To be read in conjunction with
the tabled evidence/statement

BOARD OF INQUIRY

Proposed National Policy Statement
for Renewable Electricity Generation

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

THURSDAY 11 JUNE 2009

HELD AT THE MEDIATION CENTRE, MOONEYS BUILDING

28 LOWER STUART STREET, DUNEDIN.

HEARING OPENED [11:25 am]

APPEARANCES

Ms C Henderson

Mr J Douglas

Mr F McRae, Otago Regional Council

Mr N Watson, Otago Fish & Game Council

Mr P Mulvihill and Ms B Malcon, Pioneer Generation Limited

CHAIR: Well, welcome Mrs Henderson thank you very much for coming.

MS HENDERSON: Thank you very much. Do please call me Chris.

CHAIR: Certainly and thank you for coming here to Dunedin to meet with us, we really do appreciate it.

MS HENDERSON: I appreciate the opportunity to talk with you about it.

CHAIR: Now I won't introduce us because we -

MS HENDERSON: We've talked.

CHAIR: Yes indeed, yes, thank you. But I do need to tell you that we have - this is all being recorded.

MS HENDERSON: As Josie was saying, yes.

CHAIR: Good. And the transcript comes up on the web eventually so thank you very much. Now feel free to approach your submission however you like.

MS HENDERSON: Thank you for that. You've read my submission haven't you?

CHAIR: Oh yes absolutely but we would be grateful if you could expand on it.

MS HENDERSON: Well I'd better tell you my background so you know that I'm not actually a fresh newcomer to this whole thing. I cut my environmental teeth on the (inaudible) campaign and for 18 years I was a Guardian of the Lakes. I'm currently a member of the Waiou River Working Party and the Marine Science Forum for Doubtful Sounds so we're going through the throes of second Touress (ph) tunnel residue in the MCHAD (ph) proposal we already have at the moment. So I have some background, I wrote a submission on the Clutha Dam, I've been there done that and I was just

saying before I was part of the group with (inaudible) and others who could see the Bradford reforms for the can of worms that they were. And of course the latest listeners indicated that, it's more or less official now that it was a can of worms.

So I come to this sort of thing having had some experience in energy in its various forms and the impact it's had on the environment. It's never been cheap, because the only reason it's been cheap is because we knew it affected and impacted on the environment we never had a figure for environmental services. And I think this is why I was so determined to come and talk to you about this, because I noticed interestingly that David Parker at the Nevis hearings had said out loud that hydro isn't a renewable energy and we know that. Particularly with the Wairau (ph) of course because it's been really reversed and put down through the tower range, that was particularly a graphically example but in terms of eco system health and things it is not, this is why I've put that in at the end of the letter to Bill English that you only have to look at the literature of Worldwide to realise that jamming rivers is not a good idea if you can avoid it. Having said that I also say in that letter that it poses - because we know the damage to hydro things that we should use what we've got frugally and thoughtfully which is why I'm so excited about things like energy efficiency and conservation and I know it was introduced that Barack Obama, Nicholas Stern the British government used that as their first way of dealing with climate change and global warming, and of course it also helps the economy because it employs lots of people and gives instant results.

I think there is some planets coming together and I even looked up the Collins English dictionary to check out renewable and of course it says that wind is renewable, tide or wave but it doesn't mention hydro, which is quite fascinating I thought. And sustainable is capable of being maintained at a steady level without exhausting natural resources or

causing severe ecological damage. And what we're confronting now with the Waiau and Doubtful Sound is severe ecological damage already especially in Doubtful Sound which we may push to the final limits if we let them take the last of the pipe water flows from the Waiau and put them down the second Touress (ph) tunnel all in the name of a smelter, and the financial bottom line from Meridian. I get quite emotional about the whole thing because it doesn't have to be like that. I mean I see this white advertisement, which should actually be in green washed all over. I mean the gap in there the credibility gap is as wide as that page, I know how these things work. So renewable to me is saving what we've already got and I think I gave an example, and EECA has too, of high fluorescent light bulbs through any household safety equivalent of Clive Dam or why would you dam more rivers if you can do it that way.

[11.30 am]

So virtual dams, and there are heaps of examples around the place, and then go into see the state economy so you're not continually looking at the Waiau rivers as the next big dam. And looking for soft options, solar, there may be some tidal power between the two straights or between Foveaux, Stewart Island and the mainland. But looking for ones that we can live with and even in that equation, things like biodiesel based on algae from effluent, that you're actually getting away from fossil fuels you're using what is at the moment almost a waste product that's just dumped into the waterways of the world which is always going to be perfectly renewable, they're constant. And in starting to look at maybe some of the old ways of dealing with these things, I mean the Chinese know about night soil from millennia, we wouldn't do it that way of course. But I mean, it's looking at what is a waste product and saying this has huge potential.

So those are the sorts of ethos, that's the sort of ethos it came from. And I mean, the market force has patently haven't worked and will never work because people stuff them up, it sounds very good on paper but it's never put into practice. And also with global warming we have to do the right thing whether it's man made or not and it seems to me that we now have a change through these new fresh perspectives to do something that, going on, will reduce the parts per million back to 350 as we have to.

So many things that are all interwoven but I look at the Doubtful Sound and know that in the Rockwall communities of black corals there are thousands, hundreds of years old that have been put at risk, fisheries, dolphins, for what? So we can have a plasma TV that really, really don't need but if we want to we can get it out of our own power account through progressive pricing. We don't need to be expanding all the time we can live within our means, our parents and grandparents had to and I think the values they held are pretty important to bring back again. Any questions?

CHAIR: Well thank you very much. Is there anything that you wish to add to your comments about particular policies?

MS HENDERSON: Well the tenure of this document is nasty and punitive. I mean, there's a very good reason why people don't want wind farms on their sky lines. There's very good reasons why they don't want their precious rivers dammed, whether it's for eel's or whatever. And I think that the past government got it terribly wrong, they were probably persuaded by the Ministry of Economic Development that it was really, really important and they were probably spooked by the power generators and of course the other thing is if they get the money from the power generators to run their coffers, so there's a conflict of interest there. If we drew back and took a breath we'd realise that there's so much that we can save that we don't have to have a punitive attitude towards communities, the communities are actually working pretty hard to think of alternative

ways of doing things. Whether it's small turbines in a town rather than a huge array on a hill top, or whether it's retrofitting or the feeding back into the smart grid which is what we'd then have to get instead of just the old national grid.

There are so many new alternatives now that we don't need to be bulldozed into it, we certainly do not need companies to be able to take this into their own hands to push these things through and we really need to revise what we mean by 'in the national interest' and 'project of national importance' because I think at the moment there's a dislocation between what, I think, what people around here think and what government thinks. And so I think that's got to be another conversation pretty soon actually because with the changes to the RMA that I suspect that those things are going to be - big projects are going to be called in despite the urgent misgivings of the people who are going to be either affected financially, physically, or whatever, or emotionally. And I think that's precisely the wrong way to go about it. What we lacked on the RMA of course was a National Energy Policy that everyone had brought into, or a National Landscape Policy or a National Water Policy, and so this is sort of retrieving an unfortunate beginning which had all the right credentials for being very positive in the way it was put together by powers that be.

CHAIR: So just before I invite my colleagues to ask you any questions of you, **i**n your submission you've got the evaluations of policies, and thank you for that. Your Policy 2 through to Policy 5, I'm just interested to know whether you wish to add anything to your comments on the policies. We are particularly interested in your views about the instrument that's before us and also whether or not it would give sufficient guidance?

MS HENDERSON: Remind me about the instrument, was it blunt or a very fine?

CHAIR: The draft National Policy Statement, which we are really inquiring into, you were good enough to refer specifically to some of -

MS HENDERSON: I've got it here but it's been a while.

CHAIR: Yes I understand, and I understand entirely what you say about particular policies in here. You've canvassed them well in your submission and if you've got nothing further to add to that, that's fine.

MS HENDERSON: If you can just remind me a bit. You see, I mean, obviously one already renewable can't look at that without questioning the whole meaning of renewable and especially in particular with hydro. The constraints are an ageing national grid which we share with many other countries and I think with the Americans who have just recently built the smart grids, we should be looking at refining what we want not just replacing old with the new same version.

MRS BAUMANN: Mr Chair could I just ask, you mentioned smart grids can you elaborate?

MS HENDERSON: Well I don't know a lot about it and in fact Professor Chapman probably knows a little bit more than I do, well a whole lot more than I do, but I understand that they're more able to take a distributed energy and put it into the grid from whether it's households or small entities or whatever, or moderate, medium sized entities, they put it into the grid without putting the grid under too much pressure. What the trouble with the industrial wind farms at the moment is because we've got a delicate national grid and a delicate connection between the two islands any sort of sudden impact on the national grid has all sorts of potentials for catastrophic meltdown if we don't get the mix right. And so the more we can take the pressure off the national grid by energy conservation efficiently the longer it will last which buys us time then to look at the new technologies which are all around us, all burgeoning including the smart grid which I think from what I read, and I'm not an expert, obviously is the way to go. You're just refining the whole system and you're allowing all these things to happen and it's got huge potential.

MRS BAUMANN: Are you aware of the National Policy Statement on transmission?

MS HENDERSON: Not - all I see is the manifestation from the Waikato through to Auckland and we really got it the wrong way round. No, I haven't seen it actually because - did they mention smart grids?

MRS BAUMANN: Because that is now the policy for transmission.

MS HENDERSON: Did they mention smart grids?

MRS BAUMANN: They don't use that terminology I was just going to ask if you feel that policy deals with your concerns?

MS HENDERSON: Well it has smart grid somewhere in there I'm sure it is the right way to go. But you see what we should have done there between Waikato and Auckland was to start from Auckland and work backwards. Because -

MRS BAUMANN: I don't really think we can hear about that.

MS HENDERSON: Oh can't you?

MRS BAUMANN: There's another inquiry sitting on that.

MS HENDERSON: No, no but I mean in the way we look at things that we start from the small and then think about the overall impact. If there are a million plus people they've got huge potential to actually take the pressure right off the national grid, which is what we have to do when we look at a smelter or (inaudible) power station or whatever, we're all very vulnerable at the moment. I mean, I support the smaller community scale of renewable energy electricity generation of course especially if it's solar or small wind turbines. And so there are some very positives in there but they really do need to look at things like the renewable (inaudible) the hydro is a big, huge question about whether it really needs to be. See

they're talking about solar here, I mean hydro here and renewable electricity generation and with the past Minister of Energy saying it's not renewable, David Parker at the Nevis that's another vindication of what I consider true. I don't know if that answers your question.

CHAIR: No, no.

MS HENDERSON: You can see where I'm coming from?

CHAIR: Yes thank you so much and I've - your submissions very comprehensive on these policies so we understand.

MS HENDERSON: That's good.

CHAIR: I might get that back from you though, thank you very much, it's our reason for being. Right, well perhaps if you wouldn't mind with - could we ask you some questions?

MS HENDERSON: Yes sure.

CHAIR: Mrs Baumann would you like to?

