CHAIR: Okay so just if you could tell us later?

MR SOMMERVILLE: Was that GDP or growth rate?

CHAIR: Demand growth sorry and also I need what's your calculations of GDP as well. You've got a model do you? Now, the other thing is can you confirm, at the moment in development terms Mr Sommerville is the geothermal project the cheapest in cost as far as kilowatt?

MR SOMMERVILLE: For renewables?

CHAIR: Yes.

MR SOMMERVILLE: No I can't confirm that, but I suspect that it probably is, I would be very surprised if it's not cheaper than hydro or wind.

CHAIR: Yes well we've had some evidence on that and I just want to get your views on it. Have you got any information on solar?

MR SOMMERVILLE: No.

CHAIR: Anything on tidal?

MR SOMMERVILLE: No.

CHAIR: The other figures with where you are dealing with wind farms there's been a common theme has come through from submitters both from generating companies and from local authorities that in Policy 4 which deals with identifying sites, that local authorities and generators believe it would be better for local authority involvement to be in identifying no go areas rather than potential areas. Is that something you would agree with?

[12.25pm]

MR SOMMERVILLE: Yes.

CHAIR: So when it comes to it's better to know where the outstanding natural landscapes are for instance so you don't have a hearing and find out.

MR SOMMERVILLE: Yes rather than have the local councils decide where we should put them.

CHAIR: Finally, have you any views on how a National Policy Statement could address the issue of cumulative effects when it comes to wind farms?

MR SOMMERVILLE: Cumulative effects being possibly noise and visual?

CHAIR: Well that's the additive if you've got - the Ruahine's for instance.

MR SOMMERVILLE: That's right well the Tararua's and Ruahine's.

CHAIR: Yes have you had a look at or is that again is that a matter for Mr Robinson?

MR SOMMERVILLE: Yes it's not something that I've been thinking about, but yes put it to Mr Robinson.

CHAIR: Well that foreshadows the sort of submission we've been getting and that is that smaller local authorities would prefer to have some assistance at the national level on densities and separation distances.

MR SOMMERVILLE: Okay yeah.

CHAIR: Heights, all sorts of things, virtually in a national environmental standard level that something that Mr Robinson maybe able to help with. Thank you very much Mr Sommerville.

MR SOMMERVILLE: Thank you.

CHAIR: Now, Mr MacIntyre.

MR MACINTYRE: Mr Chairman, board members I'm Peter MacIntyre I'm the Regulatory Affairs Manager at Contact Energy based in Wellington. I have a background in economics from Lincoln in Canterbury and my current job involves interacting with the government on anything to do with regulation of the electricity sector and quite a lot on climate change as well. My background is I spent some years at Telecom in strategy roles and before that in the New Zealand Treasury asset and liability management and in Foreign Affairs before that.

If you prefer we can just work off what you have in front of you rather than turning around to look at the screen, but I'll perhaps keep it up because some of the diagrams might be easier to explain up there. Now, we've covered the slide 3, introduction to Contact largest private sector generator retailer, 2,000 megawatts of existing generation and 1,400 under development and \$600 million dollars of new investment in geothermal, gas fired peaking plant and gas storage with \$1.5 billion of new investment at various stages, mostly in geothermal. Moving on to the next slide.

DR CHAPMAN: Can I just ask a question just there Peter. Of the investment under construction what's the mega wattage there, do you have that number available?

MR MACINTYRE: I think it's in the last slide, so yeah it is, it's in the very last slide.

Contact is often described as a diversified and integrated company and are diversified in fuels, products and geography and integrated generator retailer. I think we touched on before our share of the industry in various respects, this is an alternative way of looking at it which gives you an idea of what the opposition are up to as well. As we've said, we've a 26% share in the generation market and 26% in the retail market. We have - and we're half a kind of a natural gas generation base and half renewable

geothermal and hydro. We're mostly serving electricity customers, although we've got LPG and gas customers as well.

Now I'll just move on to the New Zealand electricity market and the economics of that from our perspective. Slide - oh it doesn't have a page number, but History of New Zealand Generation, as is quite clear from this diagram from the Electricity Commission statement of opportunities, New Zealand has been dominated and still is very much dominated by hydro generation. And that has major impacts on our system given that we can't import as Norway might be able to, in a dry year we have to provide everything in house within New Zealand so there are major fluctuations depending on rain fall between dry and a wet year for example 2003, 2004, which are discernable from that picture. And gas and coal fired generation has moved into the New Zealand generation mix providing for swing generation around the hydro fluctuations and in recent years geothermal and wind have grown, although wind is still quite a small proportion.

Now I'm just going to talk next about the key sort of factors that are weighed up in making an investment decision in the next megawatts of generation capacity. The kinds of things that are weighed up in making that decision are absolute first and foremost are you going to get a return on your investment? What does the forward wholesale price look like according to each company, including us? Is it going to go over time? And that requires an assessment of what the others are going to do, what generation they're going to build and how demand is going to grow and to your question about demand growth. We have generally erred just under 2% I think has often been our sort of stock and standard growth rate in electricity demand and around that people do scenarios for higher or lower growth to test their assumptions about the next plant that should be built etc and what it might be and where it might come into the picture.

Recently, because of the economic down turn, we have been looking at lower growth rates for the next two years; even static growth rates for the next two years as a test of our economic modelling. Another critical issue is the capital required and the cost of that capital so the equity or debt financing that you need, with hydro developments you're talking about very, very large up front sums which are put at risk for a period of up to 80 years over somewhere along the line you get your return on investment and start to be a positive cash flow investment. So that's quite a gutsy activity investing in hydro, because you've got to be sure that you're going to have over 80 years worth of cash flow coming in the door. And then on the other hand you've got the thermal developments which have a much greater cost in the fuel that you're buying in and a much lower capital cost up front. So you get a return on investment more quickly and the life of those assets is generally assumed to be shorter.

[12.35pm]

I think Andy's talked to the consenting difficulties issue in more detail than I'll cover in here, but that is a critical issue. You're weighing up both the economics and the consenting difficulty. How long is it going to take? How much is it going to cost. At the end of all that effort are you going to have it turned down? What are the probabilities of that sort of thing happening? So that's a very important part of the mix.

Exchange rate movements are very important. A lot of the equipment you're using you're importing from offshore, wind turbines for example, so the plunge in the exchange rate recently has changed the relative economics to some extent depending on how much imported technology you require for your wind farm or imported technology you require for your geothermal development.

The forecast gas and coal cost, as well as the CO2 price, where is climate change policy going and where is it going to end up and how tight, I

suppose, are the government's targets going to be? Therefore, what is the price of CO2 emissions and in our case green house gas emissions generally, given that geothermal emits some other gasses other than CO2.

And transmission cost, as Andy's talked about, the thermal plant tends to be able to be located right next to the grid. Generally renewables are a lot trickier because they tend to be where the geography of the good source is and therefore you need to get your electricity to market and the costs of getting it to market are quite substantial, so that's a very important component.

On the next slide we show a Contact view of the relative economics of some of the technologies available to us, so this is the range that we are focusing on much more in the short term, but you can see, I think Mr Chairman you asked a question about geothermal economics, what this shows is above the price indicated, so for example \$60 a megawatt hour for geothermal on the far right hand side, the cheapest geothermal can be built, this is arguing, for \$60 a megawatt hour. And if you have a long run price series in the wholesale market above that level then you're making a return on investment and its worth investing in that plant. Geothermal ranges there from \$60 to \$80 a megawatt hour, so evidently it's the most cost effective we think, other people have different views and you're entitled to them. But I think you generally find that the Electricity Commission, we have debated this issue with them and they are coming round to the view that geothermal is at the more cost effective end of the spectrum. A more interesting issue is the wind verses gas argument and you'll see there that in our view at \$7 a gigajoule gas price and no carbon price which is the red block, you've got gas at about \$80 a megawatt hour. When you add increments of carbon costs, \$23 a tonne in the first sort of bar above the red block and \$45 a tonne in the second one up you drive the cost or the price you need in the wholesale market up before you are

prepared to invest in that technology. And this is the trade off between wind and gas I suppose starting to show here and the issue that Andy raised about the price of gas over the long run, I think you raised it Mr Chairman as well, the view about gas in New Zealand is there's all sorts of debate and all sorts of opinions but the Electricity Commission has the job of trying to take a middle view and it has a view that it is more probable that we will not be finding another Maui in the next 10 or 20 years, that we could find another Pohokura but not another Maui. So, the probabilities are that we will run into a gas shortage in the period up to 2020, 2025 and therefore, we should be investing thinking about that risk quite seriously and we have done so and have acted on that which I'll go into shortly.

The following slide is another way to look at it. This one is sort of an industry wide view, our view of the industry and I quite like this slide as to me it explains how each generator retailer and potential new entrant is looking at the options in the generation market. In the first diagram you have each technology against its long run marginal cost ie, the cost over which it's worth investing in that and you get some idea of how many megawatts available at each price. So for example, wind the grey line there's, its saying 2,000 megawatts at a price somewhere between about \$80 and \$120 dollars a megawatt hour, I suppose. And whereas gas you've got essentially running out of juice and the price of gas investment or the return in the wholesale market that you need to support that investment in gas rising sharply.

You can see in this new - we're talking about what is the cheapest generation, the most cost effective and this diagram is showing a block of hydro which I think might be Mighty River's re a view of Might River rehashing it's Waikato scheme and upgrading its capabilities there as being that lower priced hydro investment.

And following that, there's a big block of dark blue geothermal which is to the previous slide was talking about our view amongst our portfolio of assets, geothermal is the best investment.

The slide to the lower right is another way of looking at it, except this time stacking them all together rather than looking at them per technology. And that shows again in the grey a considerable amount of wind out there but it's reasonably high cost. We don't have who belongs to each increment of generation marked out in here, but we've got assumptions about that in the background. And you can see again there's a big block of geothermal that we think is the most cost effective and a small amount of hydro up the front and then the wind starts to come in. And you'll notice there's a \$40 a tonne carbon price and a \$7 gigajoule gas price put into this. In this sort of modelling you can throw in different numbers and you see the different technologies shooting up and down that line and you can get an idea of the risks that attach to each type of investment.

With all this wind coming in and available, as Andy has talked about, you need something to back it up and existing hydro spinning reserve is a big part of that and the gas fired fast start plant at Stratford is another important component and the Electricity Commission has done work on the ability of our system to take wind coming in, a lot more wind investment, but depending on the level or risk you want to take as a country oversupply, which is a decision to be made. It's kind of arguing that the first 1,000 megawatts of wind can be handled within our existing resources of hydro back up plant and fast spinning reserve etc. Beyond that, you need get fast start gas plants or something of that ilk and you need a considerable amount of it, the more wind you bring in the more you need it to, I think in sort of one level that sticks in my mind is for every 100 megawatts of wind you need 60 megawatts of backup plant beyond the 1,000 megawatts of wind in the overall system and we must be at about 300 to 400 today.

[12.45pm]

DR CHAPMAN: Can I just clarify that, that if you were - the grade locks you talked about another 1,000 megawatts of wind roughly within the current hydro backup capacity?

MR MACINTYRE: Yes.

DR CHAPMAN: So that would account for the couple of grey slices on the graph to the bottom right?

MR MACINTYRE: Well yeah I suppose that's -

DR CHAPMAN: The first couple.

MR MACINTYRE: Yeah that's not saying these - each generator retailer will look at its options and this is just a pure economic view without resource consenting overlaid on it. So, for instance some of these wind farms might be in places that it's extremely difficult to consent so therefore they will never turn up, potentially. And some of the hydro might be as well, might be difficult to consent, so you kind of have an evolving mix of options that are looked at by each company along the lines of series of bullet points I went through earlier to assess what is the best way to go.

The following slide I suppose - so Contact sort of looked at all the options, it's looked at the price of gas and the availability of gas and we've gone out to tender and tried to get enough gas to fire up a base load CCGT plant and failed to do that or to get that in. So, in the last couple of years we've changed our focus away from Otahuhu C which is on hold and towards geothermal and wind and hydro options in the longer run. So, as well as the gas fired peaking plant. So that's where we've changed, the whole sort of company focus has changed and as we've talked about and covered in other discussion this morning, we've got wind farm options out there and we've got hydro options being looked at on the Clutha.

Just moving on to the next slide; this is a different view of the forecast, I suppose, of our ability to cover growing demand and we have demand in there at 2.5% and we have a more conservative line which is just looking at the detail, low demand growth until 2010 and 1.5% demand growth after that. And it shows you being able to cover your energy demand and how that might be done and I suppose this is a rather kind of high level view, but it's showing you that you've got your block of existing renewables, you've got a block of existing gas, you've got Huntly coming out of the system in this case by about 2017 and you have to meet your demand growth with other things. And we have geothermal and wind and hydro coming through there as being able to do that.

CHAIR: Can I just ask, do your models go beyond that, do they flatten out at all, do you know?