MRS BAUMANN: Okay. Progressive prices, I see you advocate that?

[11.40 am]

MS HENDERSON: Yes, it's also called block pricing and I think in my letter to Bill I say about Googling block or progressive pricing. It came out during the time of the Bradford reforms, when I was working for Molly Malish (ph) Lovers on power for our future, and she mentioned about it and I thought it had great merit. What happens is you do the retrofit say for a house, or building and you work out what energy is required to run that house for the inhabitants whoever they are. And you look at, I'm just giving you a for instance because it wouldn't work like this, but it would work in a similar way. You then look at say a moderate, between a winter and a summer

use, say a spring or autumn power account, and that gives you a ball park figure of how much energy is required to run that household safely and healthily and fairly. Then you view the retrofit, and that fills the bottom of that power account because you've subtly reduced your energy requirements, you pay the retrofit often that other top bit you've got that block for ever at a reasonable price at a fair price it's only inflation proofed. So it's your permanent reward for doing your energy conservation and efficiency upgrade. Any gains you get once you've paid that retrofit price are then all within that block of power that's yours.

If you want to be really a wasteful, you go into the next block which is quite a huge jump in price. So you're actually being encouraged to stay in here, but it's fair that you pay them for the next level of pricing or power pricing might come from geothermal or thermal if there's too much pressure on energy. So it's a fair thing, and I mean it means that energy poverty is a thing of the past because the people on fixed incomes have had that all happen, and so they can live within their means. And it means then that we've actually got some sort of basis on which to work the way we need energy in the future, and it's just any building, any entity, even a smelter probably. But it's got to be fair, no subsidies.

MRS BAUMANN: So would you characterise it as perfecting the costs of producing that electricity?

MS HENDERSON: Probably, because I mean it's all we've been paying for what we've got already for what, 60 years and over again every time we corporatise and hybridise and whatever. So we've got that base energy now and at this stage if we worked on the progressive pricing it seems to me that fewer and fewer sources of new energy -

MRS BAUMANN: So large users would pay less?

MS HENDERSON: A fair whack I think is the term we're looking for there, yes. But you see that would also be an incentive for them to look at energy conservation. I mean in the second to last round out that we had a few winters ago. The smelter in Tiwai actually locked in the 10 percent savings that they managed this is a few years ago now if they can do it we can all do it. But it shouldn't be at the cost of older people going to bed in the winter, because they can't afford to heat their rooms, it's that sort of change we're looking at. So block pricing certainly definitely works looking into it, if you're not already aware of it.

MRS BAUMANN: What can you help me with the Genuine Progress Index?

MS HENDERSON: It's a bit like the Steady State Economy, as I said before we were supposed to have had cheap electricity, because we never factored in the impact on the drowning of the good land in McKenzie country, the dislocation of the people's of the Clutha at Clyde and the fortunes we've lost, all the tourism opportunities. But also the ecosystem services that we lost by damming those rivers, and I think that's what we've we needed to factor in to find out that in fact they're probably very expensive indeed. I mean if you look at erosion around the Otago Coast it's probably in effect of the two dams already on there. So I mean these are the sort of that's the sort of thing I'm thinking of. Already I suspect that the ecosystems there we've lost in a way our system are at least a billion dollars, and that's because all the water was churned back on itself and put into a smelter. These are significant figures that we're looking at, I know based it on that of course because for every cumec Meridian gets, it's a million dollars worth to them or at least it was ten years ago, probably more now, it's the easiest way of working out what we've lost as a country.

MRS BAUMANN: And your answer is?

MS HENDERSON: Ecosystems services have to be factored in because otherwise you'd get a shonky result when you're looking at the economics of any project.

MRS BAUMANN: But your preferred path is small scale?

MS HENDERSON: From now on in, I'd shy away from hydro because I know the damage that it's done. I'd look at direct use of wind and the solar technology that's coming in, because although the production of the solar collectors may not be benign, certainly the end product is. We can look at other ways of doing things and the act of -

MRS BAUMANN: Are there other ways of doing things?

MS HENDERSON: Yeah has a sort of gain building our houses and buildings so they actually become solar collectors, and breathe, and do all the right things and there are plenty of good examples around. In fact I think Meridian and DoC have both got buildings that 60 percent less energy and 70 percent less water use in the new Meridian building. But there will be other examples (inaudible). It's just building codes and things like that that we have to -

MRS BAUMANN: And what about all the existing housing spots?

MS HENDERSON: Oh that's why we're so excited about the budget, because of the retrofitting in there.

MRS BAUMANN: But that's only really for home insulation?

MS HENDERSON: No, no it needs to be extended to all buildings.

MRS BAUMANN: Well currently it's only -

MS HENDERSON: Oh it is but I think when they see the growth (inaudible) for the economy and the employment opportunities they'll start embracing it

fully, because it means that the next ten years we can actually do some very positive things on a whole lot of levels, so it's very exciting.

MRS BAUMANN: Okay. Then moving to your comments about the policy themselves. You may not and it's a while since you wrote this so if you feel that I'm asking that too much just tell me. You're talking about a bond in your comment on Policy 3?

MS HENDERSON: That was mentioned I think in connection within any large scale project that the bond was to ensure that if the wind farm became obsolete there was enough money there to deconstruct it. I think that was what the context was.

MRS BAUMANN: Have you had any experience of bonds?

MS HENDERSON: Only as a teacher.

MRS BAUMANN: But I'm -

MS HENDERSON: I was a child in the 60's and we had bonding then and that was -

MRS BAUMANN: Yes but I mean bonds in the environmental area or energy areas?

MS HENDERSON: No I would suspect that any one that was confronted with a bond would look three times at any big project, and think no, not worth it. Because if they're going to have to be around to tidy up their mess, I don't think they'd be terribly keen, and of course dams, I can't ever imagine them being deconstructed. Though having said, that in the states they have because the salmon runs have been so badly affected and I suspect the three gorges, one will be eventually deconstructed too because of the huge horrendous - yeah. But in more enlightened times it will happen.

MRS BAUMANN: You've had no experience with bonding arrangements?

MS HENDERSON: No, only of course the community funding the things like wind farm have to pay and things like that, but I don't think it's nothing to do with deconstruction of the wind farm at the end of its life. I can't see it working, but it sounds like a really good idea. It just puts up front the whole circle thing of any project and I think that's positive. And it should reflect what happens in 30 years time of course with inflation, I mean it has to be a realistic bond otherwise it's -

MRS BAUMANN: The other thing I wanted to explore is your views about reconsenting existing house spaces.

MS HENDERSON: Been there done that, been there done that, yes.

MRS BAUMANN: Yes, and whether you see that should be on the same basis as the new Greenfield?

MS HENDERSON: It almost is, of course with Matapouri - Te Anau legislation it was a special case, but it certainly means that if you've got a dam you have to go through proper peer review monitoring of the impact of that to say well whether you can actually afford in this country to have that continue, or whether it has to change. With dams it's very difficult because they're such a solid entity now, and so new consents would be tricky but amended consents would certainly, I think, have to be required in the light of the information we now have 30, 40, 50 years on.

MRS BAUMANN: You were involved with the reconsenting of Matapouri?

MS HENDERSON: Yes I was, yeah.

MRS BAUMANN: And that was done on the basis of?

MS HENDERSON: The legislation and in fact it was almost a fate de compli.

MRS BAUMANN: Are you sure?

MS HENDERSON: Well, because they already had the use of that water through the original legislation. Meridian were very sure, not me, so it was more or less pushed through on that basis. But with the second Touress (ph) tunnel, we did have to go through some - quite a bit of work to make sure -

[11.50 am]

MRS BAUMANN: That was a new consent under the resource management?

MS HENDERSON: Yes it was but of course it went under the guise of the same amount of water used more efficiently, but of course afterwards we found out it was actually more water.

MRS BAUMANN: Yeah but I'm talking about the process, whether there is a different process for reconsenting or not, a lesser process and whether you have a view about that?

MS HENDERSON: No I don't think it's a lesser process I think it -

MRS BAUMANN: Whether you have a view there should or shouldn't be?

MS HENDERSON: I think any consenting whether it's new or reconsenting has to go through a more rigorous process than now. And part of the problem is that groups that are involved, for instance, as I am with the Waiou Working Party do not have access to unbiased peer review processes. And I think that's the constraint we've been working under for 20 plus years, that many of the experts have been hired by, for instance, in this case, Meridian but there will be other examples. And so because we're such a small catchment in terms of expertise it's quite difficult for us to call in other experts that don't get paid by Meridian. And so although intuitively know damn well what being told is not absolutely true, it's hard to prove. But at the moment, especially with this particular one which I've got have involvement with, the last couple of years they've really pulled

their socks up and we do have some now good concrete data from which to move forward. But it's too late really, it's long overdue and the tragedy is if we actually allow MTAD to go through it will just be confounding what is up to now at least two felonies if not three. So yes reconsenting I think, I don't think you start from fresh but you certainly start from fairly high plane of expectation.

MRS BAUMANN: The last thing I wanted to talk about was wind farms, and you make the comment that, not you today but on smaller scale, but there comes a point where that also is a concern to you. Do you favour the idea that there'd be parts of New Zealand which are no go areas for wind farms?

MRS HEDNERSON: Yes ma'am, absolutely.

MRS BAUMANN: And how would you establish the go areas?

MS HENDERSON: Well at this point the no go areas would be by local consensus, and a proper conversation about them, and also a proper conversation about the alternatives to large scale wind farms. For instance, nobody's had the conversation in Auckland about putting them on Rangitoto Island I notice, or in the Wellington harbours.

MRS BAUMANN: Well that's a transporting problem getting energy back, I mean it's a lot.

MRS HENDERSON: Oh they could do it if they wanted it. Maybe it's just the (inaudible) thing is making sure Auckland, for instance, doesn't get sullied landscapes, but it doesn't matter if it's in somewhere where they don't go very often, and I think that's the wrong way to look at it. All our landscapes in New Zealand are loved by someone or some groups or some communities, and so you have to say, "Well if we can do it better, without infringing on the sky lines and planting them in somewhere which is pretty special, sacred even, that's the way to go." Industrial wind farms

also put far too much pressure on the national grid and we simply can't afford them, and I think that's why I like the small scale. I mean it's not all entirely akin to the windmills of our childhood's on the farms bringing up the water for the cattle and the sheep, but it's almost that size. And putting amongst built area, or small scales, have a lot more going for them I think in terms of distributed energy and putting the energy where it needs to be, rather than transporting it from one end of New Zealand to the other which is what's happening at the moment, it's just a nonsense.

MRS BAUMANN: And how would you see that the security of supply would be maintained, if there's a lot of distributed generation which obviously will be affected by climatic conditions?

MS HENDERSON: Well I like to think that distributed energies alternatives we're looking at stay within the community more or less so they're not putting pressure on the national grid which is still there. I mean nothing would change but they're just becoming more self sufficient so if we did have a crisis for whatever reason, a g-clamp in a substation or whatever, that we're not left high and dry, that we do have a form of cooking and heating and surviving for quite long periods, if necessary. But also be able to feedback into the National Grid when it's appropriate and just spreading the risks, just taking - going more future-proof, self-sufficient, but still having the umbilical cord of the National Grid when we need it. Thank you.

CHAIR: Thank you. Dr Chapman?

DR CHAPMAN: Just picking up on that last point, spreading the risk. Is that something that you think should be emphasised more explicitly in the objective of the NPS?

MS HENDERSON: It sounds pretty good to me, because, I mean, really if you look at the States and their cascade of loss next to Enon (ph) to look at a very big case in point where many people were left stranded, and at risk, and this is what I like about the retrofitting; if you have a solar hot water cylinder your roof half your bill is covered by the solar. And the entire solar is probably a bit expensive at this stage, but it will come. I mean, you've got now skins you can put on vehicles or buildings, which actually produce solar energy. And I think well, it's just around the corner, let's not rock ourselves into the old ways of doing things when we've really got all these new opportunities. I mean, paint that can generate solar energy sounds pretty exciting to me and much more benign.

DR CHAPMAN: Yes, perhaps I've misled you actually in terms of the location of the comment around spreading the risk of distributed electricity power supply and Policy 1 may be a more appropriate location for it. In direct (inaudible) to the statement as it stands, if it could just refresh your -

MS HENDERSON: Which particular - Policy 1?

DR CHAPMAN: Yes, already we've talked about maintaining or increasing security of supply - electricity supply for local, regional, national levels by diversifying the type and or location of general -

MS HENDERSON: Well, that's probably heading in the right direction as long as we don't use the old patterns, which means the Nevis or Mokihinui or anything that's on the hit list for the Ministry of Economic Development.

DR CHAPMAN: So is there a form of words that you would like us to emphasise in terms of - and perhaps bringing out the benefits of distributed generation? Perhaps I'm asking too much in terms of --

MRS HENDRSON: No -

DR CHAPMAN: -- having a use of words.

MS HENDERSON: Yes, I think you're probably better with the words than I, but I mean, you get the general gist of what I'm saying, which is that the more we take the pressure off the National Grid, the more security of supply we do have. I mean, whether it's combined cycle, or wood chips, or whatever that companies and factories can use that's local and appropriate to them; there's geothermal in Rotorua. Just so that you're using actually more directly, so you're not using, for instance, the gas to electricity at 6 percent loss of energy by conversion, there's more direct use at a local level, which is appropriate to them. And I think that's what we need to look at. For instance, rather than a solar array in the Central Otago, all the houses are solar powered, and suddenly you've got appropriate use; Auckland the same. Northland, they could all be solar powered, at least even for their hot water cylinders, and you think that's brilliant and that's a form of distributed energy that benefits everybody, including tourism and things like that.

DR CHAPMAN: You specifically mentioned taking the pressure of the grid and Policy 1 doesn't specifically or explicitly refer to the that, and I wonder if -

MS HENDERSON: Well it sort of does obliquely by saying increasing security is supplied, doesn't it?

DR CHAPMAN: Yes, you could interpret that, but it says, "By diversifying the type and or location of electricity generation." Rather than specifically mentioning reducing pressure on the transmission system.

MS HENDERSON: So could you add that as part of it at some stage?

DR CHAPMAN: Well, I'm wondering if that's what you're --

MS HENDERSON: It would definitely what I would be promoting.

DR CHAPMAN: -- among other things, aiming at.

MS HENDERSON: Absolutely**,** because it's a huge cost even though - I mean a new transfer for Transpower through the Waikato to Auckland, that's a horrendous cost. Financially, emotionally and in terms of the environmental impacts, and if we go that way it's going to be repeated right across the country and, as I note in my letter to Bill English, even with the wind farms proposed we've got 12 million dollars worth sitting there. Mind you, that was before the global economic meltdown; things would have changed, but I mean, that was the way we were going. And that was the 'think bigger' the 21st century, rather than Bill Birch's examples. And I don't think we can afford to go that way any more, except in energy conservation and efficiency. That's where I want us to think big.

[12.00 pm]

DR CHAPMAN: So just to pursue that a little more, I don't want to put words in your mouth, but you specifically mentioned risks to the grid and so on. I just wonder arising from distributing -

MS HENDERSON: One and two?

DR CHAPMAN: Yeah, and so I'm wondering if some words around maintaining or increasing security of electricity supply and reducing pressure on electricity transmission, at local, regional and national levels. It was something along those lines.

MS HENDERSON: That sounds pretty good. And diversifying and location, we do really need to try and put distributed energy in there.

DR CHAPMAN: Yes, I think that's what's meant by diversifying type and or location.

MS HENDERSON: Do you? Oh good. That would satisfy me if that's what's implied, rather than more of the same.

DR CHAPMAN: Anyway, I hear what you're saying. Thank you.

MS HENDERSON: That's good, thank you.

DR CHAPMAN: Just on this question of reversibility. Some submitters to us have indicated that it's the ease of reversibility that's more at issue, rather than whether or not something is reversible. Do you agree that in the sense that - an engineer, for example, made the point that it's much easier to reverse a wind farm than to take out a hydropower station. Is that the sort of logic you agree with?

MS HENDERSON: I'd probably tend to agree. I've heard some comment that even with a wind farm, the damage has been done in a lot of cases to, say, the tussock communities. That will take a long time to repair.

DR CHAPMAN: Because of the earthworks.

MS HENDERSON: Yes, all that, all that. And again, unless it's factored into the price, the original price, of the electricity and a bond is provided for, again, even decommissioning it is going to be very expensive; huge concrete bases and roads that have been put in. Even the process of

decommissioning will have its process of environmental impacts. So, I mean, if we can avoid that. But I mean I don't know what they've done in the States with the dams, whether they blew them up spectacularly or took them down brick by brick. But, again, it would be very expensive and we just have to be really thoughtful about what we do from now on in.

DR CHAPMAN: Would you see a difference in scale of equally reversing --

MRS HENDERSON: Oh yes, absolutely.

DR CHAPMAN: -- between wind and hydro. Yep. Okay, so you'd accept there'd be a scale difference but there would be issues with each, yes.

MS HENDERSON: Oh I would absolutely, but I've seen some wonderful photographs of turbines tipped over that have folded, you think well even starting to decommission something like that would be a nightmare, let alone a whole wind farm like Hayes. There's a phoronic component in wind farms, I've decided, and large scale dams, or even small scale ones.

DR CHAPMAN: Just on Policy 5, to finish up, which is around small and community scale wind, oh sorry, renewables, not just wind. You were concerned about the cumulative effects of the area wide small scale wind turbines, need to be considered, you said.

MS HENDERSON: I think so. I was just thinking through the potential there for stuffing up again and that, for instance, in my area if we had a little tiny - if a wind turbine for Lumsden, one for Mossburn and one for Dipton, maybe a couple for Dipton, that's not too bad because they're set in the valley, they're not encroaching on the skyline they're fielded community directly. But if you then had somebody who is going a consent to six - a whole lot of turbines on a farm, just along the road, that then, of course, impinges

again on all other elements we hold dear. And of course then becomes a troublesome neighbour in terms of noise or a flicker and things like that, whereas maybe you could cope with a small scale one that is an occasional nuisance or has a quiet hum, but far enough away that it doesn't disturb anyone.

DR CHAPMAN: Do you see any way of discriminating, if you like, between the impacts of small scale wind or the effects, the landscape effects and so on?

MS HENDERSON: Do you mean discriminating or ameliorating?

DR CHAPMAN: Well, I'm just wondering, Policy 5 is all about really saying local authorities giving attention to those effects and really saying it may not be such a problem with small scale wind or small scale renewables, but where do we draw the line?

MS HENDERSON: Oh well I think that's again - community expectations would sort that out, I suspect, because there may be brief vociferous enthusiasm for quite a sizeable wind establishment but, again, not huge turbines that impinge on the whole sensibilities of a landscape. But there might be a cluster that they all agree on, is a very good idea. I notice that there's a village in North Wales or somewhere, which is set at the local power company. We'd want one of those please for our own use. And in fact there's also wind power in India, I think there's a movement for people in England to pay for wind power in India, which serves their local community very well because they suddenly have access to energy, which they've never had before. So there are - it's just fitting them into the right spaces that suit the local communities, I think that's what we have to look at and then maybe if they had a little drafty corridor somewhere just along the road, it would suit them very well to have four or five or ten turbines, which

just fit into the landscape. For instance, a bunch of what we call the Lake Wind from Queenstown, Wakatipu through Five Rivers. That could be harnessed and some chucked into there.

DR CHAPMAN: So would you rely on the local authorities articulating community expectations?

MS HENDERSON: No, no. They're too easily swayed by the politics and the - no, I have no faith in them at all given my experience with our local authorities; they're good people, but when they're breathed on quite heavily by a large SOE with government expectations it's most difficult to not succumb to them and with the best (inaudible) in the World, I think it has to be proper. Awareness by local communities of what they're letting themselves in for, who then tell local authorities what they expect from them, and that they get a real, real opportunity to make those decisions at a local level.

DR CHAPMAN: I'm just wondering if we could reflect that sentiment in the sort of words that we are grappling with here. The idea being that, as it stands, that local authorities would notify, essentially, and enable - well, I won't go through the details, but the idea is that local authorities would put into their policies statements and plans something about small and community scale renewables.

MS HENDERSON: Which is a perfect opportunity for people to put in submissions and be part of that whole discussion.

DR CHAPMAN: Yes. If it's done before the pressure's come off is that what you're saying?

MS HENDERSON: Absolutely, because that's conduit, the proper participation in decision making.

DR CHAPMAN: So the right process -

MS HENDERSON: Yeah, rather than having it imposed from higher - on the pretext of national importance, which is the wooden horse, isn't it.

DR CHAPMAN: Okay. That's helpful, thank you.

MS HENDERSON: The Greeks did have a word for it, I'm sure.

MR GARDINER: Excuse me, can we just pursue a little bit of Policy 5? I'm interested in the way in which impoverished communities in the Far North, we know that they've got terrible housing conditions. We know they've got the end of rows without access to power generation and actually have wood burning stoves and things like that which are probably -

MS HENDERSON: This is what we used to have when I was a kid.

MR GARDINER: Yeah, presumably if we say the community should take the action to achieve the implementation of Policy 5, rather than local authorities, but it's seems to us by observing that they're where they are because of the whole social condition they live in. How do we actually bridge across and actually say to them, "Look, here's a model operating in Dipton, which is great for you, why don't you pursue it?" And you're assuming that the community knows best, I presume that's what -

[12.10 pm]

MS HENDERSON: Well, they know they want warmer home that are safe for them and healthy for their kids and that they don't have to spend a lot of money on just surviving. Those people in Northland, it seems to me, are perfect cities for solar and those sorts of things, but they still need a link somewhere along the lines to the National Grid. But I mean I think in those particular circumstances, they're a special case and they do need a 'think big' policy of distributed energy, they need the hand up, and they need some way of, not necessarily paying off, but it's like (inaudible) and the houses you help to build, and the local community builds them with you, and you get involved in that, and I think there's potential for that sort of thing to happen. But I mean, in terms of national importance, the implications for health, let alone anything else, mean that every dollar you spend helping those people takes the pressure off not only on the National Grid in some circumstances, but also the health budget and so that you can put that back into the community in lots of more positive ways. It's just when we think laterally, I think that's probably what we need to do and I mean solar north, it just makes so much sense on so many levels, and the more affordable it becomes, the more I'm sure communities like that will be able to look to it, to help solve some of their needs.