MR MACINTYRE: Yeah our model I think goes perhaps another five years beyond this. The Electricity Commission goes right out to 2040, so - and they play with other scenarios and I'll give you a flavour of that in the slide coming up. But yes you can have - the Electricity Commission has to look at a whole lot of viable scenarios and they've looked at a scenario of reaching 90% renewables by 2025. They look at scenarios of a lot of demand site response and electric vehicles coming into the system. They focus on generation build in the South Island versus the North, various ways of looking at it and then try and see how it all maps out and what sort of generation might be required to meet it. Our approach is much more sort of oriented at what is the economics of our own options? What do we think the others are going to do? And what does the consenting look like? And therefore where should we build and what should we be trying to raise our money to invest in?

CHAIR: Yes it was just with Mighty River we had a prediction that it would start to flatten out long term, otherwise every river every hill top is covered in plants. You keep a list on this graph, isn't it?

MR MACINTYRE: Yeah our 50 years it could get to that sort of level I suppose, but there is an awful lot of wind potential in New Zealand and there's an awful lot of geothermal as well, but when you take away areas within National Parks areas under lakes etc etc, you narrow it down to a large extent, so, yeah.

CHAIR: Sorry to interrupt you.

MR MACINTYRE: No no, that's fine. It's quite possible that demand will tail off and perhaps driven by a combination of things like smart meters, electric vehicles being able to offer energy back into the system, you know, top up over night and then offer it back in and all that sort of technology change that will happen over time.

CHAIR: Can I just ask you now that I've interrupted you, how about pump storage, is that something that's renewable?

MR MACINTYRE: Yeah, I have recently looked at a case for pump storage and I think the economics of it were much much more expensive than existing options and when was that? I think the Electricity Commission did a piece of work or pulled up a piece of work that had been done some years earlier on one of the best options, which is down in Otago somewhere, I can't remember exactly where. But the economics were very challenging and not.

CHAIR: Was that behind the Roxborough?

MR MACINTYRE: I think somewhere in that area.

MR SOMMERVILLE: Was it between Orewa and Wanaka?

MR MACINTYRE: Yeah I think it's up on the hills there somewhere in that area, but what I remember from reading the report was that - and I think the report is available is that the economics are very, very challenging. Because its been raised by a number of people from time to time as being a good option; I think - yeah, the economics are difficult.

CHAIR: So the economics of the overseas examples in Wales and so forth, have you got any of that?

MR MACINTYRE: I know there's a pump storage in Scotland somewhere because I was looking at a map yesterday, but the economics there must be better I suppose and it's probably more peaky nature of some of the generation, that if you're storing it up overnight at virtually nil cost, perhaps because you're attempting not to shut down your plants and you need to keep them warm and running and the costs of shut down are part of the equation as well, then offering it back in makes economic sense sort of at a 6 o'clock in the evening on a winter's evening or something that makes sense to do that economically to do it in the UK.

Then one of the interesting issues I think from a New Zealand incorporated point of view, and Andy has touched on this, is that the choice of renewables verses gas. Gas can compete with wind and hydro and not so much - geothermal is cheaper, but can compete if you're sure you're going to be able to run your plant for the next 25 years and get a gas supply. If you can't and you have to import it, that is will mean that the margin of cost of electricity in New Zealand will be driven by the imported cost of gas. The imported cost of gas is very much linked to the oil prices and the vagaries of oil prices as we've seen over the last couple of years. So the cost effectiveness or the competitiveness of New Zealand electricity compared to competitors on the world's scene will change and it will be much more like say a European country depending on fossil fuels to be marginal cost more of the time. If you have more renewables in your

base they will be more - a larger percentage of the time they will be setting the price that is different. So that is a real issue and I suppose just making the point here that the RMA and policy statements made under it are critical to enabling that renewable generation to come through in New Zealand.

[12.55pm]

So move on to the next slide, which is the one I was talking about giving you an idea of the sort of options and the sort of work that the EC does and this is a 2040 time horizon and it shows there five scenarios that they model. And into this modelling they put different gas prices, different assumptions about gas discovery rates and different carbon prices generally kind of look at all the options and see how it comes out. And I suppose the critical issue that I'm trying to present here is that, doesn't matter what option you're looking at there, there is a bit of large hydro required, one or two of them on the Clutha before 2020 in this picture and 1,000 megawatts of hydro if you're going to try and make 90% renewable by 2030, in this case 2025. So I suppose it speaks to the choices that New Zealand has within the constraints of the competitive market as to what we have to do if we want to avoid more thermal generation and enable renewables.

DR CHAPMAN: I wonder if in that last graph you could point out which increments represent large - it looks as though the high vertical steps on the blue line represent the large hydro?

MR MACINTYRE: Yes, yes.

DR CHAPMAN: What years do they come in?

MR MACINTYRE: Well between 2015 and 2020 there, even in the demand side participation scenario which is a low one, you have around 100 megawatts of hydro coming in there. Now I had a look back through the drivers of this model and I think virtually all of the larger steps came from assumptions about building dams on the Clutha. So that's the worse case scenario, I suppose, as far as hydro build goes if you're in favour of it, and then you have all the other scenarios which involve a lot more.

DR CHAPMAN: The really big hydro developments are around 2030, 2035?

MR MACINTYRE: Yeah, as to what they are - I think when you get that far out in your modelling we're assuming something exists, they don't have a name to put to it.

DR CHAPMAN: They don't distinguish between run of the river and storage there?

MR MACINTYRE: Not in this diagram, no they haven't.

Okay and finally just the last slide is a run through of our current projects and I think we may have talked about this sufficiently so yeah, if there are any questions?

CHAIR: Well there will be, but I think we need some lunch and you probably do too.

AJDOUNED

[1pm]

Audio file: 29June3

RESUMED [2pm]

DR CHAPMAN: Thank you very much for that presentation. One technical question on the slide called Generation Investment Economics. “Wind ELP range”, what did ELP stand for there?

MR MacINTYRE: Entry Limit Price. Just jargon for the price above which it’s economic –

DR CHAPMAN: Yep, it’s like the hurdle, yeah.

MR MacINTYRE: Yeah.

DR CHAPMAN: And then on page 10, “RMA has major strategic significance”. “P90 Mean Hydro Supply”, well could you translate “P90 Mean Hydro Supply”?

MR MacINTYRE: Again that’s Contact jargon. It’s a particular business plan version, P90.

DR CHAPMAN: Okay, so it doesn’t have anything to do with 90 -

MR MacINTYRE: No, it’s not probability, no. No it’s not, no.

DR CHAPMAN: And on the same graph, just looking at that 2025 projection, which is the last column on the graph, is that – well could you give us the renewable energy proportion of total supply, well yeah, total supply –

MR MacINTYRE: I'm not sure, I think this series was based on meeting the 90% renewables target, so that is I think, I have to confirm it for you, I don't know exactly what that chart assumes there –

DR CHAPMAN: It doesn't look like it, but yeah – you've got quite a big chunk of gas in there which looks like more than 10%. But if you could come back to us on that, that would be great, thank you.

MR MacINTYRE: Yeah, you might be right.

CHAIR: Your graph, Contact's View of New Zealand's Investment Options, the geothermal, the line peters out, is it not - is that the life of geothermal is it?

MR MacINTYRE: No that's the top left chart in the – on that page, that's a view that there's not a lot more capacity beyond 800.

CHAIR: Oh I see, I see. So have you got any information about the life of geothermal?

MR MacINTYRE: I suppose the Wairakei is your working and operating version of that and 50 years and we're kind of looking at renewing it, so that's one estimate I suppose, a 50 year – 50, 60 year life span.

CHAIR: Yes, it's just a question over long term, whether the capacity of geothermal is maintained, once it's fully developed.

MR MacINTYRE: Right. As in the kind of life of the underlying asset, yeah –

CHAIR: Of the fields, yes. It can't be maintained (inaudible) presumably?

MR MacINTYRE: Yeah, they all decay and the sort of decay - generation decay of productivity over time and I think (inaudible 6.52.21) would probably know a lot more than I do about this, but you go around and drill other bore holes to try and keep your generation up to whatever level you might have it at, say 200 megawatts or something like that and I mean Ohaaki was an experience where the sort of thoughts about what it was going to do originally exceeded what actually came out of it, however recent work by Contact to kind of ramp that up has succeeded in doing so, from what I understand.

MR GARDINER: Have you got an estimate of how long the fields are going last?

MR MacINTYRE: No, but I think, like I say, there's sort of periods of – I suppose what's the time horizons of those decay curves are they 30, 40 years and you see a sort of 10 to 20% dive off of capacity and then you're trying to keep that going by drilling another hole that's pointing a slightly different direction and trying to find a new source of geothermal fluids.

MR ROBINSON: Yeah, but the reservoir modelling they decided to take typically projects 50 years into the future on the basis that beyond that it gets too uncertain, but ultimately a geothermal operation is about minding heat and so for instance the Waikato regional planning provisions policies are around controlled depletion and that it is not perpetually – it is not a perpetual motion machine.

CHAIR: Can you improve your technology to sort of maintain efficiencies when there's a drop off in steam?

MR CHRISP: To a small degree.

CHAIR: To a small degree?

MR CHRISP: Yeah, you're limited with your temperatures (inaudible).

CHAIR: With your own colometric modelling have you – your assumptions about growth over the period we're talking about, what do you – what assumptions do you make on things like GDP and housing uptake, construction and that sort of thing? Are you just using on GDP are you just using Reserve Bank stuff or something like that?

MR ROBINSON: We generally focus just on the growth in electricity demand and I suppose to an extent taking into account the economic conditions, I think slide 10 shows the conservative demand line versus a more (inaudible) demand line of a two and a half percent growth, so the work we tend to do doesn't kind of focus from GDP necessarily down to (inaudible) demand growth. It's focusing on I suppose what has past demand growth been and where is that likely to go? And of course we've seen the recession cutting it down quite significantly in the next couple of years.

CHAIR: Yes, I'm just interested from an economics point of view, how, if you look historically what's happening with growth, how that's tracked as far as those other indicators are concerned.

MR ROBINSON: It's been – yeah as a sort percentage of GDP, the intensity, the energy intensity of the economy, I think it's been gradually improving over time, however that's been kind of counteracted to an extent by the you know, the level of heat pumps going into people's houses and all that sort of thing, so there's more goods and services I suppose using electricity that kind of counters the more efficient way that the economy works over time. So that's kind of left us saying well you know 2% is probably more or less right if you're looking back over you're shoulder and of course looking back over your shoulder is not always the best way to do it, so

you're kind of testing the sensitivity of that view and right now you know, looking at a zero growth rate for a couple of years and seeing how that looks.

CHAIR: We've recently seen quite a, over the last five years, quite a steep increase in the retail price of power, are you taking that into account in your forward projections, the impact of that in reducing demand growth?

MR ROBINSON: Not explicitly I don't think. But that is a distinct possibility and that's the whole point of putting a price on carbon, is that you get – you incent different behaviour and so, yeah that will have an effect. I mean that's essentially the net result of what you're trying to do, you're putting a price out there in the economy.

DR CHAPMAN: Now I know we're looking at electricity consumer numbers here and your cost of development for geothermal versus wind, we've had evidence from people in your business who have been in it for a long time, who have said, well 20 years ago they would have stood before this Inquiry and said there's no way you'll see wind in New Zealand because of the cost of it, it was off the graph then. What are your views on solar?

[2.10pm]

MR ROBINSON: I have been involved in work looking at the economics of that and looking at its economics around the world and as far as sort of an in-house investment, solar hot water heating is economic right here and right now. The sort of photovoltaic cell side of things is quite uneconomic still. If you're going to do say your own generation, sort of distributed generation model then wind and small hydro, if you happen to have a creek running through your backyard with enough water in it, are the more economic ways to do it, but that's still I think around three times the price

of grid delivered electricity at the retail level. So I mean that's the kind of the last time I looked at it, which was about a year ago.

DR CHAPMAN: Sorry are you saying PV at micro scale is about three times the price of -

MR ROBINSON: No I think the PV's something more like six or seven times.

DR CHAPMAN: Right. Thank you.

MR ROBINSON: Yeah. But I mean, you know, there will be a change in that over time, the economies of scale, the technology will improve at some point, it will come down. I suppose the question is if you are doing it yourself and putting it on your house, is that going to be able to compete with the scale economics of building a large wind farm or something like that and I suppose there are a large amount of fixed costs and the fixed costs of even doing that yourself are reasonably substantial. So it does make the economics better if you're building larger areas. I mean a classic case would be Hauāuru mā raki where at the end of the day once you've got over the sort of hurdle of having a consent, if you get your consent, and then you build your link to the national grid, the more economic plant that you can put out there the better from an economic perspective. Just as if you happen to be in an area with your own house which has a lot of wind resource, you are probably going to – it's going to be more economic to put in two turbines than one. Once you've got all those sort of other stuff sorted out.