MR GARDINER: I'm interested in the thesis about the Steady State Economy or economics that you actually take the existing infrastructures and do better with them. Are there models of this operating elsewhere in the western world, or somewhere where one can read about it because I think I'm quite attracted to the notion of using things, rather than reinventing things, you use things that you've got better?

MS HENDERSON: Well I mean our parents and grandparents called it living within our means, didn't they? And I think that makes a whole lot of sense. I'm not sure whether there are communities or industries actually using the Steady State Economy yet, perhaps Dr Chapman, you might know. But I mean it's been around since the 70's. We had this conversation a long time ago with talking about limits to growth and things like that, and we've lived it since then, realising that the law of diminishing returns has been working with this and now that we've confronted the last 27 wild rivers that may have dams, and then we realised just what we've lost and what we could gain by just pulling back from that and starting to be more frugal and efficient. And we save a lot of money that way too of course which is very good.

MR GARDINER: But certainly the duties are resourceful and considerate, they consider these matters to go that way, but given the driver in consumerism that drives our society. I mean the communities I'm interested in and other impoverished communities, in the north and some parts of the East Coast. And then this statement (inaudible) NPS can contribute towards them their wellbeing and all the things that you're talking about will be achieved because they'll have warmer houses.

MS HENDERSON: I think it was about a year ago, we were a consumer society and then look what happened. Suddenly the shops were almost empty, the streets were almost empty, people have closed their wallets and suddenly realised that they have to now work out what's important, and I don't think we'll ever get back to that consumer society in the way that we did, which was just a nonsense really but it was good for the national accounts. Suddenly we were having to reassess, and say there's a paradigm change here going into the future. If we consume, it'll be heat pumps, woollen jerseys, double glazing, woollen insulation which is good for the farmers. That's sort of thing. Saying we've got to now target our

money to what's important. More books in our classes, and school rooms and libraries and homes, those sorts of things will suddenly re-emerge. In fact, I think they're already re-emerging. That things we were doing in the 50's as a matter of course are now just coming back as the way forward in a lot of ways with modern technology.

MR GARDINER: That's when we'll have to watch and wait and see the -

MS HENDERSON: Well, I mean, this is why we have to have this conversation, which I'm so thrilled about, having the opportunity to be part of, that we do have a chance now to have a fresh start and doing what's right for the community. It's not just leading the market, the anarchy of a market to tell us how we're going to live and which way we're going to live.

CHAIR: I mean clearly, you've got strong ideas that are expressed in your paper which I think are really refreshing personally. How do you connect with local Māori communities if at all, with Ngai Tahu?

MS HENDERSON: On the part of Waiou Working Party and we have dealings of course with the local iwi down in Southland because it's such a small community and we share their concerns, for instance, on the Waiou Bou Eel Passage (ph), that's going to be a huge, huge thing that we're going to have to fight in the ditches for. Most of them especially down through the Touress(ph) tunnel and the migration back out to sea is not being helped by their present regime. So we share a lot of the concerns that iwi have. I think we would like to work more with them but we do have links right throughout, for instance, Southland and share a lot of concerns.

CHAIR: And they're the kind of ideas that you're talking about?

MS HENDERSON: Well yes and no. It's been a fairly rocky relationship I think iwi with Meridian and politics always get in the way but -

CHAIR: You think you might have a different opinion at the Ngatai corporate to what you might have at Ngatai local?

MS HENDERSON: Probably and that's the way of corporations, isn't it, because one level up and in a different media but then of course they're also a pattern of behaviour that suddenly imploded and maybe there's something in there that will evolve from that which will be good. But I think we all share common concerns for the ecology of rivers and lakes and marine waters, water bodies and things like that as well as the biodiversity of the land, lots in common.

CHAIR: Thank you. The Waiou Working Party which is - Mrs Baumann mentioned to you about the - when it comes to reconsenting, the Waiou Working Party is a very good example of how the community became involved in the reconsenting process.

MS HENDERSON: Absolutely.

CHAIR: Now would you criticize a good model or are there improvements that could be made on that process because there aren't many large working parties like that for reconsenting but there were some others in the Waitaki too, but yours is an extraordinary one.

MS HENDERSON: It is, isn't it, yeah. It has the potential to be a good model because it's based on consensus and the consensus takes sometime. It's quite a long time to get through, though it can be divided and ruled. And I think some of the clauses that are in the present RMA process are that people who bought off, people can have their concerns addressed not as

part of the usual run of monitoring and work as usual but, for instance, there were a lot of issues between the first and second Touress (ph) tunnel and there's still a lot of them are unresolved but they're now being put into the MTAD basket so that if we don't get MTAD, we may not get these other things addressed which should've been done 20 years ago. And that's where there's a certain pressure put on those who don't want to see any more of that river turned into power are confronting the process. We'll be isolated, we'll be put to one side, we'll be forced to be pariahs when all we want is the best outcome for the rivers ecology and the lakes and the Doubtful Sound. Whereas others can be given. The water supply improvements at (inaudible) for the last 20 years as a consequence of MTAD.

The process we have is also flawed because, as I said to you before, we do not have a peer review available to us to counter the scientific analysis that's been done by Meridian. These people who do the science are good people, but there's always in the background he who pays the piper calls the tune, is part of the pressure that a small community like New Zealand confronts. The mavericks out there, we can't afford them, but they're the ones that probably will be the ones that we need to consult, and that's where we are, the whole process is found wanting. But in terms of community involvement and say it is a blueprint but a lot of things can be ignored.

CHAIR: So when it comes to reconsenting which is clearly on a different - as you said, there are different relevant factors and Policy 3 which deals with reversibility appears to be dealing with new projects.

MS HENDERSON: Yes.

CHAIR: So the idea of a working party approach is not as high as co-management but it's certainly a goal in the community at the renewal stage if that were required and district plans and regional council would that be of some stuff?

[12.20 pm]

MS HENDERSON: Oh yes I do. I think because people will have watched what's happened to, for instance, (inaudible) river over the 30 years of the first consent and seen what they've lost and they should be given plenty of opportunity to become involved with a renewal consent process. What we've done with the Waiou River Working Party is so that if people have discovered us and want to be part of us then unless they're antisocial elements, then we welcome back in because at the moment we lack the expertise of fisher people in Tewawa Bay, for instance, we haven't had any input from them. The expertise of dolphin experts is what we're just coming to now with Doubtful Sound and the mortality rate there. Plus of course the conflict with fishers and Te Wai (ph) with (inaudible) and it's marine reserve propose. So we need to have those conversations but at the moment Meridian's hell bent on getting through this last lot of wild water into the western power station so that we won't have had those conversations before we make a decision on MTAD which I find averse.

CHAIR: There's nothing in the instruments in Southland as far as the working party is concerned, is that set up through conditions of the resource consents?

MS HENDERSON: Well it came out of concern by communities and individuals about what we have lost in the Waiou. It would have been concentrated on the lakes as was appropriate to do that, that whole Manipuri campaign and suddenly you realised that there were places on the Waiou that were

actually deep watered at times and so it was a community initiative to become involved in a working party and we've had support from Environment Southland and the District Council is backing us up. And then when the consensus processes came, they've moved to one side so that they're not found to be a biased party when it comes to the communities.

CHAIR: Yes, I understand. What I was really interested in is whether or not if there's direction and a policy, a national instrument to local authorities that should be included in the local authority instruments, a requirement with the renewal of the large scale projects that there'd be a working party or some similar approach involved?

MS HENDERSON: I'd support that 100 percent, absolutely.

CHAIR: You would support that?

MS HENDERSON: Absolutely.

CHAIR: Rather than relying purely on a consenting phase with the conditions?

MS HENDERSON: Yeah. Because the working party will have needed to come together quite a bit before the reconsenting to look at the monitoring that's gone on, the gaps in information, and if they're given enough finance to get a peer review by unbiased experts so they've actually got something to work on when it comes to reconsenting. But if you don't have the base data, you can't make your decisions going into the future.

CHAIR: Thank you, and now Policy 5 which you've discussed already about facilitating through District Council instruments and the ability to implement, say, wind generation facilities, solar heating, all that sort of

thing in a way where there aren't difficulties when it comes to applying to do these things, regulatory difficulties I mean. Would it be helpful if there was requirements in district plans that those low scale projects were perhaps controlled or permitted activities?

MS HENDERSON: I don't know how you would -

CHAIR: Rather than having to go through a full registry or consenting process?

MS HENDERSON: Well you see, if it's pulled back one stage and say, during the plan process whether it's the year one or the long term one, you put in there a question about that so that people actually have time to think about it and to work it through. I mean, I know the long term plans (inaudible) in a living document. So starting the conversation, which is what the District Council actually is about to do, is to go out to small communities and say, "What are your issues and needs?" I think that's the process that I would say would be very positive because it starts from individuals of communities rather than the other way around. And also I think they would be amenable to that because they're already embracing things like the warmer homes initiative and seeing the benefits to where local communities of that modest start already. So it's just, I would think a continuum of that sort of way of working.

CHAIR: Yes. Well we're looking at a policy that promotes renewable electricity generation, so that would be one way of promoting it, through a regulatory instrument.

MS HENDERSON: Yes.

CHAIR: Yes, that's very helpful.

MS HENDERSON: But can you go back to the renewable just in terms of hydro, I think we really, really, really need to have a national conversation on that because, I mean, with David Parker coming out and he was saying it's not renewable, a lot of us knew that but it's been plunked in with other things that are, I think the government needs to be told that in no uncertain terms, because their thinking in terms of when they were previously in a how that worked. They really need to be brought into 21st century in terms of reality of the situation, because - and the Ministry of Economic Development they've had all those small rivers on their lists for about 20 years, as far as I'm aware. And so nothings changed it seems to me and it needs to.

CHAIR: Well we're very grateful.

MRS BAUMANN: Mr Chair, just one supplementary question, just remind me, are the Guardians of the Lake, Manapouri, do they still exist?

MS HENDERSON: Oh yes they (inaudible) we inherited (inaudible) as well.

MRS BAUMANN: Yeah, yeah I understand, yes. It's just that we haven't heard any -

MRS HEDNERSON: Well of course Alan Mark is chairman now, and a lot of the things have been resolved, but what's happened with the lakes is that under the second (inaudible) regime, Meridian's kept more in the middle range than they normally should have been, and I think that's another thing that we're going to have to confront. Because what's happened, the communities of classes and teachers and things like that had a sort of continuum have all migrated to down or up the middle place and they are changing the ecology of the lakes edges. And Meridian's in denial about this along with a whole lot of other things. If it was a human person, I'd say it was a denial (inaudible).

MRS BAUMANN: I see what you mean though, you're talking about the working parties, I just wondered whether the guardians were still operational or not.

MS HENDERSON: But they are now confronting the regime of the second Touress (ph) tunnel and working out -

CHAIR: The guardians -

MS HENDERSON: But they're very strong and very positive.

CHAIR: Yes the guardians established by statute.

MRS BAUMANN: Yes that's right.

CHAIR: Thank you very much, well thank you Chris and we appreciate you travelling up to present to us, and matters that you raised have been raised by a number of submitters as well.

MS HENDERSON: Oh good, I'm happy about that.

CHAIR: And of course we are getting submissions from all points of view, and we appreciate that, so thank you very much.

MRS HEDNERSON: You're very welcome, thank you for the opportunity, I really appreciate that and I look forward to your deliberations.

CHAIR: Very good. Thank you very much, now into the hot seat. Mr Douglas, welcome and thank you very much again for travelling to Dunedin to present to us. I won't introduce the panel, our names are here, we are recording what you say and it will eventually appear on the website. You were expecting to start at 12 o'clock, do not despair we've got time, we'd like to hear you and don't feel you need to curtail your submission because of the time. So we leave it to you to present to the way you choose.

MR DOUGLAS: Well I thanks again, it's a privilege actually to come along to the hearing committee. Normally a lot of these ones are held in Wellington, so it's good that the hearing committee has gone out into the community, and it's probably allowed you more people to get in contact with. Briefly I'll just outline a bit of the background, why I've got involved with energy environmental issues.

[12.30 pm]

I arrived in central in 1985 I was with Telecom overseeing the upgrading of the network and left them in '91. I started a small tourism business Safari Excursion Wildflower Walks as well as I do other part time work. I've gotten to know the landscape, the history - the natural history both from field visits, with my tours, and also from research. And the environment of the landscape is very important to protect from the activist development. I've been involved with groups, and as an individual and probably you might have been aware that I was with the Contact Energy renewal of water right, that went to the environmental court and I think conditions were put from the environment court satisfied both Contact Energy and the group that I was with, The Alexander Clyde Action Group. We were very disappointed that the CODC and the ORC weren't there, in force, projecting, they were basically well I won't go into politics. More recently I've been involved with Meridian's wind farm and as an individual, well within the family, we took it to the environmental court along with some other groups and individuals. We're waiting the hearing of that it was supposed to come out at the end of May, it will be interesting to see how that one goes. And more recently I've been involved up in the Nevis hearing, this is the Fish and Game asking amendment to the (inaudible) Water Conservation Act. So that's where I've come from, I've fixed the aspects of large scale development that's of concern, you can get away with small scale, but there is a compromise, it's not all or nothing, it's

some times in-between. Now do I need to go through and read this? or this qualifies?

CHAIR: We have read it, but if you wish to expand on anything on it, please do so.

MR DOUGLAS: Thank you. Well at climate change it's not adversely affected by human beings, there's a lot of other factors, and we do create greenhouse gas emissions. And whether it's actually increasing climate change, or at the moment we're going through a cooling stage, and I think the introduction of that type of bill is basically adversely affecting energy subsidies basically. It's causing and also creating what I call a greedy market, you've got a market that's set up and it's just generating money but it's not developing anything back into the community, it's money sake, a bit like money trading. It provides nothing for the local people; all it does is provide money, extra money, and sometimes a colossal amount of money for a very small few. And yes we do need to deliver clean secure energy, but we need to look at a reliable base load, and still treating the environment in a responsible manner.

Probably our genuine source of base load is thermal, and then we have hydro schemes coming in on that, as well as gas. But we should not overlook nuclear power, it's got a very small footprint, it's got a smaller footprint, a bit like large thermal stations. It's environmentally friendly it doesn't put any emissions into the air, and you can actually locate that type of energy very closely where the demand is. Therefore you haven't got adverse affects of energy loss and high grid costs. France get away with it, they provide probably about 78 percent of the energy from nuclear power, and some say it is expensive, but it's probably based at original nuclear power stations, we're looking at a 35 year life they're now working up to 50 years, so they are cheaper as time goes by. It's a bit like hydro schemes probably got a life of 50 years, and then you've got to go and

rewind the turbines, and then you get another additional life out of them. It's like anything else some are renewable in that aspect, wind farms probably not once they've done their dash at 20 to 25 years, you've got to replace the whole lot and then you've got another aspect. So, wind farms in my opinion is more of a temporary situation.

Natural resources from which electricity is generated from must take into account areas of significant natural history, significant community values, historical heritage and historical corridors, outstanding significant natural features and landscapes and we must avoid man putting structures on the sky line, that can be seen from public view, and we're also going to affect significant indigenous vegetation and the habitats. So there is a risk basically when you put in the hydro scheme you flood a valley, and basically any historical evidence through there is now under water, the sediment then over covers it, and even if you go and reverse and take away the dam the sediment is still sitting over your historical sites, as well as areas of significant vegetation and habitat. So dams can be reversible, but they do cause environmental effects if the dams are demolished and left the water the river free running again. I would like to see that the renewable electricity means generation of electricity from solar, wind, hydro, geothermal, biomass, tidal, wave or ocean currents resources and we should have an open mind on the prospects of forms of nuclear energy.

Nuclear energy development, we've even got fusion energy, a possibility coming up, and it's got a lot of cleaner bio problems. At present you've got nuclear waste, and even though it's small in scale, a lot of the communities get worried where you're going to store the nuclear waste. One solution if Australia goes nuclear, we will be taking uranium from Australia, maybe our waste can go back to Australia and buried where Australia's going to use it. So it is a solvable solution, people fear nuclear energy, but those that live in Wellington are basically on a fault line, you've

got more potential of a fault damaging the Wellington area than a nuclear reactor going up anywhere in the world, of a modern nature. Those that live in Auckland you've got volcano's, there's always a potential risk of volcano's becoming active again. Myself, I live below the Clyde dam, and there is a slight risk that the Clyde dam could go, but we live below underneath the Clyde dam, we live with it. There's always a potential you hop on a plane, you come down here in a car, I've got a potential risk of having an accident, just as much as any risk going on. We use radioactivity; cancer, we use it when we go to the dentist for X-raying, so we do come into contact with radio activity material and we live with it. And it is in some cases a medical cure.

I see target setting does not work and may not be cost effective, you can get to a point where, okay, you're going up, it's easy to get to the 10 the 20 the 30 the 50, then it gets a lot harder, and once you get to that sort of 85 percent, 90 percent mark it becomes increasingly excessive in costs of getting to renewable. It depends on how you're going, tidal energy there is a project up in the Kaipara harbour, I think at the moment it's been consented but only for half the turbines that companies asked for. There's a project working in the tidal Cook Straight. There's a huge potential possibility with tidal energy, we could probably satisfy all New Zealand's demand just through tidal energy from those sources, and from Foxel (ph) Straight. But it's getting into the grid is a cost, and that's where Cook Straight tidal energy could supply the lower half of the North Island, quite significantly and at little risk.

Maintaining or increasing electricity generation capacity while avoiding, reducing or displacing greenhouse gas, there again, it is an important benefit surely this National Policy Statement or some other policy that we again should consider the benefits of nuclear power, don't shut your minds to it. It was looked at back in New Zealand in the 60's by NZED, and there was a good article that came out not too long ago in the National Geographic

magazine of August 2005. It was all set up, and this, I don't see how legislation avoid it; we avoid missiles and all that with nuclear power heads coming into the country but it doesn't specifically say that we can't have nuclear energy. It's just that the public perception of it that says it's a no-no. And I think I gave evidence of that at.

[12.40 pm]

CHAIR: Did you give this evidence at Project Hayes on nuclear energy?

MR DOUGLAS: It was raised, but it wasn't pursued to a great extent. You ask a lot of people around in the South Island 'cos we got sufficient energy. You probably don't need a nuclear plant in the South Island in the immediate future. I was up in Auckland when my mother had her 90th birthday, and we talked about nuclear power plants, and the perception was that at least 50 percent of them would say they could live with a nuclear power plant in the Auckland area, and that was, two or three years ago. So with the aspects of energy production, nuclear power, they probably can live with it.

They probably could live with one plant up in the Kaipara Harbour and then one down at Raglan. It was all geared up, it was looking to be policy statement, but it never came into vogue, and I think we should, at some stage, even say probably no to nuclear power with uranium, but with fusion energy, we should keep a very keen open mind on it. Very hard to produce, still in its infantry stages, but in a few years time, it could be a working model.

It could be expensive to start with, but as it comes into vogue, a bit like anything else fusion energy will drop in price. The capital cost and you've

got very little renewable energy source to power it up and you've got little waste.

Really there's no known method of generating electricity that is 100 percent renewable. Renewable refers only to the input, energy input of hearing of the generation. For example, wind is a renewable energy source, but a large scale wind turbine assembly is built of many hundreds of tons of concrete. Now, when you look at the Clyde Dam, the prospect of the Clyde Dam itself looks at 1 million cubic metres of concrete, and another 0.2 million for the power station. You are going to be using about that much with the concrete pads for the full proposal of turbines in the Hayes project. So you will use it.

You've got travelling time to it, you've got built in maintenance cost, so no energy is purely 100 percent renewable. It's the ongoing installation and then the ongoing maintenance costs. Even a nuclear power station you've got staff going to it, so you're always going to have some form of greenhouse gas emissions coming through, maybe of a small nature, but it's still there. We need to be maintaining and increasing security of electricity supply at local region and national levels, by diversifying the type and location of electricity generation.

If we have unreliable, and basically wind farms are unreliable, and they are a volatile source of power when you distribute it widely, and you have an increase of energy into it, you've got to significantly increase the management cost of getting that source of energy into the grid, and then controlling the fluctuations of the power from it. Now it's quite interesting, only last week, we had one of the highest demands during winter and no wind. So we can survive without wind into our network at the moment.

So once you increase the factor, you can live with small amounts of wind energy, but probably add a factor of 20 percent of wind energy, you've got to manage your network grid very carefully and you've got to have an increase technology cost to cover what goes on. I think at the moment, natural potential of energy, wind energy into the network is about 3 percent. That's if everything is working right. Like anything else, even though you might have a 600 potential megawatts from a source, you've got anywhere from 5 to 10 percent of it on downturn. So you've never got your maximum capacity and recently when we had a surplus of energy going from the South Island to the North Island, just yesterday there was 500 megawatts going , just over 500, but I don't know whether that 580 megawatts is the net effect coming into the North Island, or that it's leaving the South Island. So you've got energy loss through any system.

What we've experienced lately, we've had dry years, and also during dry years, you can have; especially in Autumn and over Winter, it's based on your calm periods, your longer periods of calm days. Then you've got to have additional energy going into the grid. At present we're spilling energy, and basically the energy supply in the South Island is quite cheap. There's two markets, there's a North Island market and there's a South Island market. And we effectively, the South Island, we do have cheap energy.