CHAIR: It was also - it was raised I think by Mr Hassan from Meridian, it would be on the record, there were a list of further questions from the panel of - he's coming back at the end of this week with some answers, but have you had a look at the National Policy Statement on Transmission?

MR ROBINSON: Yes I think I have.

CHAIR: You have?

MR ROBINSON: Yes I have, yeah.

CHAIR: He raised the issue about the fact that – well he raised the question really whether or not the National Policy Statement on Renewable Electricity Generation should address transmission efficiencies where there's not – it's not involved in TransPower, in other words, distributed lines, and things like that, so I would be grateful if you – somebody within the team, Mr Robinson, could deal with that perhaps. You haven't any numbers and –

MR ROBINSON: No.

CHAIR: Well thank you very much. Do stay around.

Mr McIntyre, just before I forget, you mention or something was said, you mentioned the 80 year pay back period on hydro was it?

MR MacINTYRE: A life of 80 years of pay back somewhere in that period.

CHAIR: Within that period – I was going to say – have you done any modelling on the basis that you might have to pay for the water?

MR MacINTYRE: No.

MR CHRISP: Thank you Mr Chairman, Members of the Committee. Now I understand you've got my evidence and I understand that you have read

it, so there's obviously no point in me reading through it, so should I suggest sir, that if I can address a few supplementary issues, particularly in light of the ones that have already come up today, then you can carry on from there and ask further questions.

CHAIR: While you are on the supplementary issues, could you also let us know the position Contact took over the Freshwater policy, I understand it's about to start its hearing tomorrow.

MR CHRISP: Yes, yes, I can I've written my evidence for that already and submitted it.

Okay, so I guess just by way of introduction, really the purpose of my evidence is in the first instance to give you the sort of benefit of someone from the coal face, sort of trying to actually work on these types of renewable energy projects and secure consents for them and also in the context of working in district and regional plans, trying to get in place planning provisions that actually adequately recognise and provide for renewable electricity generation and also deal with the other side of the coin increasing it, which is dealing with that whole issue of reverse sensitivity. And those seem to be the sort of like the two key parts of a lot of what I do and I think I am probably one of the few people in the country that have worked on hydro, wind, geothermal and tidal. I was in the Environment Court the week before last I think it was, up in Whangarei on the Kaipara Project, so you will see in my introduction there.

But firstly, by way of working through these various issues, since writing my evidence I read Sarah Dawson's evidence for Meridian and I guess the first sort of point I wanted really to pick up on which is sort of carries on from the point I make at paragraph 11 of my evidence where I'm

talking about the nature of most district and regional plans in terms of the objectives and policies and potentially what I described as negative imperatives. Lots of policies about avoid adverse effects on the coastal character, avoid ecological effects or avoid, remedy or mitigation, it's all about don't do this and don't do that and you find very little in the way of positive objectives and policies that are actually trying to seek out sort of you know, positive economic outcomes and with Sarah's evidence, Sarah Dawson's evidence, she has - the Appendix 1 to her evidence sets out the relevant provisions from the Southland Regional Policy Statement, of which there's a total of three objectives and two policies which focus on renewable electricity generation and then talks – then she looks at how that flows through into the Southland Regional Water Plan, whereupon there's only two objectives that could be classified as enabling or positive. She then looks at the Canterbury Regional Policy Statement where there's a total of one objective and two policies. Again, same sort of things, and then you go to the Canterbury Natural Resources Plan which deals with a variation, one which deals with water quantity and there's nothing. And that just sort of struck a bit of a cord with me because last Monday I was in a hearing before the Otago Regional Council where they are promoting plan change 1(c) to their regional plan of water and as you've heard, Contact's got the Clyde and Roxborough Power Stations that between them generate 9% of New Zealand's electricity and I said at that hearing, I think, that sort of makes those physical resources of national importance. Yet when you look at the plan change dealing with water quantity there was one mention of the economic and social importance of hydro electric generation in the opening sentence of the chapter and therein after there was absolute silence.

And we were at the hearing and I probably shouldn't talk about this too much because it's (inaudible) as I understand. But it would be fair to say

that we are – it would be fair to say that we are experiencing – have a perception of experiencing a (inaudible) uphill battle just to get recognition of the fact that there's those existing assets there and that when you have a regional plan like that which describes the Clutha as having plenty – you know, water being plentiful, and having no allocation regime in place for that river for that reason, which basically then tells irrigators and everyone else that wants to take water “there's the water guys, go for your life” and no recognition of the adverse affect of that on the ability to generate electricity.

[2.20pm]

So you get the scenario that we often refer to as death by a thousand cuts. So essentially a cumulative effect issue. Where every little individual extraction adds up to quite a lot of water, particularly in that situation where it's going through two power stations.

CHAIR: Did you, in your further submission, did you deal with the Federated Farmers?

MR CHRISP: I'm not sure.

CHAIR: As you can imagine we've had the opposite view.

MR CHRISP: Yes I know. Well it was one of those things where in Otago they tried to take the position of saying that they didn't want to favour any particular industry and Contact's submissions didn't actually seek any favourable treatment. All they were really asking for was to have that recognition in the plan that Contact's physical resources are actually part of the existing environment and that they can be adversely affected by other activities and even to the extent that you could mount an argument

for favourable treatment, you could say that section 7(j) actually provides that legal basis for it, but you don't find corresponding sections in Part 2 of the Act that actually highlight the benefits of other industrial activities that do deal in renewable electricity generation. So we do need to think about that.

So that sort of leads on to one of the next issues that you raised Mr Chairman, which is about the issue of non-complying activity status.

CHAIR: Yes.

MR CHRISP: Now there's probably – there's two particular examples that spring to mind where I have dealt, and are currently dealing with that. One – just deal with the historical one first, was the – you will see in my introduction, I was the reporting officer to Environment Waikato on the re-consenting of the Tongariro Power Development and that was a situation where – as I assume you are reasonable familiar – oh, I know you are sir, the water – just about all the water that is collected basically then flows into Lake Rotoaira and before going through Tokoanuu (ph) Power Station, now because Lake Rotoaira was a natural lake, despite it's subsequently been modified, it discharges into Lake Rotoaira and classified under the Waikato Regional Plan as non-complying activity. Now as the reporting officer and having sort of firmly come to the view that it was the right recommendation to say that the TPD should be re-consented and it being a very significant career limiting move to say otherwise, I then of course had to be able to justify that recommendation in terms of the relevant provisions of the plans.

Now, in the situation of the Waikato RPS and the Waikato Regional Plan, I was faced with this situation of having all these negative imperatives. There was not a single objectionable policy that I could point

to and just say, this project is in accordance with that. The best I could possibly ever get to was maybe they are not inconsistent with some of them. Because the reality of it is of course all those things are effects based and there were lots of effects associated with the scheme. And given that it was a non-complying activity, we had to undertake all manner of – or I in particular, had to undertake all manner of intellectual gymnastics, helped by Mr (inaudible) and to try and work through that process to actually come up with something that was defensible to actually be able to recommend that the TPD should be re-consented. And that was just a function of – nothing to do with the merits of the project, it was just the fact that the plans were written in such a way that didn't allow for that sort of outcome to be achieved in a very straight forward manner.

And the other thing, this is the last thing I'll say about the TPD is that I remember talking to my colleagues at the time, and my colleague at the time Rob van Vorthousan (ph) did the reporting officer for the Horizon's MW site, the two of us were doing it together and we were talking about you imagine if you were going to advance a Resource Consent application for a TPD today under the RMA, if it didn't exist and you know you only have to think through it for about 10 seconds. Then you come to the view that you'd just be wasting your time. You just, you know, if I was advising a client I'd just say there is just absolutely no way in this world that you would get a scheme through like that in the proximity to a double world heritage national park under a whole heap of DoC estate, with significant Tangata Whenua values, the benefits – you know, while the benefits might be substantial, they just wouldn't get a rating to go anywhere near something like that being assessed under the RMA. But given that it's there now, the benefits are recognised now, and that's one of the points I talked about in my evidence about the example Lake Karapiro. Imagine, you know, imagine if the proposal was

now to dam the Waikato river at that point if there wasn't a dam. I mean you'd just – you'd just, you'd really struggle and we're dealing with the same issue with the Clutha and you get to the point of saying, you know what is it going to take to actually try and balance the scales up? And obviously we're hoping that the National Policy Statement will help in that regard, because otherwise the only other alternative you get to is empowering legislation which is hence the way that the Clyde dam obviously came about.

And I don't think any of us really want to go there and sort of effectively override the rights of participation and things like that, but it does need to be that sort of I guess balancing up.

So one of the other issues that was raised was the – sorry, yeah, sorry, non-complying activity status, sustain all that in terms of HMR, the Hauāuru mā raki, which is the Waikato wind farm on the west coast, I'm involved in there for Contact. We have a situation there where we are in two districts, the Franklin District and the Northern Waikato District in the south and the Waikato district part of it, there is a coastal zone and a rural zone and within the coastal zone any turbines within a thousand metres, one kilometre of the Miha (ph) Water Spring. Turbines are a non-complying activity in that area, so I mean that of course if the place where the best wind is and so we are in the process of obviously trying to manoeuvre that project through the consenting process against section 104(d) and again, it would be fair to say that it is a very hard argument to make in terms of, you know, firstly going through the criteria, there's no way you are going to stand up and say the environmental effects are minor in terms of visual effects. Not even our landscape architect will – well, particularly our landscape architect because I know that's not the case, so I can't say that it passes the first threshold test. So then you are forced into then having to then rely on

the second threshold test in terms of objectives and policies and in that regard we come back to having to do intellectual gymnastics again, to quite an extent. Because again, most of the objectives and policies are negative imperatives. We do have a two plan situation, an operative plan and a proposed plan and the new plan has moved forward and has got some good recognition of renewable electricity generation and on balance I think you know, if we can position our –

CHAIR: Which plan is –

MR CHRISP: Waikato Proposed District Plan.

CHAIR: Oh the Waikato one?

MR CHRISP: Yeah, the Waikato Proposed –

MRS BAUMANN: Second generation one?

MR CHRISP: Yeah second generation plan, yes and it, you know, being written since section 7(j) was put into the Act and so on balance my view is that I could make an argument to say that basically this is not only consistent with the totality of the policy regime, if you can put more weight on that, on the proposed plan, but you know it's hard, you know, it's not easy when you would expect, and as – with reference to Andy's evidence I mean, if we went out there and proposed a gasfired power station you know it would be a doddle in comparison. Which is ironic given the country's emphasis on renewable.

[2.30pm]

So I now turn to the whole issue of geothermal policy. I was, along with Rosemary here, was one of the people involved in the hearing, the nine week hearing. And also then heavily involved in the meditation which went for months after that and actually writing lots of it. And in terms of the issue raised by Tuwharetoa I understand that the areas they're looking at are in the forest covered lands and once they clear the trees there might be some areas where that's developed.

Now, the way the Waikato Regional Policy Statement, the Regional Plan works is that they would actually need a plan change to take that through. Having discovered firstly - the first challenge they'd obviously discover the resource for it to be of sufficient quality to be developable. For them to then develop that, they would have to go through a plan change process and in that regard a National Policy Statement of this nature would be of enormous assistance to them in terms of actually achieving that sort of outcome, in terms of setting that national priority.

And that probably then leads into one of the other issues then, which is the one about zoning and plans. We've got a situation in the regional policy regime in the Waikato where there's been a division of the various - the geothermal resource is relatively well known apart from whatever Tuwharetoa might have discovered and the rest of us don't know about. But basically the resource is fairly well defined. It's been categorised into five different management classes from development through to protected.

But other than that, what I'm getting to is where I've got concerns about this zoning and district plans for renewable electricity generation. Because you get to the point where, what happens is then, as a council might - if you take it in a positive sense and they say, right we want to actively zone areas for renewable electricity generation. What they then start doing is potentially advancing hypothetical possibilities and saying

well this area could be good for that. What's the initial reaction from people who see that proposal for the first time? Throw your hands up in horror, major objection process, all arguing the merits and adverse effects of hypothetical possibilities, then gets people's backs up and all sorts of things. Not a very productive process. Huge range of factors which Peter's outlined in his evidence as to the type of considerations that would go into deciding whether you would or would you not proceed with a project, which you can guarantee a local authority is not going to get into that level of detail in terms of deciding where to zone the areas.

So, then turning to the no-go side of things. I guess, the key message here is that, particularly in the context of what this NPS is trying to achieve what that would be in fact doing is just making things harder. 'Cos of instead of having at least a carte blanche to start with to say, well look you can have a crack at developing a renewable energy project anywhere and let's consider the effects on its merits in that situation, what zoning no-go areas are effectively doing is saying, well you can't even consider those areas from the start. So, that whole approach would seem to run counter to what my understanding of the NPS is trying to achieve 'cos it basically sets certain areas off limits.