Right on our back doorstep we have got a magnificent energy source, but we pay the same energy, probably more there than what we have in Auckland. I've seen my power bill just about double in the last ten years and that price of electricity generated hasn't doubled at all. It's probably only gone up the question of inflation. And I don't know whether you can put into your policy statement that controlled power energy is at basically inflation cost, especially for all, you've got domestic and industry and commercial users. It should all be at inflation adjusted.

Especially, recently a study was done that we've basically been overcharged 4 billion dollars of material, I suppose you've seen that article, have you?

CHAIR: We are limited really to what's in the Resource Management Act, because this is a Resource Management Act instrument, but what you are talking about are economic instruments.

MR DOUGLAS: It's the efficiency and economics.

CHAIR: Yes, absolutely and there are certainly windows within the RMA as you know for that, so thank you for raising it. We do have some constraints.

MR DOUGLAS: You have standby systems that they normally, you have basically fast, what do you call them, fast scale or something like that. They power-up and meet the demand very quickly, within a few minutes, but that type of oil or gas standby energy supply is inherently expensive. And basically that is one of the costs that come into, when you have looking at wind farms. It's that inherent security cost of standby energy if you are right on the margin of generation demand. Because quite often that investment lies idle, and also you've got to have basically sufficient reserves of fuel supply, gas supply to last maybe two or three weeks, so you've got an unused resource sitting there just in case.

It's interesting, within the RMA, it does not appear that we can provide a withdrawal of a National Policy Statement. This would appear to be a seriously deficiency in the legislation. You can have knowledge change and technology change that can happen at any time, but a National Policy Statement probably can't reasonably follow through and go through government, unless you have a decree of government to change a degree

of it. We need to respond equally rapid to new knowledge and understanding that renders existing National Policy Statements and their incorporation into the RMA.

[12.50 pm]

There again within the use of targets, cost-effective pricing and there again increased costs going up. Basically at the hearing, at the Nevis hearing, wind farms are probably going to be even more marginal now that a lot of the technology-like-energy, like a lot of our equipment coming into the country is sourced from overseas and our energy, our exchange rate is quite adverse affected by buying in from overseas, so if you can look at energy production technology within New Zealand, and I think they are looking at the tidal turbines for the Cook Strait, a lot of that's going to be of local component; therefore tidal energy could become more cost effective than compared with wind farms.

Now, just to qualify, that particular person, what's his name, he has got an economics degree, so it's just not a lay person talking about it. He runs a professional business for the last 40 years and he's been called as an expert witness for Pioneer Generation and in this hearing, so his credentials are basically respected, and what he is saying is possibly quite true at the present stage.

We will just follow with the last one, the general conclusion. Given the large number of internal conflict, uncertainty and unjustified assumptions, and given the large amount of other policy guidelines guiding such decision, I wonder if such an NPS will create more problems than it solves. I also question whether there is a problem that needs to be addressed. Basically the RMA and Section 2 do not identify any serious problems that I see within the current RMA practice, and at least in

relation to specific issues of consenting of renewable energy generation plants.

So we've got the RMA that was originally quite robust, it's been attacked, and in some cases the environmental side of it has been weakened, but we've still got the CODC plan, and the ORC and other organisations. So, maybe the National Policy Statement should be more simplified, and just a few short guidelines, not like the present one that has been proposed, and more reference back to the RMA, even within the CODC plan, well, within the local district plans and the regional plans. It should still be able to be basically workable without having to bring in the heavy handedness. It's probably good that we do have National Policy Statements. A degree of it going through is basically at the whim of the government.

CHAIR: Mr Douglas, thank you very much.

MRS BAUMANN: Thank you Mr Chairman, I just wanted to see if you could help me on nuclear plants. I'm not aware of the kind of technologies available with nuclear, but my memory is that still most of the plants are rather large in megawattage.

MR DOUGLAS: Yes, well they're only large because the larger they are the more economical, but you can put a small plant into a nuclear submarine. So you can come out with a small scale one, but -

MRS BAUMANN: But the generation business, the ones today are quite -

MR DOUGLAS: The technology's there, but it's quite expensive. But I think a 600 megawatt nuclear power station are available, but probably more likely you're having to be looking at a 1,000 megawatts -

MRS BAUMANN: At least.

MR DOUGLAS: At least, just to -

MRS BAUMANN: I'm not aware of any 600 megawatt ones that are up and operating though. There's some suggestion of something in South Africa.

MR DOUGLAS: But there are technology prototypes going on in the area of that size.

MRS BAUMANN: Have you got any views about how a 1,000 megawatt nuclear plant would fit in our system, with the problems about instability in the grid?

MR DOUGLAS: Well a nuclear plant, it provides your base load.

MRS BAUMANN: Yes, but -

MR DOUGLAS: So it's always there. It's basically on or off.

MRS BAUMANN: It's dispatched at zero.

MR DOUGLAS: Yeah. I don't think you can trim - I think it is possible to trim down your output --

MRS BAUMANN: Well I'm not sure about that.

MR DOUGLAS: -- by taking some of the rods up or out, yeah. But basically your nuclear power, well, France run what 78 percent of their -

MRS BAUMANN: They've got a big load, haven't they.

MR DOUGLAS: Yeah. And they provide more than sufficient. They actually export some of the energy to the other European countries.

MRS BAUMANN: That would make them exporters too.

MR DOUGLAS: Yeah. And then they do have some hydro schemes and they do have a few small wind farms coming in, but they rely on -

MRS BAUMANN: But you haven't got any evidence of nuclear - modern nuclear technology?

MR DOUGLAS: Of that smaller type, except what goes into submarines.

MRS BAUMANN: Yeah, I think that's all my questions, thank you.

DR CHAPMAN: I just had a question really about your early statement on climate change. Are you aware of the work of the IPCC's?

MR DOUGLAS: Work of the?

DR CHAPMAN: IPCC, Intergovernmental Panel on Climate Change. And you're aware of the conclusions in their Fourth Assessment Report?

MR DOUGLAS: Yeah. Basically at the Meridian hearing, I heard a lot of pros and cons on climate change and basically associated with that organisation. Those that basically are supporting it are government officials, backing up the government policy, which is the only thing they can do I mean, we've got the Kyoto agreement. And those are against the aspects of the Commission, they feel that it's biased and it's very politically

motivated and it all depends on what you put into the model, what comes out. And unless you know exactly what is causing climate change, you can only guess. Therefore your assumptions and your model can be skewed up. It's basically data you put in, faulty data you put in, you get a faulty result out.

DR CHAPMAN: And are you aware that the scientists who contributed to the IPCC's report, some two and a half thousand scientists, are not government officials?

MR DOUGLAS: Yep, that's right. But also you've got a lot of other ones that have been on, or employed in semi-government role. There's a great scientific debate going on of those that are supporting it, and those that are against it. It's not a very easy one to understand, especially for the average person.

DR CHAPMAN: Are you saying those people employed in a semi-government role are contributing to the IPCC report?

MR DOUGLAS: Yes and no, 'cos some of those in the (inaudible) basically are university professors and teaching within those organisations, and some of those scientific bodies are basically against what the result is. Therefore there is a lot for it and there's also a lot against it. And basically one of the conceptions is that the original report has been politically tuned up. So you don't know exactly where one stands, because of the political motivation and effects from say the green environment people.

[1.00 pm]

DR CHAPMAN: Are you aware that the conclusion that the IPCC, was that anthropogenic climate change is unequivocal, and are you also aware that

the IPCC concluded that it was very likely that it was - that the main effects were caused by anthropogenic causes?

MR DOUGLAS: By man?

DR CHAPMAN: Yeah, by people.

MR DOUGLAS: Well there again it's that very likely cause, but how much is caused by man. We've had extreme climate changes in the past and we've just come out of an ice age, and it was warming up until early this century and now it's cooling. And you can't say that any sign curve is going to go up, because at some stage it will drop and go up and down. We're not in a perfect orbit. Basically our engine's controlled by the sun, so how much influence is controlled by the sun and its nuclear radiation waves that come through. Our orbit's not perfect we don't revolve quite perfect. We have different oceanic systems going through, so -

DR CHAPMAN: Would you contest then the conclusion of the IPCC that solar radiation effects were less than 10 percent of the total radiated force and effect?

MR DOUGLAS: Can you clarify that?

DR CHAPMAN: The IPCC concluded that solar radiative effects, the impacts of variations in solar incoming radiation, were less than 10 percent of the total radiated force and effect that -

MR DOUGLAS: Climatic change - if that's come from a science prophet ,I can't say no to it.

DR CHAPMAN: Perhaps I'll just leave it there, thank you.

CHAIR: Can I just explore the conditions that were imposed on the Contact case that you were involved in. Was there one involving a bond in that the environment -

MR DOUGLAS: A bond in the case of dismantling of the dam?

CHAIR: Well I'm not so sure -

MR DOUGLAS: The bond, insurance bond -

CHAIR: An insurance bond.

MR DOUGLAS: Basically the Environmental Court came up and gave two conditions to Contact Energy. One condition is that we'll give you 15 years, but you'll need to do a considerable amount of sediment and removal out of Lake Roxburgh. The other one was 35 years, and we'll do remedy sediment removal out of the Manihakea as while as we provide an insurance protection for flooding of the Alexandra.

CHAIR: So the insurance, or bond, was basically to address flood relief in the -

MR DOUGLAS: Yeah, so if anything happened over the flood banks, and through the ground to any business person or a resident, they don't have to go through their lawyer to claim. Basically they would go directly to Contact Energy, and hopefully their insurance policy will pay out under the conditions.

DR CHAPMAN: Mr Douglas, was there a fund set up through the local authority, or was it merely left with the insurers of the generating company?

MR DOUGLAS: I think it's left with Contact Energy. I think they've taken the risk that themselves, they think, "Okay if we go through one flood in the 35 years, we're still winning. If we go through three or four floods, then we're in a problem." So they've looked at the risk factor and they say, chances of it happening is minimum. If it does happen, we hopefully - we can pay out without having to embarrass the equivalent costs of the sediment removal.

CHAIR: And is the 35 year term, is that reviewable with the - if there are several floods and --

MR DOUGLAS: No I don't think so.

CHAIR: -- they seize the amount -

MR DOUGLAS: Yeah, I can't actually recall all the conditions, but I can't recall that, if they had that many floods then there's a renewing, no.

CHAIR: It's fine. And finally, with the sediment, the Roxburgh sediment, how's that going, has that been -

MR DOUGLAS: Well basically the Lake Roxburgh sediment is basically stabilised. Its only sediment comes in from the Manihakea and now all of the sediment is storing up and basically getting close to the (inaudible) mouth going into the lake so that the sediment is flowing down and it's expected to reach the, basically the junction in another couple of years. So it is a problem, and I think that was the condition. Might have been the (inaudible) - that the sediment removal out of the Bannockburn Inlet and out of the Lowburn Inlet etc, that's about expected to be activated and sediment removed, which is taking place very soon.