And I guess - and a good parallel for that is probably your - if you look at Water Conservation Orders. Where what you had historically is, particularly in the South Island, where Fish and Game and DoC and (inaudible) have gone and basically done the pre-emptive strike. Gone in there and said, right no damming of these rivers, and it's in a situation where no one had any proposals at that time. So, very little in the way of opposition. And you get to the - and we've got a live example of this on the go at the moment in the form of the Nevis, where on the one hand you've got the intent of the pre-emptive strike, to have another go at that Water Conservation Order to have a prohibition on damming of the Nevis

and I was down there a couple of weeks ago saying basically look, what you're doing is you're putting up the hypothetical effects of an unknown project, as yet undefined, no assessment of environment effects. And then basically putting that up and saying, oh because of that would be just so abhorrent we have to protect it by way of Water Conservation Order.

Now, there's a couple of things flow from that, one is well obviously you are just dealing with hypotheticals. Secondly, you don't know what the nature of any particular proposal is, what the mitigation measures that might be developed. And in fact, you might have a better outcome than is achieved with just leaving things alone. One of the examples there is there's a native species gollum galaxias which has been discovered. Now, if you do nothing, the likelihood is the trout that's so highly valued by Fish and Game will probably swim upstream once they find the gollum galaxiids and eat them 'cos that's what they do. They just don't know they're there yet. You know, whereas of course the dam would actually prevent that happening. The whole mitigation package, to actual enhance that population or whatever, or create the environment which would actually make this a better could -

CHAIR: How do they get downstream? Sorry.

MR CHRISP: I don't know.

CHAIR: You've got (inaudible) obviously going up, and galaxias coming down.

MR CHRISP: Yeah, well I don't know, because I (inaudible) but that was the interesting little irony with that. Was that you've got this recently discovered little population which is now being held up as a reason to protect everything. But they're actually potential fodder for the trout which is -

CHAIR: No every example is useful.

MR CHRISP: So, I guess the message there was; let the consent process run.

That is the situation where you can fully identify the nature of any specific proposal, you can identify what the actual effects are, the potential effects. You can look at your mitigation measures and you can come to a reasoned answer. Rather than having pre-emptive strikes and knocking out possibilities that might actually be good outcomes. And I guess so that same thinking I'd urge you to consider in relation to the issue of potential zoning or not zoning sites in district plans which has a bearing on Policy 4.

MRS BAUMANN: Can I just challenge you on behalf of local authorities?

MR CHRISP: Sure.

MRS BAUMANN: Say you're (inaudible) let every case be considered on its merits. There (inaudible) that is an expensive and time consuming approach rather than identifying some values in the area that are so high that hypothetical or not they're just not going to be touched. Any sympathy for that approach?

MR CHRISP: Oh yeah, absolutely. But I'm not saying that you have it in a policy vacuum. You still have your district plan provisions and I guess that's one of the messages in my evidence. There is absolutely no shortage of plan provisions that tend to deal with section 6 and 7 matters.

MRS BAUMANN: But you just don't want absolute - you don't want no-go areas, you may have shades of grey but no -

MR CHRISP: Yeah, that's right. Because I mean, if you read Policy 4 what you could take from that is to say, right we want to identify it, let's take wind farms for examples, we want to say - and say, let's take Waikato District as a good example. It already has ridgeline protection policy areas. It has landscape protection policy areas, it used to have a coastal protection policy area, it now has an actual coastal zoned.

Now, it would be so easy for them to say, right no wind farms in any of those areas. Problem being that happens to be where the wind is, on top of all these hills and along the coast. So, in terms of what you are doing here in terms of trying to recognise and provide for renewable electricity generation, the likely effect is then you then have basically the local authorities effectively shutting it down.

MRS BAUMANN: So, you do not - you would be not supportive of any policy which would direct local authorities to identify zones where there shan't be renewable development, but you would not be against them identifying values and the way they see those values. Then let the cases run depending on -

MR CHRISP: There's two points. I agree with - that's the latter I agree with, yes. But the second point is, I don't see that that is the role for this NPS to direct them to do that. Sections 6 and 7 already require them to do that sort of thing and you know, we've experienced like, you take for example, Taupo District. That's only in the last few months notified it's variation on landscape and natural values. Some, what are we, how many years now, after the Act was enacted?

MRS BAUMANN: Well that's perhaps why we're considering directing that they at least approach the issue for those that have been so recalcitrant to date. Are you saying that they're largely falling into line?

MR CHRISP: Well, I think they are. I don't see that as the role of this NPS to do that 'cos what that would effectively be doing is encouraging them to put in place constraints which is going to shut down possibilities for renewable electricity generation. So, I see that as counterproductive to what this NPS is trying to achieve. But in terms of the job that they're suppose to be doing in any event, I think, you know, they are getting there.

MRS BAUMANN: And that they need a shove from us.

[2.40pm]

MR CHRISP: And as a say, yeah, they don't need a shove from you and I think there is enough of the protectionist approach, as I've said in my evidence, and all those negative imperatives already. There's never been any shortage of that side of things and at the end of the day it's actually the other side of the coin that needs to be looked at, hence this NPS.

DR CHAPMAN: Can I pursue that a little bit more?

MR CHRISP: Sure.

DR CHAPMAN: Just exploring this issue of how values can be identified in a way that like, signals that certain values be protected. But doesn't pre-empt the best renewable energy generation possibilities being developed in future. Is there a ground, a middle ground for that?

MR CHRISP: I think, yes - I think well, there's various ways you can do it. You can look at your rules and plans and you can look at your policy regime. And one of the things in terms of rules, from the point of view of looking at it from the energy development is to not have things flicking into non-

complying. But rather be no more restrictive and classified than discretionary.

And as I said in my evidence, in terms of re-consenting an existing facility then I think controlled activity is particularly appropriate. And you know, Trevor and I were talking this morning about, well would that have made a material difference in terms of for example, re-consenting of for example, the Waikato hydro system you know, versus it being full discretionary if the controlled activity assessment criteria were wide open.

But what it would do, is it would shut what you might majoritively refer to as the loony fringe which is sort of, people actually seriously saying, no these consents should be declined. I don't like it, I don't want the dam to go type of thing, you know. In a situation where the dam is actually permitted but the damming and diverting of the water is a discretionary activity.

And if you can actually get the focus into dealing with the real issues and not having to, because they're there as well, deal with the more extreme type positions. Then you can actually focus the Inquiry down into the real issues, cut the costs down, cut the timeframes down. That's got to be a good thing as well. I mean, most of these re-consenting processes for these large scale infrastructure energy projects have cost you know, millions of dollars, you know, many millions of dollars. Just to re-consent what's there and the usual outcome is largely one of a backward step in terms of output from them.

The TPD was a classic example where basically there's just a whittling away here and there of water flows which mean that less electricity is produced. And when we point out to people well, okay if you need to consider the fact that if you do that it means you're going to have - that

generation has to be taken up by someone else which is invariably going to be Huntley, particularly in the Waikato region. And it was very difficult to get people to say or to recognise that you're going to have a greater adverse environmental effect in a wider sense with that sort of outcome than the effect here.

And again, it comes back to this issue of the macro-effect versus the micro-effect which is big sort of theme running through my evidence in terms of the national benefits versus localised effects.

So, but then coming back to your question in terms of the - it's the middle ground is - it comes back to the policy regime in that, where I see the NPS coming, is actually giving that national perspective, giving some direction to the local authorities and the regional authorities that they need to take onboard that type of view as well. And then you get that balance, then you don't have that TPD example that I sort of gave you. You then have a project like the wind farm out on the West Coast of Waikato actually being able to be more sort of, considered on a more balanced way rather than just trying to bat away all the negative imperatives and saying, oh you know we've got past that, we've got past that you know, at the end of the day we say, where's the policies I can grab hold of that actually says, yeah I'm doing the right thing.

DR CHAPMAN: But should the NPS in effect instruct councils to make a plan change, put something in their plans in which really does move it along? So, there is a provision that you can refer to in identifying -

MR CHRISP: I think you need the dual level because you need that national recognition in the actual NPS itself. And you need as part of the implementation of that NPS is in different ways and that's where Sarah Dawson's evidence looks at that in quite some detail, where she

says - well there's really two areas, there's the actual resource consent application where you can use the NPS in its own right, but there's also the step in between which is the preparation of the plans and policy documents where the NPS becomes valuable to advise local authorities that these are matters that need to be reflected in their plans as well and providing the balance of those documents so that when you do actually get to the point of applying for a consent you're not then still in the situation we're at the moment that all you've got is section (j) over here and then you've got this huge wad of negative imperatives over here and - whereas now if you get that better balance it flows through, it cascades down through the whole system, then you'll, you know, you will get more balanced environmental outcomes and projects proceeding. That's the way I see it, that's that middle ground that I see.

So I guess the next topic I've got on my list is transmission. I did cover that briefly in my evidence. I guess the key point here is that, and I've dealt with this just recently, for example, with the Hauāuru mā raki, HMR, project where we have about 28 kilometres of what we call the external transmission line which is from the last substation to get to the national grid, of 220kv line. Now that is - because that 28 kilometres of line is not part of the national grid, the NPS on electricity generation doesn't apply to it, so therefore you have a situation where it's effectively serving the same function, it's exactly the same type of asset but the distinction is who owns it determines whether it's of national importance or not. Now that, to me, is not right, and it seems to me that there is two ways in which that gap, if you like, can be remedied. One is obviously a future change to the NPS on electricity generation. Well given that it's only just been made operation - sorry, you can make a change to the transmission one, but given that's just been made operative, that's some time down the track. So recognition in this NPS on renewable electricity generation probably needs to cover that issue off. Because as was pointed out by the others, there's no point being able to generate the electrons if you can't take it to the markets. That's probably that one

The NPS on fresh water. Contact's been heavily involved in that one and I have written evidence and submitted that already. And I guess it would be fair to say that I think that one's got a long way to go. There's so many issues that have been raised in the submissions I think it's got major problems and I think - basically it doesn't actually provide that national perspective. What it does is it just gives a whole lot of directions to regional councils to go off and write some regional plans that actually address this issue, so what you're going to get is a whole lot of different regional perspectives, rather than a national perspective and there's some submissions that Contact supported of others which I've particularly emphasised in my evidence, which is that I think that the benefit of the current round of submissions needs to be taken onboard, there needs to be a re-drafting of that policy, and then it needs to be re-notified and then let's have another crack at it, because it's just too far away from the mark.

CHAIR: Would you be able to let Ms Beruldsen have a copy of your submission? We've asked that of all parties because we're tracking slightly ahead of that one.

MR CHRISP: That's my evidence on the RPS?

CHAIR: The freshwater.

MR CHRISP: The freshwater, sure, yeah.

CHAIR: Because I was particularly interested to know what your submission was about Policy 1(f), about guiding and directing regional district councils - oh no (g), I beg your pardon, about damming and diversions, notable values and so forth, "Guide and direct regional plans, including considerations and determinations of resource consent applications restrict existing takes, uses, damming and diversion of freshwater in order to sustain notable values and non-consumptive values and interests in tides with low

flow". So I'd be interested just to see what you've said about that, because that does seem to be a matter that's also relevant with the NPS we're dealing with.

[2.50pm]

MR CHRISP: Yes, that's right and one of the key things in my evidence and indeed in Contact's submission on that NPS was the need for integration between the various documents and the various NPSs in particular and obviously I appreciate there was some difficulty with that because they're all running on their own sort of processes with differently constituted Boards and things like that, but I guess one of the messages also was that, and I guess one of the risks we saw was that it couldn't be assumed by Judge Shepherd's Board that anything to do with the renewable electricity will be addressed within your Board and therefore he didn't have to deal with it.

CHAIR: Exactly, that's the difficulty and I was also anxious to know whether or not you've made any submissions on the question of water allocation in respect of, you mentioned irrigation versus electricity and so forth.

MR CHRISP: Yes, in terms of - yes well we've definitely sought recognition of the use of water for renewable electricity generation purposes with independent bodies and in the context of that we've also been doing the same things as you'll see in the start of my evidence I talked about being in Dunedin last Monday for a Board allocation change there; Environment Waikato is having got to the point of the decision's been released and appeals, we're now in the appeal stage for their water allocation regional plan change.

CHAIR: Well it may be Mr Robinson wants to talk about that as well, but I am interested particularly in section 30 (1) (fa).

MR CHRISP: Yeah, I think we've been sort of saying - fairly consistent round the country on these things and that there is that need for a recognition of, yeah, you could call it the water allocation or just the use of that water for particularly non-consumptive uses.

I think the only other issue I had sir, on my list from noting this morning was the issue of cumulative affects. I'm guessing Waikato District Council's been before you on that one. I guess my response to that is that that is another one of those things which is already dealt with elsewhere, particularly section 3 of the Act, in terms of the definition of effect and I haven't received any lack of ability or willingness to actually deal with cumulative effects and I don't see that as something that this NPS should delve into because if you did what that effectively would be doing was putting in place another potential barrier to renewable electricity generation and to me, yeah as I say, those issues are dealt with elsewhere and what this NPS is about is probably trying to put in place the positive side of the story and relieve the well established regime of effects-based planning instruments to deal with what they already deal with admirably.

CHAIR: Perhaps if we could ask you some questions, we may be able to tease some of the things out, because I am conscious that you have covered a lot of other matters in your submission and we're grateful to you for that.

MRS BAUMANN: Perhaps we'll just go topic-by-topic. The first thing I want to talk about, "reverse sensitivity".

MR CHRISP: Sure. You are talking to the right person about reverse sensitivity. That seems to be a large part of my practice. Not only for the electricity sector, but also for the dairy sector. I am Fonterra's main planning consultant dealing with those sorts of issues. Essentially it's something we saw as a gap in the NPS and that we think there needs to be a policy that addresses reverse sensitivity effects, it's something that is

obviously recognised in case law, it's becoming increasingly a reality around the country. We have a lot of first hand experience of this in terms of particularly geothermal resources, particularly round Taupo where we are at the moment - I was in the Environment Court about a month ago in relation to plan variation, now plan change 19 to Taupo District Plan which is dealing with the whole vexed issue of rural/residential subdivision, well it's actually the whole rural subdivision, but of course the issues are all about rural/residential and essentially, again, you know, not an easy battle, but basically what we're seeking is protection of the geothermal resource which actually is well recognised in the RPS, and the regional plan, it's defined, it's mapped, we know exactly where it is and it actually goes underneath the town of Taupo in terms of the Wairakei, Tahaura town and we've always taken the east Taupo arterial, which has been designated for many years and is now finally under construction, as effectively being the boundary and saying east of that let's protect that part of the resource from incompatible activities and the pressure is constantly on for people wanting to subdivide and when they do so, or even just what's there now, it actually constrains the ability to access the resource and the example I was using in a hearing last - well it was a month ago, was that you've got this whole southern part of the Tahaura field, which goes around the back of the town and comes down towards the Taupo airport and you've got residential activities programmed right to go right out to the Etah (ph), as it's called, and then you've got the field, and then beyond that there's a rural/residential area that was established in the 1970s called (inaudible) Park. Now because of the noise constraints alone, forget about anything else, of actually undertaking a drilling operation, you have to be set back in reality about 900 metres from these residential activities to be able to comply with the night time noise limit and that's with a top quality quiet-ish rig. So what that means is that you basically lop off about a kilometre either side and therefore your effective area that you can access for that geothermal field has shrunk to about a third of what you could potentially otherwise access through that part of the field, and it's just simply because of what's there now and that's in the

situation where we're trying to then fend off, you know, that same type of situation occurring elsewhere round the field. It's not only around the edges, it's within it as well, because of course Contact's got huge access rights in terms of - land access rights, but it is a patchwork at the end of the day, and it only takes one house in the middle and you sterilise, if you take a ring of about 900 metres around that, just say a kilometre in round figures, huge areas, and just strategically placed houses here and there, I mean, when you've got one or two, you can move those people out for the 30 to 60 days, you know, and put them up in a hotel, which Contact has done on occasions, but when you've got a whole rural residential area like Oronui, which is out the back, and if that expands, you just can't do that, and so what that does - the land use character changes around you and that then compromises the ability to access the resource, essentially for everyone. So that's a geothermal example. With the wind farm out at the west coast, it's not even so much the reverse sensitivity, it's just a concern by neighbours who are like in some instances are 6 or 8 kilometres and you know - (inaudible) visited Ashurst and (inaudible) there and looked up, quite a different situation. Issues and perception.

CHAIR: We have had some submissions that developers of wind farms should buy two kilometres worth of property as a buffer or else pay compensation, we've had those submissions.

MR CHRISP: Yeah you see, and the thing is that you can say that and you know, even if the power company went and did that, it's not going to stop the objections from people two kilometres onwards. We've had - we did our consultation up to five kilometres away.

MRS BAUMANN: That was for the -

MR CHRISP: That's the Waikato wind farm. And we had objections from people coming in, you know, reading us our pedigrees because we didn't consult with them and they live 8 kilometres away.

DR CHAPMAN: Can I ask a question on your para 67 which relates to reverse sensitivity. Look, I haven't considered it closely but I just wonder about your - the quote in there you've got "This policy", you know, "Address resources once identified" and para A, sub-para A talks about potential to constrain existing and new renewable electricity developments. It's quite strong really, does that strike a reasonable balance?

[3pm]

MR CHRISP: Yeah, I guess I was thinking about that in terms of what would you define as new in terms of potential? Because I mean that could be anything anywhere, at one end of the extreme. But then you've got situations like the geothermal resource for example, where it's defined, it's in the plan, it's identified as a development geothermal system or a limited development, you know, in the geothermal context in Waikato you would say that that type of policy should automatically relate to development geothermal systems and limited development, because the policy regime is there having recognised those resources, actively encouraging that they be developed and therefore, having got to that point and recognised their importance, you know, why would you then allow that situation to be compromised by having incompatible land uses established on or around those areas? And indeed the RPS actually has a policy to that effect. But that's an anomaly, that's a rare example of someone actually doing it right. And I'll say that as a consequence of a pretty drawn out long mediation where we battled to get it in, and the end result actually won an international environmental award in terms of resource management.

DR CHAPMAN: In that sort of regard I just wonder if there's some way it can be cast, something like that can be cast to recognise the ongoing development of a resource, part of which has already been developed and recognising that there are economies of doing that, once part of the system is established there are economies and further development.

MR CHRISP: Yes, that's true. I guess what you - you get into various categories where you've got at one end of the spectrum something that's developed and potentially expandable like geothermal (inaudible), for example, you've got other areas at the other end of the spectrum where there's nothing there now, but there is a recognised potential, whether it be wind or hydro on the Clutha, for example, you know, so should the Clutha District Council be having objectives and policies discouraging subdivision in the area potentially floodable by a mega damn? I mean that's something that probably does need to be addressed at that local level. But if you've got a national policy statement which recognises the importance of that type of generation, I don't think it would be appropriate for it to then jump down to the level - of that level specificity, I think that's where you do need to leave that to your local environment, but you give that direction as to the broad national area that these types of developments are important, the need to address the reverse sensitivity issues is important and then I guess we do have to have some level of risk as to the extent to which each regional district council picks up and runs with that, but I think there is a balancing act in there as to how far you go as a national direction in terms of requiring councils to take that onboard.

DR CHAPMAN: Yeah, it's perhaps just a recognition of that - the strategic opportunity's there and incremental development that doesn't think about that strategic opportunity might be discouraged in order to -

MR CHRISP: Yes, that's right and you know, at the end of the day it will be a horses for courses situation just take, for example, the Tuapeka Dam, now there's a situation where Contact's gone public and said we are looking at four options on the Clutha, it would be in my view absolutely irresponsible, for example, for the local authorities to suddenly say well maybe I'll zone a new town there in that area that's potentially going to be flooded, you'd say well let's just wait for - let's just at least keep things in a reasonable holding pattern until that's worked through its process before we know

whether it's actually a goer or not. That would be an example of dealing with that reverse sensitivity effect or actually just avoiding the creation of additional adverse effects, which would be caused by that project.

MRS BAUMANN: But equally if you're not careful, because there's a great potential for wind farms this would preclude any development that could potentially - yeah, so it's quite hard to find a way of defining it.

MR CHRISP: Yeah, as I say, yeah it's a horses for courses thing.

MRS BAUMANN: And I don't know you're words - yeah I mean I can see what you're trying to get with your words, but they are a little broad.

MR CHRISP: Yeah, well I think at the end of the day you've got to look at the NPS serves two functions in that it is a touchstone as a policy regime for the assessment of any specific proposal, you know, like (inaudible) and it is also a guide in terms of actually drafting plans. Now it might not suit both those purposes in every instance, you know, fully, if you like, if you know what I mean. It's there to provide that national direction and you know, because if there is an identified wind farm site that's currently actively being investigated and looked at but not yet quite got to the point of lodging an application you will find that the relevant power company, whoever it is, will be in there probably lodging submissions trying to halt that position in any event. Now it would be helpful to that power company if you actually had a policy that even if only at a high level recognised that other land uses can compromise what this policy statement is trying to achieve.

MRS BAUMANN: I don't think anybody would have a problem with that approach, but it's just how to wordsmith it.

MR CHRISP: Yeah, I know that is the challenge.

DR CHAPMAN: Yeah, I didn't have anything more on that, but I was interested in the discussion in your submission around reversibility, Policy 3 which I don't think we've traversed.

MR CHRISP: No, I haven't yet.

CHAIR: It might be better if we work through the policies I think, because with your high level of expertise in this, if we could take advantage of that, if we could start with the objective and I realise you've got a suggested change to the word of "Approach" at page 10 of your submissions, but just leaving that for one moment, the first matter which the panel's exercised over is whether or not it's appropriate to include a percentage goal in an instrument such as this, particularly if that's a policy incentive way by central government and if that were to change what does it do to the document?

MR CHRISP: Well, I mean, I'll answer the last question first. If the government changes its position then it might tend to be that the policy statement might need to be changed to reflect that and the extent to which that becomes an over burdensome sort of process unnecessarily is obviously the issue there. I think, I mean we're in a position where the New Zealand Energy Strategy was prepared by former government and it's obviously their document, but I understand that the current Government has endorsed the 90 percent target, so I think we should work on the basis that that is it and in terms of the first part of your question, I think if you are going to state an objective, it's quite important to be able to have something that is measurable in terms of achieving that, what's helpful to have it as measurable, it's like, you know, if I'm going to join a gym and I want to lose weight, something like that, if I've got a target of a particular goal weight or a particular bicep measurement or whatever it might be, you know, we know what we're aiming for, we know when we've achieved it.

CHAIR: If you were advising Contact or indeed if you were advising a local authority developing its plan what assistance is that when it comes to undertaking -

MR CHRISP: Well I actually think it's got quite significant assistance in that when you look at the facts and figures like including what Peter's presented to you, what it tells you is we actually have a long way to go and that it actually probably increases the recognition of the size of the task at hand, rather than it being a warm fuzzy apple pie and sort of motherhood-type statement saying "isn't it nice to have renewable electricity generation", because that feels good, whereas if you can actually have it as a measurable outcome we've got this target, we've got it for a reason, it's backed up by international obligations and yeah, so I would support maintaining a target in there and by a particular date, because you'll find invariably there will be the curve to get to that point will not be a straight line and it will be a, you know, there might be a rush at the end if you're lucky.

CHAIR: Can I just take it a little further then? At the moment the 90 percent is mentioned in the Preamble, there's this issue of whether it needs to be in the Objective. The reason I raise it is the efficiency matter you raised, that if that were to change beyond the – the (inaudible) decision's made beyond the RMA context through the energy strategy, is that not - would it be perhaps preferable to have another form of wording which still shows that there's - what the goal is without having a specific percentage in the terms of the document, bearing in mind that this is a statutory instrument, this is an instrument.

[3.10pm]

MR CHRISP: Yeah, you get to the point, I mean, I guess one of the problems with that - start again, you certainly achieve a high level of efficiency if you can defer to - for example, one way to do it is to say in order to achieve the stated objectives of the New Zealand Energy Strategy, whatever that

might be from time to time, but then you get to the point where - I don't know if it's a sub-delegation or function, but it's that thing - you get a vires issue, in terms of having something that's outside the ambit of the document that is then able to become a political football and changed and we're all over the place and moving around all the time. Whereas, what you might be able to decide in your own, as a Board, is to say irrespective of the New Zealand Energy Strategy and the fact that that happens to be government policy, that that 90 percent target is actually meritorious in its own right as a resource management outcome.

CHAIR: I see, that's helpful.

Now, moving on to policy 1, unless anybody's got any further questions about the objective? Policy 1, the benefits which are listed there, Roman paragraphs 1 and 2 there, can you give us any further benefits that you believe would be helpful when it comes to addressing the issues you've raised? Mr Robinson mentioned some cases and you did too I think in submission, would there be any point in including a benefit which refers to the sunk cost or the fact that you've got existing projects in place which the whole system's dependent on?

MR CHRISP: There's probably two things I was thinking about one was – yeah, it's that recognition of the investment in existing – there's a section 104 (e) matter in terms of recognition of existing investment infrastructure and that having a bearing on an efficiency-type issue, sorry it's 104 (1) (a) is that the one about recognition of existing investment? Oh 1A, yes.

CHAIR: We know the one you mean.

MR CHRISP: The other issue that's not there is some of the things I've discussed in my evidence about the new type of environment that's created, the Lake Karapiro, the Lake Dunstan-type situations and I'm dealing with a very similar issue with working for King Country Energy with a proposed dam on the Mokau and you have a situation there if you think

about the King Country there's no flat water, anywhere, and you've got the local, you know Te Kuiti High School going down, travel miles down to Mokau to train for rowing, there's nowhere to go sailing on calm flat waters to teach kids, you know, they've got to go basically as far north as Karapiro, so you know, major local benefits, the High School's you know, very supportive of the project just from a recreational point of view, let alone the increased security of supply of electricity to the King Country which does have problems with its security of supply. So that that's a - it's the other benefits that are tangential I guess, or incidental I guess.