CHAIR: I see. Yes, but you mentioned to the panel about the issues of sediment, even with the decommissioning or removal of a structure. We have had some evidence from a witness in Palmerston North, have you any literature on the sediment issue, the residual sediment issue, or is that something that you perceived from your own understanding of what's -

MR DOUGLAS: Well there is evidence that the sediment has affected the storage in Lake Roxburgh by about 50 odd percent, but basically it's a run of the river system through the Roxburgh hydro scheme. The sediment itself, you can see it when the lake's low. There is supposed to be - done at the flushing stage, but we've had no real big floods to seriously activate a genuine flushing and when you go and walk on the sediment it can be quite hard, so it basically cakes and it - the flushing action is probably in effect at the top part, even though the current is probably faster up there, but the bottom part of sediment becomes quite noticeable.

CHAIR: No, what I was particularly interested in was a comment you made which you may not have intended, and that was that there may be little benefit in removing dams, because you'd still have residual sediment issues in the river and I wondered whether you had any literature on that?

MR DOUGLAS: Well I know they're doing old dam removals over in the USA.

CHAIR: Yes and we've seen that material.

MR DOUGLAS: And they've come up with sediment issues there, and whether they have to do extensively excavation of it or not, or whether they just live with it and then just put a valley floor back at a higher level than it was originally.

CHAIR: Yes, yes. Well we're very grateful, thank you for that Mr Douglas.

DR CHAPMAN: Thank you.

MR DOUGLAS: Thanks for your time.

ADJOURNED [1:06 pm]

RESUMED [1:56 pm]

Audio file: Otago Regional Council

CHAIR: Welcome. Thank you very much for coming to see us, and we look forward to hearing what you have to say. We've read material, but it would be really good if you can elaborate. I won't introduce the members, their names are here. But just to let you know that your evidence is being recorded, or your submission, and eventually you will see it on the website. So please just proceed the way you are comfortable with when it comes to -

MR MCRAE: I suppose just first of all, apologies from the Chairman and Deputy Chair, they are both in committee meetings today, which I've left to come here.

CHAIR: Thank you.

MR MCRAE: Really the Council, as the submission says, is in support of the principles that are being proposed.

CHAIR: Just for the record, can you we have your name.

MR MCRAE: Sorry, yeah. James Fraser McRae and I'm Director of Policy and Resource Planning with the Otago Regional Council and I've delegated to be here today.

CHAIR: Thank so much.

MR MCRAE: The Council supports the first three policies, the principles that are intended in there. It does have some problems with Policies 4 and 5

which, while they lay out a process, they don't lay out an outcome as such and they appear to presuppose that the process under the First Schedule in the Resource Management Act is going to give the outcome that the Crown anticipates, and if there is particular wording that's required to go in to a plan or plans or statements, then that wording should really be made available to us to put directly into the plans. From our perspective, it's a little bit open as to what was anticipated that we would put in a document we were to launch ourselves, but from a national point of view you're going to end up with 80 odd Councils trying to all presuppose the wording that the Crown anticipates we should put in our plans, and get that through the public process at the other end. So we would prefer that if there was going to be wording needed to go into plans to make particular direction from the central Government, that that wording was directed to us. Otherwise we're sort of assuming that we all know exactly what we're going to do, and that we're all going to get what we want through that central process and out the other end. So really that's about it.

CHAIR: Thank you. And we do have some questions, because we've got to get your help on some of this. The points you make about having a more prescriptive Policy Statement, so that you can change the wording from the Policy Statement into your instruments has been made by a number of your - by other local authorities, so we're interested to explore that with you.

MRS BAUMANN: What I wanted to talk about was whether your Council would be attracted to the idea that we direct that through planning mechanisms, there'd be, for example, no go areas for wind farms or the like, or you could have go areas, but I'm being sort of a despereaux here by saying no go areas.

[2.00 pm]

MR MCRAE: The Council's plans at the moment are neutral on activities such as wind farms, and they tend to try and be more, in the terms of the RMA, effects based, so similar to rules themselves become very activity specific around discharges and things like that, but as far as the policy end of it goes though, tends to try and be neutral, so that you can accommodate whatever comes along. And wind farms is an interesting one, with some of the debate we've heard here recently. You could write something into your plan to control wind farms, but that's not going to stop a satellite down station or something else going in there. We'd have a similar impact on the landscape in the terms of it's now a big open flat (inaudible) plain with tussock on it. It's going to end up with a whacking great satellite dish on it or something. If you go after something specific you end up with everything else going around it, so you actually don't achieve the outcome that you're really after, so you've got to be, I think be more activity neutral if you can for as far into your plan as you can possibly give.

MRS BAUMANN: Yes, because some Regional Council's have been attracted to that possibly because they getting really into problems about the number of farms in their areas and they want to say, well put a ring around that lot and preserve the rest, but I take your point that preserving the rest is only preserving the rest from wind farm, not from other possibly offensive -

MR MCRAE: Whether a satellite down station is offensive or not, yeah -

MRS BAUMANN: Is offensive, I don't know, but yeah -

MR MCRAE: But it doesn't stop anything else. It would have a similar impact -

MRS BAUMANN: Yeah but if you do it effects based then you're actually looking at - yeah.

MR MCRAE: Yeah and plans generally - well we don't have a land plan in Otago, and I'll explain why shortly. Things that are in the plans now that are controlling, or managing, the policy frame around things like landscape and those sort of things, should be there now anyway, in plans, and the policy around that sort of - the identification of significant outstanding landscapes, if they're identified in the plans, that mechanism is there now, or should be there in the plans now that are controlling land use. In Otago we don't have a land plan as a Regional Council. At the beginning of time, under RMA there was the - triennial meetings were held and the spirit of the one shop stop was taken into play so that the land use controls all fell down into the District Plans. Now that's happened to a greater or lesser extent, but the principle has been retained that this Council doesn't have a land plan, regional land plan, and the controls generally on excavation, earthworks and that sort of stuff which most Regional Councils control or some control, that falls into the District Plan.

MRS BAUMANN: And water, I suppose?

MR MCRAE: We've got the water. We've hung on to water.

MRS BAUMANN: For better or worse. What is your experience about hydro then in your area?

MR MCRAE: Hydro, we've got significant hydro development in the region. Clyde dam being the most recent, which was done in (inaudible).

MRS BAUMANN: Like the consents around the RMA?

MR MCRAE: Consents around the RMA, yeah, and the others have been re-consented under RMA. And they've progressed through the process normally.

MRS BAUMANN: And there are no sort of conclusions you've drawn from that process that would help us, for example, re-consenting, should it be - to what extent should there be a different regime, a lighter regime for re-consenting compared to new. There is already some difference in the Act but should there be more?

MR MCRAE: Well the Act requires you to consider the investment that's there now and prior to working here I worked for Waikato District Council and the re-consenting of the Mighty River Power schemes on the Waikato and they were - the base line there, there was a bit of debate around, in those days, whether there was - what they'd been consented from no dams through to - or the regime to operate the dams under a new regime and it was agreed the baseline was dams in place, everything open. It was taking a reasonably realistic view that the thing that was being consented was really not the dam itself, but how the dam was operated, and that sort of regime is in place now. The dams are there. They're realities. They're seen that way. The Act recognises, or it gives us the opportunity to recognise they're there in the consenting regime, and in that sense I suppose they've got a leg up from somebody who wants to a brand new dam in the river anyway. They've got their lake, so the arguments around whether we're going to dam the valley or not isn't really on the table. The dam's already there. How the lake might rise and fall, and then the shore line that's exposed would be debated, but not that there's going to be a lake there -

MRS BAUMANN: Or not.

MR MCRAE: Yeah. So they've got a bit of a head start.

MRS BAUMANN: Some of the communities find that difficult no doubt.

MR MCRAE: Oh for sure, yeah. Yeah, if you fought the dam from day one, every chance to have a go is another good go.

MRS BAUMANN: Yeah, yeah. And the other thing I wanted to raise with you, the policy talks about reversibility and whether people be required to take that into account. Have you got any views about that?

MR MCRAE: I think it is an opportunity that should be considered because at the end of the day with something like a wind farm you can dismantle it. There's still a bit of damage around with roading and the base sites and all the rest of it. By and large you can pretty much clean up the site. It's a bit different with the Clyde dam. You can very much - once you've taken it down it would take a fair bit to clean up the valley if you took the dam away, but for some of them, yes. But that's a presumption that it is going to go away, which I don't think consenting something to be there, you should assume is going to happen. If somebody is going to get a consent for a wind farm, you have got to assume that they are going to want to keep that wind farm there, and to consent it on the basis that it could be gone shortly or if it went, they could clean the site up, is a bit - to me in the time frame that you work, communities work, that would be stretching it a bit. You give people and expectation that they're not going to be here for ever. But the wind farm is probably going to outlast most of us.

MRS BAUMANN: Yes and there's nothing to say they can't keep renewing the elements?

MR MCRAE: They'll replace the screws. They'll replace the base bolts. They'll replace the turbine on the top. They will, and they will - like grandad's axe, two new handles and three new heads, and it's still grandad's axe. But it is important to understand that the impacts may be, for some, renewable energy is lighter on the ground than others, yeah.

DR CHAPMAN: So in a way you're - you think Policy 3 has some merit. Policy 3 was the -

MR MCRAE: Yes, yes that's the reversible bit. It does have some merit, but it's not something I think a proposal would, or should, live or die on.

DR CHAPMAN: No. So are you suggesting it could - people might have regard to it, that it wouldn't be a determinant -

MR MCRAE: Yeah, yeah.

DR CHAPMAN: Okay. Just going to back to your questions about - well the questions I should say about landscape controls could be, should be there in the plans now at the district level. Why aren't they there, and is there a way of expediting their being put in place?

MR MCRAE: Yeah. Bit of background on myself. I've worked for Regional Council, unitary authority in Marlborough and the District Council in Waikato, so this is not going - this answer won't be a Regional Council or Otago Regional Council response. I'll just step well away from my current employer. It's the question obliging property, property rights, perceptions of property rights, perceptions of impact on value. As soon as you colour somebody's property something, and it doesn't matter you colour it or for what reason, it's generally perceived to be damaging their property, the value of their property.

DR CHAPMAN: Would be reducing their property value, at an auction?

MRS BAUMANN: Cutting out their rights.

MR MCRAE: It may be going to cut out in auction, it may reduce the value of my property. It's seen as a negative, unless it's a significant rezoning to something that's much more commercially viable. But generally if you colour somebody's property in with some sort of hazard or some sort of outstanding landscape or biodiversity or natural ecosystem or something like that, that's generally perceived to be taking away some opportunities from them, therefore devaluing their property. And so the consequences of that is that generally tends to be a bit of a resistance to colouring too much stuff up when you're drawing - doing that district level planning.

[2.10 pm]

DR CHAPMAN: And so resistance on the part of - or it gets communicated to a Council -

MR MCRAE: It's communicated to Council. It's a resistance from the land owners and that gets communicated very quickly to Councils and to the staff obviously.

DR CHAPMAN: And that's true even for a landscape of outstanding - outstanding landscape features?