CHAIR: The difficulty is if you start to distinguish between run of the river and storage and wind farms it's just -

MR CHRISP: You start tossing up the benefits between a piece of flat water versus the kayaking fraternity, for example, who want white water, you get into those sort of dilemmas. Another example is cascade users with geothermal, I mean that's a benefit, for example of, you know like there's local Māori groups around Wairakei, which have developed tourist ventures, re-creating the pink and white terraces and things like that and also used for heating sources and central drilling and also Wairakei Resort and things like that. So those are activities which are basically what we refer to as cascading uses, secondary uses that spin off the back of the fact that there are deep wells which are being drilled, which wouldn't occur - you wouldn't get those benefits if there wasn't the primary activity of generating electricity, because they are essentially using the waste stream, which is the water at somewhere 120 degrees below or lower. Once it gets to about 90 degrees, after it's come after out the binary plan it's not much use for any more generation but it's still great for heating, for example.

CHAIR: Well, you may like to give some thought to that. And if you've got a more comprehensive list?

MR CHRISP: Happy to do that.

CHAIR: Then, if we turn to Policy 2. If you were advising a local authority there, does that policy add anything to what's already there?

MR CHRISP: In the Act? Well I guess the drafting of that policy comes down to (inaudible) experience where - the first thing there about recognising that renewable electricity can only really go where the resource is located. And this is one of those items that pops up for example in the context of rural subdivision, where you get views on the part of local authorities that everyone should be able to subdivide in a rural environment. Now, I mean, that, in my view, is not right. I mean, you'll have fence line and one side of that fence will be saying, "Residential" and the other side will be saying "Rural" with completely different rights of subdivision and often very arbitrary as to where that line is drawn. Just have to explain to councils, there are no (inaudible) different rights of subdivision, the rights that people have our only those that are afforded by the district plan.

So we have a situation where if we want to develop a geothermal resource or a hydro dam or a wind farm we have to go to where that resource is located, other activities don't necessarily have to go in those locations. An example I often use is protection of coastal character. Most councils are very happy to restrict subdivision along the coast, in the recognition of protection of that rural character, but if you get them to try and apply the same thinking to a geothermal resource and say, "Well that's of national significance as well then" Then they say, "Well no there's nothing there, it's all under the ground" and they build their houses. But then once they do that, the access to their resource is then denied.

CHAIR: Do you support that policy, Policy 2?

MR CHRISP: The other considerations in there are just the more technical practicalities associated with developing and obtaining renewable electricity generation, location of existing structures and infrastructure.

CHAIR: The reason I ask, and you'll appreciate this, is if you arrived at a plan, and this arrives in the mail, what do you do with it? The National Policy Statement.

MR CHRISP: Well I guess the first thing you do is you actually - I'll give you a good example, the Taupo District Plan was finally notified in 2000. It's the only recognition, and I'll just take us backwards a step, Taupo District has the bulk of the geothermal resources in New Zealand, it has five hydro dams in its district and plus the control gates. And you read the district plan when it was first notified. There was basically no recognition of the fact that, you know leaving aside Taranaki, this was energy central, and in terms – so far as geothermal resources were recognised, there was some reference to the fact that they were just a hazard. And so hence we had to start the process. So we lodged a submission saying, “Look guys we’re coming from a policy regime that at least in the old Taupo County District Plan we had geothermal resources zones and the development of geothermal resources was in fact a permitted activity in that zone, and it covered huge areas of land”.

[3.20pm]

So you could under that old plan actually develop a power station as a permitted activity. Now, we accept that times have moved on, but going to the point of being completely silent on it and everything falling off the end and not having a consent status identified, and as it turned out in the Taupo District Plan, the most restrictive was discretionary, because they

didn't like the non-compliant so we were a bit of a lucky there, but have they just followed the normal approach in that regard, everything becomes non-compliant? And so finally, so it took a long, long process of Environment Court appeals and all sorts of things, we now are finally have a chapter in there called section (a) which recognises and maps the geothermal areas, and has some policies that actually deal with it. And that's where I see the benefits (inaudible) coming in. Is that it doesn't allow a council to actually be silent on these issues and just ignore them. Otago Regional Council is effectively doing that now with hydro, with its water allocation and use plan. It has just failed to recognise that hydro is an existing use and is a very important and significant one in that region.

CHAIR: Do you see Policy 2 as addressing that?

MR CHRISP: It would certainly be helpful for the likes of people like me when going to a council like that and saying, look, rather than being silent, actually promote it, you know, just ignoring these things and making them all non-complying activities just by virtue of silence or whatever is hardly in accordance with a National Policy Statement which promotes the granting of consents. You need to look at what resources you've got, recognise those and provide for them. At least the ones that are there, before you can get to the potential ones.

CHAIR: Perhaps you'd like to discuss this with Mr Robinson. I'm particularly interested here, because it's whether this provision is referring to resource consent or plans and also once again, whether or not it's prescriptive enough. What we're particularly interested in is, what can a policy do, a National Policy Statement, can it get down to the level directing, as to say, activities or is that going too far? And Prof Palmer who's given evidence, belied that would be going too far, it's a higher level instrument. So

perhaps through the day you can think about that and get back to us on that policy.

MR CHRISP: You're right in that this policy is primarily focused on consenting, in a consenting situation, but I would also look at that from the point of view of saying, well when something, if you allow me to go back to your first question, how would a local authority deal with that when writing a district plan? Well that actually means that they need to look at regulatory framework to say, well, how are we going to deal with these in our plans, and silence is no longer an option.

CHAIR: So you think Mr Chrisp, that that could well give them an indication of the level of activity status they should -

MR CHRISP: I don't know, I don't think that one will give an indication of the level of activity status, the way that's necessarily written. I have got another section in my evidence which is about the controlled activity status.

CHAIR: Oh yes. Remind me which policy did you put that under? That was the new one.

MR CHRISP: That was the new one and that was paragraph 68 onwards.

CHAIR: Yes, I remember now. Now Policy 3, we're just going to start on that now but I just want to, before my colleagues talk to you about that, the words "relative degree of reversibility" in the second line. Do you have any difficulty with those words when it comes to if you were a consent authorities making a judgment?

MR CHRISP: Yeah well, I think as I've discussed in my evidence, what are you to do when you read those words? Are you to favour something that's more reversible? I mean, the inference to me is - the more reversible something is the more favourable you should be disposed towards granting consent to it. So that then, as was said in my evidence, that then places a wind farm far higher up the consent-ability continuum than for example, a hydro or even a geothermal. I mean, there's nothing particularly reversible about subsidence. Even if it's at a low level across a large area, and obviously you can, as I've seen in the evidence of the Recreational Canoeing Association showing pictures of dams being blown up and dug out and things like that. But I mean, the practical reality is that for all intents and purposes, they're there for a long time; they are a lot less reversible.

Just to finish up on that. I appreciate a lot of the other submitters that have just said, "Look, strike it out completely". And I would have no problem with that, because that's not an issue. But the way Contact's submission frames it is to say, well, that might be an additional positive, if you like is to say, look if you are concerned about this - like the wind farm, you can say, look, if it all becomes some big problem in the future or whatever, you can potentially take it away. And that might be an additional benefit. But I wouldn't want it to be, well okay, that'll get the tick because it is and this one want, because it isn't. Particularly when the one that isn't is the one that might be needed more so than others in terms of the mix of - because when you look at what the others have discussed in terms of wind farms you need that other type of generation to match it. If you get top heavy in wind farms, and you don't have the generation capacity to match that when the wind drops off. As I said in my evidence, wind alone is not going to be the answer.

MRS BAUMANN: You don't think the word's "relative reversibility" sort of allows some support of the non-reversible?

MR CHRISP: Well, I think if you put yourself in the shoes of Recreational Canoeing Association. Like Trevor was saying in his submissions, you should be building your wind farm up in North Waikato not down in the Clutha, that will be the line available and they'll be able to use that to say that if you're making a call as to which one, you should go for the more reversible one.

MRS BAUMANN: So, they'd complete Policy 3.

MR CHRISP: Oh yeah, it'll be great for anyone wanting to oppose a hydro and that to me is counterproductive to what this policy statement is standing for.

MRS BAUMANN: And any response that we're only looking at relativity, rather than absolute -

MR CHRISP: That'll still play into the hands of being a negative factor for the less reversible.

DR CHAPMAN: I think we've largely dealt with the issues I wanted to just raise about that, I mean, it seemed to me to be two separate issues. One is the word "relative". The other is the issue of having it in at all, Policy 3.

MR CHRISP: Well, if you wanted to have, as I understand it, that if something is reversible that's an additional benefit, if you like, then you could redraft it along those lines. So, it's only a do you get an extra for experts, do you get the gold star for this test, if you like, or do you just pass?

DR CHAPMAN: Well yes, and that may be a matter for consent authority to fail it on other grounds.

MR CHRISP: Oh yeah on other grounds sure, but not on this point.

DR CHAPMAN: So I thought that was a very constructive suggestion, but I just wondered whether it would always be seen in that way, or whether the extra favour, if you like, for reversible development might be implicitly disadvantaging a less reversible.

MR CHRISP: I think it will be, I think it could well be the case, because people will argue. I mean, sure, the Kayaking Fraternity will use that to argue that there is now an essential hierarchy, which is reflected in this NPS. Which is that all other things being equal, the more reversibility it is the better it is therefore you should go for those options and not these options that are irreversible, or relatively irreversible.

DR CHAPMAN: But I'm right in thinking am I that you don't in principal have an objection to a relativity being established by an NPS, as long as there isn't some kind of prejudicial statement?

MR CHRISP: My problem is I don't know how you're going to have a relativity, it's like you've got a class full of kids and we're going to say, "You're all going to pass the test today, okay. But I'm going to rank you from 100 percent down to 50 percent, and you're going to be in the pecking order." Now, the kid that gets 50 is still going to feel like the dumbest kid in class and the kid that gets 100 is still going to feel like the smartest kid. So there is an inherent superiority through to inferiority which would be derived from any relativity-type assessment, even if it is all above the pass mark.

[3.30pm]

DR CHAPMAN: I guess the question though is, that sits within a context doesn't it. It sits within the context of an NPS with an objective to promote, encourage renewables. So the overall objective and purpose of the NPS is to raise the priority given to renewables. So within that context, one could view it as a relative favouring, I guess.

MR CHRISP: Well just take that thinking and drop it into the electricity transmission one, where you can say a whole lot of smaller 110kv lines are better than one big 400kv line for example. So you get that - if you're going to have a relativity in terms of visual effect, for example, where you say more small is better than one big. You're still getting into that ranking, effectively, where one is going to be seen as better than the other and therefore, when you're trying to go for the big one, you're going to have a harder job than going for a series of smaller ones.

DR CHAPMAN: Is that necessarily a problem, if that's what – if that's, in a sense, the message that we're getting from submitters around the country that, yes, there is an additional priority or favour, if you like, for certain sorts of renewables.

MR CHRISP: Yeah, I mean if that's a conscious policy decision, then that's obviously the decision that is open for you to make, , but I think that you need to be very mindful of what I think you're heard from a number of parties is that some of the more irreversible types of generation capacity eg hydro, and indeed geothermal to some extent, are a very, very important part of the mix, and if you do the analysis and say, well okay, is this policy going to help those projects get through the consent process, or is it going to weigh against them in some regard that will determine whether it should be in or out. And it would seem to me that if you're

going to have something like this that is then going to weigh against those projects because they're not so reversible, then that's counterproductive to what the NPS is trying to achieve in that bigger sense.

CHAIR: Would that mean that if you showed or expressed a benefit of a particular technology that it'll be easier then to take the plan change to enable that to happen, than a plan change that would have an expressed benefit in section 32 terms when you're looking at benefits? Don't answer that if you don't want to, it's something you might like to think about.

MR CHRISP: You've got the overarching benefits of renewable electricity generation as a category and what this is doing is now dropping down to the next level of analysis and saying, "All right, let's apply a second level of analysis" which might actually then serve as a filtering exercise.

CHAIR: Yes, sorry, I understood your submission to be as an alternative, the wording could be that the benefits can be recognised but not the negatives. And I'm saying, if you recognise the benefits does that then skew, under section 32 analysis, towards benefit as opposed to the ones that were silent.

MR CHRISP: Yes, it does push you towards saying, well, go for the marine Meridian solution which is strike the thing out completely. What contact's submission was trying to do was to say, well okay if that is going to be an assessment criteria, to make it to be a potentially positive one, not a potential strike out because that then would be contrary to the purpose of the NPS.

CHAIR: Yes. Now on 4, I think we've already addressed 4. My understanding is that you would prefer local authorities to keep out of identifying potential sites and sources for renewable electricity?

MR CHRISP: Yeah, I think the two sides of the coin, just very quickly then is that there's no way that they will have the capability to do the type of analysis to positively identify things and get it right and that will just cause a whole lot of argument about hypothetical situations. And the other side of the coin, it would seem to be a counterproductive move for this NPS to then potentially encourage councils to identify areas where these things can't happen. Let the other processes deal with those which (inaudible) don't.

CHAIR: We should perhaps pause and have a break and we will come back on the last few policies. But there are also some other things you might like to think about during the adjournment as well. And that is the way a policy statement should be addressed, whether provision should be directed – there should be a direction they go straight into the (inaudible) instruments or whether they go through the first schedule process alternatively. All right, we'll have a break for quarter of an hour.

ADJOURNED [3.32 pm]

Audio file: 29June4

RESUMED [3.50pm]

MR CHRISP: Can I comment on the processes she raised?

CHAIR: Yes. Thank you, yes.

MR CHRISP: I was actually also reflecting on that issue you raised a comment about Sir Geoffrey Palmer about productivity status.

CHAIR: How detailed or directive when it comes to the inferior instruments.

MR CHRISP: I will deal with that one first. In my evidence how to talk about, this is at paragraph 68 onwards, about the whole activity status. I suggest that a policy be included making re consenting of existing renewable (inaudible) controlled activity. And I talked about that before in terms of at least it might cut out some of the sort of stuff along the way.

I don't think there's any vires issues, there's no reason in a legal sense why you couldn't do that. But it comes down to a judgment as to whether you should do that and whether you should go down to that level of detail, But what I think you definitely should do is make sure that the NPS specifically addresses re consenting of existing plant as being important as well. So we are not in a situation of constantly being written backwards. And that is probably- the way to handle that, where you have strong policy recognising the benefits of that existing infrastructure, the section 104 (1) (a) matter, recognising the investment in that existing infrastructure and the totality of that would then hopefully have a bearing on the consent status that often ends up in various regional district plans. I think about the fact that in these large-scale previously government

owned projects, of course we are given a 10-year window of opportunity, when the RMA was enacted with a view to having - giving the councils 10 years to put in place a policy regime, a regulatory regime to then adequately deal with those consenting. And the reality of it, as it turned out, was that they were largely, woefully behind the 8 ball. And indeed in many of those districts where those activities occur, we are still in the proposed plan stage. And in Taupo's cases we haven't even - the first generation plan is still subject to various, isn't it?

CHAIR: Do the provisions in the Waikato instruments assist you with the consenting? The new plan or policy?

MR CHRISP: They certainly do in terms of geothermal now, yes. But that was part of the reason why it took seven years for the Wairakei Power Station to be consented because what happened was the council came along and proposed a variation halfway through it and the courts said, "Well, let's deal with that matter first and then we will deal with the consents."

CHAIR: So Policy 4 would assist with geothermal would it? The Policy 4, that's what they've done there, haven't they?

MR CHRISP: They have in that particular instance where you have got a well-defined, limited resource. Whereas, for example hydro; every potential river or even stream is potentially dammable, there is a whole different scale of analysis and I guess the geothermal situation was manageable in terms of the scale and I think it's been a good outcome there, but I think because every hilltop is potentially a wind farm, every river is potentially a hydro I think the task at hand is just to fraught with difficulty to proactively try to say at a positive level should this be a potential dammed or not.

CHAIR: With the geothermal, now that that instrument's in place apart from these, what other areas would there be outside Environment Waikato's area for that (inaudible)?

MR CHRISP: Well the only other region where there is sort of large scale geothermal resource is Bay of Plenty. They have a geothermal plan.

CHAIR: And what is the position with the Bay of Plenty plant, in your policy statement?

MR. CHRISP: I must say I haven't done any work in that region on geothermal so I'm not really familiar. I'm only familiar to the extent that I know they have a specific geothermal plant and that deals with the resources in their region and I think it makes it discretionary activity, or something like that, I am just not sure of the detail at all.

CHAIR: We can probably get that. So you are saying it should be perhaps a distinction under Policy 4? The Policy 4 would be beneficial for geothermal where you could map it, but the other renewable resources such as wind and water and so forth it wouldn't assist.

MR. GARDINER: I think what you will end up, as I have said before, is you will have so many arguments in the context of with their scheduled process about hypotheticals and people trying to protect their patch by saying right this should be a no go zone area, and power companies having to take a counter position and saying, "We want to keep options the open" and therefore will try and you know, and the horses trading will go in and open and let's say we want this as a positively zoned area, because there happens to be some wind there, then we'll be criticised because we haven't done the sufficient investigations to prove that that will be a good location, etc." It just becomes very difficult.

CHAIR: How about Policy 5?

MR CHRISP: Yes, I think the issue of this is one of basically purporting to attribute national significance to small scale stuff and basically - cumulatively, it could be. And we've dealt with that elsewhere as well. But you know, I was going to use the example of a - previous in my evidence about a 100 kilowatt, micro, hydro serving the needs of a back country farm would be entirely consistent with Policy 5. But it is hardly a matter of national significance.

MR GARDINER: It would be if it's a good political imperative of the government to serve its rural communities, would it not? Northland? East Coast?

MR CHRISP: It would be, to those people it would be significant to them, no doubt about that, in terms of if they don't have a power supply at the moment, I agree with that entirely. I guess my understanding of the focus of the National Policy Statement was looking at the national benefit as a whole different scale -

MR GARDINER: It is not a surprise to you, you know that's consistent with other generators, the attitude about the size of the issue. There is another component within Policy 5 which is the threshold being set at 4 megawatts. A number have argued that that should be lifted to 10. Do you have a view about that or is it the same?

MR CHRISP: I must say I haven't really turned my mind to that, to be honest I haven't thought about that type of situation as being - I agree with you that that would be very significant to those people if they don't have power at the moment, yeah for sure. But whether that is a matter of national significance is another question.

CHAIR: We have had submissions that one of the purposes of the policy statement, or one of the benefits of it would be that it would assist in the judgments that are needed under section 6 when looking at what is inappropriate (inaudible) in other words the balancing and weighing and so forth, if the policy statement shows that the benefits are there and the reasons for them, that would assist the decision maker in dealing with that coastal area. Do you accept?

MR CHRISP: I actually would wholeheartedly agree with that. When I was taking about doing my intellectual gymnastics in relation to the Waikato district plan, trying to get around the non-compliant activity status, one of the ways in which I could sort of intellectually get through that policy regime - it did actually all turn on the word "appropriate". Because the policies of course had picked up the wording of the act about not allowing inappropriate subdivision, use and development. And so then you had to make a judgment as to what was appropriate. And so my view in that situation was here you had essentially, you know, a wind farm is essentially a rural activity occurring in a remote rural environment but not so remote as to have wilderness values; with a very low density of population; in an area where the wind blows; we've got 24 landowners covering 34 kilometres of coast, they're all signed up and are supportive of it and are obviously financial beneficiaries of it as well which helps a bit. Basically - so the only issues - there were two big areas of issues: one is migratory birds and the other is neighbouring-type issues.

CHAIR: It was really how you would apply a section 7 matter in the context of looking at nationally important matters?

[4pm]

MR CHRISP: It does certainly (inaudible), because if you have a National Policy Statement that says – this is what (inaudible) was talking about, renewable electricity is a desirable thing, that helps you with an agreement to say this is an appropriate activity. And I use the example out there, if this was going to be some sort of you know, let's just pick an example. Say I was going to have the biggest wrecking yard in the region, something like that and I bring all the cars in and I wreck them and you have this big pile of metal. Now, that would clearly be without the fact that - you couldn't say that needs to be there because it's interacting with the wind environment and it is an appropriate environment because of the nature of the physical location and also because we have got a national policy statement that actually says this type of activity is a good thing. It becomes very helpful to making the argument, that yes this is an inappropriate activity. Yeah, it would be very helpful in that regard.

CHAIR: Have you thought about the words that would be of benefit to a regional council if it were developing a plan, a water plan in respect of hydro several districts? Have you looked at the policy statement? The current wording in that context?

MR CHRISP: In terms of Policy 4?

CHAIR: In terms of any policies? If you were mounting an argument at the time – well if you've got a major project and it's dealing with several districts and you are constantly looking at regional documents or national documents rather than specific district plans, is there enough there to assist you or would there be more needed to make it a useful instrument when it comes to enabling renewable or promoting renewable electricity?

MR CHRISP: I guess my view is that what's there at the moment is a good start but I think it really does need to be tightened up to make it – I put that in

my evidence, about making the actual consenting of these things, about renewable energy projects, is to be seen as a good outcome.

CHAIR: I just want to give you the opportunity, as a result of the conversation today, if you think there could be further additions or further policies, I realise you suggested some, we don't want to foreclose on that opportunity.

MR CHRISP: Obviously, we will certainly take you up on the opportunity to come back to you with additional wording on various things. I think it needs to – I think I said in my evidence, it needs to basically state that the granting of consents for renewable energy projects is a desirable outcome because at the moment what we have got is a recognition of the need for more electricity and then we've got a whole lot of things to consider like on the way; but it has that gap in the middle that says, "Look, you have got to have some consent granted to make these things happen." And to rely on the rest of the body of policy and regulatory environment to actually pick up the effects side of the equation.

CHAIR: Yes, I suppose where we're getting to is whether or not you rely purely on the policy statement for consent, or you rely on material repair in here which locals authorities are then required to implement and give effect to in their instruments.

MR CHRISP: I think the answer is both. I've always looked at this from the point of view that, like when you go through and write a statement of evidence, always do it in terms of the hierarchy, except the Part 5, section 2 at the end, but basically you go through and in terms of your hierarchy of policies and plans, you start with national policy statements and at the moment we have only ever talked about the Coastal Policy Statement and the Electricity and Transmission one. So we've been able to talk about this as

one of the first high level policies, then you flow down into the regional policy statements and then you go onto the district plans – or regional plans and then district plans and so it will be - the NPS will be a consideration in its own right in the context of any application and it will also be a guiding document to help shape up the nature of RPSs and regional plans and district plans as well. So I see it as that dual role, which Sarah Dawson talked at length in her evidence.

CHAIR: Yes, and the guiding role, it is in the contents in the regional and districts as well as use of all resources, so if you could think about that and get back to us that would be good. The other final thing was process I raised, it may be better for Mr Robinson actually.

MR CHRISP: Yeah, he's giving me the nod.

CHAIR: I am interested in two aspects, well we are, in two legal aspects. One is whether there's any advantage in directing that these policies are implemented immediately or the policies that have been suggested. That is the first thing. Perhaps we should deal with that first.

MR CHRISP: Well I could probably say from a planning perspective, if you took the approach of saying "right, we are going to draft up something and say to the councils you have to put this in your relevant statutory (inaudible)". You then have to – you raise the question of relevance in terms of policies that will be relevant to Central Otago will not be relevant to the Auckland super city, for example. Now, we probably don't contemplate wind farms in Central Auckland or hydro dams in that locations. So there will be a sort of what's the point? The ARC would look at it and go why do we have to do that policy? We don't have any dam-able rivers in our region. We don't have any hilltops that are going to be wind farms.

CHAIR: They wouldn't have a problem then, would they?

MR CHRISP: No, no they wouldn't. But I mean -

CHAIR: I suppose you have answered the question by saying that if you have got a level of detail that you want in inferior instruments, then you should go through the Schedule One.

MR. CHRISP: That is right.

CHAIR: Because that would effectively vary it. Whereas if it was very general, then -

MR CHRISP: That's when I see the NPS having a role in its own right; that then been flowing through as applicable in terms of the various regional districts as a matter of course under the Act in terms of something that has to be considered. The NPS can go further obviously, like some of the other ones have when you say the Council shall amend the statutory instruments to give effect to this NPS in certain ways. Now then there comes to the point where you need to then allow the regions and districts to then take the horses for courses approach and say that central Otago will be taking a completely different approach to for example, Auckland.

CHAIR: They might have already given effect. They may say well our plan does that, the geothermal -

MR CHRISP: That's right.

CHAIR: You might get that.

MR CHRISP: Absolutely. And that's right, whereas obviously being open to the (inaudible) schedule process then allows all parties to then actually say well what is particularly relevant in this district or region?

CHAIR: And the final question, which this certainly may be Mr Robinson's area, and that is you mentioned reverse sensitivity are there other areas in the case law that are causing difficulties that could be resolved by policy instrument? It's not as though we're going to look at allocation, we've got reverse sensitivity, allocation that you have mentioned in Central Otago for instance.

MR CHRISP: We have got the transmission issue.

CHAIR: The transmission issue.

MR CHRISP: Which is a gap sort of effectively that's there at the moment.

CHAIR: There is that and also the final thing you mentioned was lining up these various instruments. I don't know whether you've got any suggestions

MR CHRISP: I thought that was more of an issue for the freshwater one than this one. Because this is more of a standard alone. I saw this as - these NPS on renewable electricity generation is one that can sort of largely stand on its own and then it has to be taken in to the mix in terms of then how does that relate to the matter in freshwater? So it's actually these are happening in the right order in that regard.

CHAIR: But just with hydro, which one would you give priority to then if you were dealing with either with an existing dam or a new dam?

[4.10pm]

MR CHRISP: Well I think you have to consider both. They are both equal in the pecking order of the hierarchy of plans, policies and documents and you take whatever is relevant from each of them.

CHAIR: So you wouldn't want to see one cancelling the other one out?

MR CHRISP: No, absolutely not. And that was the point we made in relation to the freshwater management one. It would be absurd to have a situation where you have an NPS here that talks about trying to assist in terms of achieving renewable electricity generation and then it effectively being cancelled out by the freshwater one that said, "Well that's all very well but no thanks to hydro, because we are going to elevate other particular values that foreclose that opportunity".

CHAIR: We have asked other submitters for a copy of their coastal submissions as well. So we could look at that if you've done those.

MR CHRISP: Yeah, I haven't been involved in that, but Contact has.

CHAIR: Thank you very much for your help. You have given us a lot to think about and we appreciate the comprehensiveness of your submission.

Now, Mr Robinson?

MR ROBINSON: There is one sort of some procedural issue before I kick off, you asked if Mr MacIntyre you could and I wonder if we could give him a leave pass?

CHAIR: Absolutely.

MR ROBINSON: While you have been discussing these points with Mr Chrisp I have been busy tagging my notes as you do. So if I could just work back. The point your made, Mr Chairman, in the discussion about the degree of direction to local authorities, I'd refer you the litigation in the mid-90s about the Auckland municipal limits where the Court of Appeal held that a policy could be directed. So there is clearly no vires issues, so the answer is as Mr Chrisp put it, whether you should do that in the exercise of your discretion and it comes back to, the way you put it was if you were in fact your direction was as to a level of detail then it should go through the first scheduled process and allow it to be worked out. But it might be okay to go directly in if it was very general. I put it the other way. If it was that general it is probably of no use anyway.

There is a balance to be struck there. But I think it is important to pick up the point you made that where a local authority, either a regional or district council, has already been through the process like the EW Geothermal provisions. The last thing you want is a direction to open it back up again for debate. From Contact's point of view having sweated blood over and an inordinate amount of money over those geothermal provisions we wouldn't be wished to be seen to be encouraging you to tell (inaudible) have another go.

In terms of the questions you posed about would an NPS assist in judgments about what is appropriate or inappropriate, I think the answer to that is in the decision of Judge Whiting's court in the Efetu (ph) case where he said that section 7 matters did go to questions of appropriateness and I think it must follow from that, that an NPS would be similarly be relevant in that context.

And, in terms of the discussion you had with Mr Chrisp, about Policy 3, whether it could be positive on the one hand and neutral on the other,

which is - the model is in fact in section 104(e) we now have the Supreme Court telling us that that's what section 104 (e) means so if you apply that drafting mechanism you could get some way down the track. Clearly there is an issue about whether you are still nevertheless implicitly creating a pecking order. But that maybe what you want to do. And I think that you stand back from it and say, "Is reversibility a benefit that you wish to emphasise in a policy sense?" I think you have got to answer that question first before deciding how you put it.

And I think that is all the specific things that I mentioned. But the one thing that I would wish to conclude on is to say; Mr Chrisp put it that this NPS is very much a standalone document, far more standalone than the Freshwater NPS or the Coastal NPS. It is of the same ilk as the Transmission NPS and so from that point of view one of the most positive features about it, is that it's short and I think from my submission on behalf of Contact, would be the shorter and clearer the better, because the more words that go into this, the more the potential for a fudge factor and to lose the direction. And so certainly the submissions – my submissions and Mr Chrisp's evidence are about sharpening the language, that we urge you not to let it become an exercise in trying to be all things to all people.

Those are the issues that I specifically picked up, but the only remaining thing is to ask if you have any questions for me.

CHAIR: Yes, thank you.

MR ROBINSON: One thing I forgot. You asked me for expiry dates for Contact's consents? The answer, Ohaaki 2013, Wairakei and Poihipi 2026, Tauhara Binary Plant, Te Mihi is 2043, but that relies on the Wairakei take consents so it effectively has a 2026 expiry date for a key component. All of the Clutha stations, 2042.

CHAIR: Thank you. Could I just ask you, have you had any thoughts while you are sitting there about how you would tie in the transmission in respect to matters that aren't (inaudible)?

MR ROBINSON: Well the obvious - to the extent that it falls within this policy statement, it is as an ancillary, an essential part of any renewable energy development. The developer may get lucky and only have a couple of hundred metres of electricity line. Or it could be an HMR scenario, we're you've got 28 kilometres. But they are still essential. And in terms of actual grafting, to me, the obvious way would be to pick up the policies in the –

CHAIR: Yeah, I thought you might say that.

MR CHRISP: (inaudible) by way of cross-reference. Just to say that to the extent that (inaudible).

MR ROBINSON: The policy might say something along the lines of "To the extent that transmission assets associated with renewable electricity generation projects are proposed, that the provisions of the National Policy Statement for Electricity Transmission shall be applied or be considered relevant to those same types of asset". And so all you are doing is removing the barrier as to who is the owner as distinguishing as to whether that NPS on Electricity Transmission applies or not, because essentially you are dealing with exactly the same type of assets.

[4.20pm]

I think you could do it that way. Mr Chrisp put to you the dangers of cross-referencing other documents. In a different context and so it is open

to the same - The policy statement will go (inaudible) change to – the Electricity Policy Statement will go through a public process, no different from the one we are going through right now. Whereas the distinction is that if you referred to something like the Energy Strategy, that's effectively a political document which does not go through this type of process.

Mr Chrisp reminded me, you posed a legal question about the appropriateness of the 90% target and the objective. I think that he'd hit the nail on the head in his helpful correction, that the key point is if it is being cross-referred because it is the NZES I think that is a problem. But if it is being referred to because it is inherently a good idea in your view, that that should be the objective, then it is by far the best way to capture the concept that this is an urgent priority.

DR CHAPMAN: So you are saying there that it has to be on – the percent has to have merits on its own basis?

MR ROBINSON: That's right. And so I have been in the Board of Inquiry where very recently the presiding officer put to me very firmly that the NZES was utterly irrelevant because it was only an instrument of the executive government. And there is merit to that view. So I would say that you need to be satisfied that that percentage figure has merit in its own right. But that is not to say you have to be satisfied it is 90 rather than 91 or 85, to an extent because - it would be different if it was policy, but because it is an objective, this is the target. And if it stays there it is what you would be saying that this NPS is striving to achieve whether it gets there or not in however many years time. 16 years.

CHAIR: Mr Robinson are you still thinking about the water allocation issue?

MR ROBINSON: Yes I am. I would be grateful - I have to confess I didn't quite get the sense of your question, what you were driving at. I wonder if you could -

CHAIR: Certainly. It is really this business of the benefits of using water for hydro rather than irrigation or something like that. At the moment we have a situation as you know where everybody is trying to invent ways of dealing with allocation of water without waiting for the Supreme Court to give the answer. And I just wonder whether you - I have read some of your stuff. Have you got any - the comments you made I think in Mr Milne's article, have you got any views?

MR ROBINSON: Well the first point is that you can't sensibly address allocation issues without discussing Aoraki.

CHAIR: That's the context of your article.

MR ROBINSON: Yes, that is right. And I think that the Aoraki decision has done a number of things. One of the things it has done is up the stakes dramatically on priority issues because of the risk that not only is the first in time in the box seat, the second in time may be closed out entirely. That Contact is not running a position on allocation that is dependent on an Aoraki-type analysis. What it is looking for in this NPS is a basis on which the merits of use of water and water courses for hydro, as opposed to irrigation, can be debated while in a context where the value of that water for renewable energy regeneration is acknowledged. That may not proved to be determinative. But it is not running a policy position seeking that it should be determinative.

CHAIR: Right. Has a solution been made on the water one? As to whether or not an allocative terms, there should be a policy saying the resource

should be allocated to this use ahead of that use, irrespective of who files their application first?

MR ROBINSON: I don't think it's - I wasn't involved in the drafting of that submission so I can't tell you that. I don't think so. I have read it, but I don't think so. I would need to check that. But certainly, Contact's position on those issues is not what I would might call an all-guns-blazing Aoraki approach.

Mr Chrisp was commenting that he had made a distinction between consumptive and non-consumptive uses in the submission. But we will get you a copy of that.

CHAIR: That would be useful because I know Mr Gardiner would be particularly interested..

DR CHAPMAN: I just have one little matter that has been niggling at me and that is the question of energy efficiency, or efficiency of end-use of energy. I just wondered, you would appreciate that it's in section 7 (ba). Bearing in mind that there is a connection between the efficiency of use of energy and the rising track of total demand, and hence the need for renewables to meet the 90 percent of total demand, is that a matter that would be appropriate in your view to put in the Preamble to the NPS? Would it be useful to, in your view, put that in the Preamble as a matter to be taken on board?

MR ROBINSON: I think the difficulty I have with it is the difference between this document being an NPS on electricity generation and 7(ba) being about the efficiency of the end-use of energy. Get the distinction correct because - and this goes back to I think the point you made Mr MacIntyre, that efficient end use of energy may mean more electricity use. It may

mean less. So the difficulty I have with the concept putting it in the Preamble, is if you don't know the answer to that question, what actually are you going to say that will be of any use? Other than that it may be relevant which - and this comes back to Chairman's questions of Mr Chrisp on a number of points: Will that actually assist anybody? But I agree. If you knew the answer to that question or if 7(ba) were about the efficiency of end-use of electricity, I would say definitely yes. But as it is, because of the juxtaposition of terms I am not sure you can do that and end up with anything that will be of material use to the reader.

DR CHAPMAN: Yes, the sort of context in which I imagined it might have some use is where an investor, a developer was considering a sort of investment, say for example a co-gen investment where the efficient use of heat could actually reduce the demand for the use of electricity. So it might be a question of a strategic investment which did operate to have advantages in terms of overall system use of electricity and if the Preamble recognised that, then there might be an additional reason to support such an investment.

[4.30pm]

MR ROBINSON: I think if you put it like that then I would agree with that. And in a way there is a parallel with a suggestion that in Contact's submission that Mr Chrisp has explained, that it is worth talking about the role of peaking part in the Preamble as a means in effect to achieve a more renewable future than would otherwise be the case. So I think the line of argument is similar. It's in the there is more than one way to skin a cat, kind of. And that the objectives and policies are aimed directly at the extent of renewable use and assisting that directly. I can't see any reason why the Preamble couldn't and shouldn't note that there are other ways in which a more renewable future can be achieved and the one you put to

me is one of them. Especially since - geothermal developments can operate on a cogent basis but normally we think about thermal plants using heat out of the boiler, Te Rapa dairy factory for instance, as having that role. So I think in my submissions I said the focus here is on renewable generation, but it's important to acknowledge that thermal has a role and to be clear what that role is. And that thermal can in particular instances actually assist the use of renewables assist in a cogent situation, assist the situation where a greater proportion of generation is renewable.

CHAIR: What do you think a Preamble does in the context of an actual policy statement?

MR ROBINSON: Nothing formal but equally, everything that is in the NPS is of some significance. It can and will be referred to later, so that – if you say guide decision makers? Well, probably not. But will it be taken into account? I would imagine it would. It is at some lesser level of assistance.

CHAIR: So you don't think it will be seen as an assistance when it comes to interpreting the meaning of the policy?

MR ROBINSON: Well it could do. Like if you linked it into the policies. Like, and in the same way that any explanation, whether it's in a Preamble or expressly framed as an explanation, is relevant to interpretation.

DR CHAPMAN: Yes. I mean the reason I raise it is that there is always a difficulty of the margins in these policy issues, where the margin is and with that substitution, that substitute-ability between energy and electricity, there is a real margin issue. And with any focus on something like renewable electricity, there's things at the margin which may be sacrificed

for that focus. And to the extent that we can suggest to decision makers that there are issues at the edge, like the boundary which should be considered in the decision in order to improve overall efficiency which is after all an objective of – well a consideration under section 7, without sacrificing renewable electricity, then presumably that is desirable and it is a question of how we do that in a way that doesn't lose sight of the focus.

MR ROBINSON: I would agree with that in the sense that if you use it to support the overall direction, or to explain the overall direction of the NPS, then it does have value because it becomes an interpretive aid as well as a statement in its own right.

CHAIR: Thank you very much Mr Robinson. And thank you to your team. It has been very helpful. You mentioned the issue of taking a view or of having a look at your (inaudible) Clyde, perhaps Ms Beruldsen could discuss that with you, rather than dealing with it on the record. We do need to say that we think it would be of benefit if we could also see the Clutha system, as well as the geothermal.

MR ROBINSON: The offer was an open one. I will say that if you're going to go to Clyde I hope you're not claustrophobic!

ADJOURNED

[4.35pm]