MR MCRAE: Yeah, generally yes.

DR CHAPMAN: Which you might assume would be a positive and given that people might not be predisposed, for example, to wind farms on their bit of landscape, would it be seen as a negative necessarily?

MR MCRAE: It depends which part of that is; the guy that's got the turbine on his farm, I understand can make probably more out of that than he can out of beef and crossbred wool at the moment, and he probably isn't going to be too worried.

DR CHAPMAN: No.

MR MCRAE: Because he's got a major financial return. But people around about are going to be concerned. There's no return in the costs. And they now see this thing twirling in the wind.

DR CHAPMAN: And conversely, precluding the development of wind would detrimentally affect the value of the landowner, potentially. And might enhance values of the surrounding neighbours.

MR MCRAE: Well, it doesn't sort of - it's not that direct, not that direct. My experience of Waikato when the South Auckland Correctional Facility was being put in, it proposed a hempton (ph) down from the Waikato. A lot of concern about the impact on the valuation of surrounding land and the experience from South Waikato which had Waikeria, I think that's down there, Prison. But there was no impact on valuation right up to the boundary of the farm or boundary of the prison. The farm property sales didn't show any valuation change at all. So for those that were there that had it and it was real, in fact they were saying great for production, great for the local community, good for work, give us another one. North Waikato was where it had this negative perception of it ruining the

community, and detrimentally impacting on property values. But there was no evidence of that from South Waikato.

DR CHAPMAN: So, it may have been on the district and locality within the district.

MR MCRAE: And to some extent, in fairness, what's being proposed as well. But there's nobody really - for identifying the outstanding landscapes and those sort of things, there's no sort of cash return that can be easily generated from that.

MRS BAUMANN: Vis-a-vie the land in question.

MR MCRAE: Yeah, but there is an impact on - well I'm not going to be able to plough that area or burn that bush off. Not that I might ever do it anyway but I can't do it now, this is saying I can't. And even just the mere identification of it, which is what we did in Marlborough in fact, we identified. And we had policy around landscape and very little in the way of rules at all, was still seen as a very negative.

MRS BAUMANN: Even without rules?

MR MCRAE: Yeah, from the communities perspective and that was in the Marlborough Sounds. You couldn't write some policy around landscape in the Marlborough Sounds and get away with it.

BAUMANN: Where could you?

DR CHAPMAN: So, although designating outstanding natural landscape would address, the effects of various sorts of installations or changes to the

layout. So, with focus on effects in that sense. It might be viewed quite negatively in a number of districts.

MR MCRAE: That's right. But I don't think that's a reason not to do it. It's just the battle (inaudible).

MRS BAUMANN: You're telling us why it's been a big hurdle.

MR MCRAE: Yeah, doesn't mean we shy away from it. It's just, that's the battle you're going to have and face up to it and get on with it, yeah. So, when you go into these things you need to go in with your eyes open. We're currently, at Otago, reworking the wetlands part of our plan. Mainly just better identifying where they are and the boundaries around them with improved science and stuff like that. We're receiving two very different types of response. There is the response that we've just talked about here, very negative. And there's the other response which is right through to a lady that came up to us one public meeting with two volumes and said, these were the projects that my children did on the wetlands on our farm. And this one here went through to the National Science finals and got second place. So, from them, from one perspective, it was seen and valued for what it was and what it did. And the others it was farmland waiting to be developed. It hadn't been developed in the lifetimes and generations it had been there. But it was still an opportunity that could be taken up at sometime and they didn't want that opportunity taken away.

DR CHAPMAN: So, what would be the process of identifying outstanding landscapes and what would be the best practice process you would, be looking to suggest?

MR MCRAE: I think it's important that you get, with a lot of these sort of things, it's really important that you get the community involved very early on in

the process. Because its part of the - inside RMA, I'm just checking my planning 101 under RMA for 30 seconds. There's two paradigms in there, there's this rational science paradigm around the numbers that you can put on stuff, work quality and that sort of thing. There's a cultural ethical paradigm that's sitting in there around landscape amenity and that sort of stuff and there is no imperial units to measure these things. So, there's only good and bad as oopposed to right and wrong. And the good and bad stuff is where I think you need to engage the communities that are involved very early on in the process. Get some agreement around the sort of things that are important that make up some of those things and then you can start to apply some science to that. We've done that with some minimum flow work just recently where we've worked with the communities around some small streams. What do they value in the stream and it's everything from a place for the grandkids to swim in the summer through to fish habitat through to irrigation water. And we talk with them for the first meeting about what the river looks like when it's getting close to when they don't like it anymore. So, they try - and we don't talk about numbers of flow or anything like that at the moment. Just about what does it look like, what don't you want to see, gravel bars across the river, we don't want - you know, that sort of stuff.

DR CHAPMAN: Qualitative stuff.

MR MCRAE: Qualitative stuff, and then having got that sort of agreement out of them, work-shopping stuff, we then go back and use the science, put some flow data on what those values would look like. We take that back to the community and then say, "If we manage it to look like this, it'll be this flow and the consequences of that would be five days a year on average without water for irrigation, 25 days of the year." And we then apply our science and I think with landscapes the same sort of thing. You tend to go in with the landscape experts first. They tell us what's good for

us with some systems which, it's fair enough. But it's trying to turn cultural, ethical stuff into rational science and I think we get some of that stuff around the wrong away.

DR CHAPMAN: Is it premised on your view that, well your experience, that it's really local communities that define landscape value, in a sense.

MR MCRAE: Well, to a lot of extent, yes. There is this high order, iconic New Zealand --

DR CHAPMAN: Yeah, national -

MR MCRAE: -- stuff.

MRS BAUMANN: The remarkables and that sort of thing.

MR MCRAE: Yeah. But generally the communities themselves value bits of their landscape and know what's important to them. And often it's something that they identify themselves as. The Lindis community, for example, up around through the Lindis Pass area, they identified very strongly with the river and at the moment are deeply embarrassed about what tourists see as they across the Lindis bridge on the state highway. It's not - in a public meeting they'd said, "It doesn't make our community look good." It's dry, the riverbed in the summertime. And they say, we identify with that river and it doesn't make our community look good to the rest of the world. So, they're desperately working to try and do something about that. So they do identify, general communities identify very closely with their area.

DR CHAPMAN: I had another question about small scale wind. Your recommendation on 5 was to oppose it, and I just wondered if you felt

there was a contribution in small scale community wind could make to, well, to overall renewable generation capacity.

[2.20 pm]

MR MCRAE: Well outside my field of expertise but yes I think, you'd have to say yes to that or you wouldn't believe in cumulative effects.

DR CHAPMAN: Yeah. So, even if it was small it could make a contribution?

MR MCRAE: Absolutely, yeah. 'Cos I think we're getting to that point as a nation and I know from the water supply point of view we're running out of big valleys to dam. We're actually needing to find a smarter, better way to manage water and some of that is going to be cumulative effects of small storage. And the same goes for energy generation. I'm surprised that we don't have to put solar on houses and that sort of stuff that we build nowadays. We could save ourselves a lot of grief nationally if there was some big drivers into more use of local energy.

DR CHAPMAN: Thank you.

MR GARDINER: Can I just pick up the Policy 5 and given the - potentially there is value in small scale wind farms. And particularly I'm interested in some of the isolated communities in the North that you'd be aware of and Northland, some parts of the Bay of Plenty and the East Coast, and whether, in fact, an NPS should have some kind of recognition of the aspirations of those communities, and whether the recommendation of the council was about the current statement of the Policy 5 as opposed the principal of not wanting to participate in that kind of activity from the regional council point of view.

MR MCRAE: I think we'd be quite happy to include into our plans the statements around that, or the intent of that. But that's asking us to write that statement which may be what we want, may not be what government wants and it may not be, at the end of the day, what the power company wants that's going to end up producing this. Or what the community really wants.

MR GARDINER: And so your point, which I think is a fair point, that if each of you were left to design our own then you wouldn't really be able to subscribe to the National Policy Statement. And that should come presumably as part of -

MR MCRAE: Yeah. I'm saying that, if we were all left to do our own thing and sort of using an analogy to the car industry, you'd end up with 150 different models on the forecourt. If the government, through this statement, is looking for a big push that way, they should go a bit further into the design and say, it's got to have a lot more stuff so that if there is going to be any change - either say we're all getting Toyota Corollas or say you're all going to get them, but they're going to have to have four cylinders, four doors, this horse-power rating, they're going to be brown. Just keep going, so that the opportunities for the variations around what goes into the plans is reduced so that there's a consistency across the country.

MR GARDINER: Thank you, I can see that. Thanks very much.

CHAIR: Your region, Mr McRae, is probably one of the few where there's been two major wind farm applications involving two different districts. Would you see, from your experience, when you're dealing with cumulative effects of wind farms do you see an advantage in a regional land plan?

MR MCRAE: In that sense I suppose yes there would be because each district is essentially an island unto itself and it's sort of swimming in a vacuum. If that's possible. And at some stage I suppose it's probably something which an RPS could do, thinking about it just very quickly. Or you could end up with a regional control for land use. But I think that you could elevate some of those principals up to RPS level and drive it that way. So, you would then drive - because of the change role of the RPS from when the RMA is first put in place, I think you could do some more creative work there and get a better spread of a more - address the cumulative effects.

CHAIR: And when it comes to cumulative effects involving scale and design and support, is it your view that it would be helpful if a National Policy Statement, if that sort of thing was to go into a regional instrument. That there was some greater, if I could use the word, direction really as to separation, distances that sort of thing.

MR MCRAE: Yes, and the short answer is yes.

CHAIR: And to be fair to you, we are getting that submission from districts as well. That they would - where districts have a number of proposed wind farms they really do need some help. Now, the other matter where we're dealing with trans-boundary issues at a regional level in the sense that several districts are involved is the water one, of course, rivers and systems and so forth. I'd be interested - I don't know whether we've looked at it yet but in the Resource Management Act under the regional council functions there's the new FA which deals with allocation of resources and admittedly there's a restriction on interfering with existing rights and so forth. But it seems to indicate that, at a regional level, you can become quite prescriptive about how resources are to be allocated and used and so forth. Has your region had a look at whether it wants to implement this sort of thing? And I'm talking about water allocation.

MR MCRAE: In the water allocation context, yes, we have two weeks from the hearings with submissions on a plan change that's picking up on that. And for Otago, we're looking at managing water as a resource, as well as water use. So, what we're doing is, and again just stepping aside from it. A lot of the water that's allocated in Otago is under the mine privilege system, and has been around a long time. And water's travelling the length of the Manuherikia Valley which (inaudible) to Clyde to irrigate apricots on the banks of Clutha River. And we're saying that's not the best use of that bit of water. The best use for that bit - those apricots can get water from a whacking great resources that's right next door to them, and that water can be used further up the Valley. So, we're starting to use the principals that are in that Section, subsection, as the basis for the reallocation of water as a resource. To get the best use out of the water, the total water that we've got, with this plan change as we get ready for 2021 which has when the mining privileges cease to have any affect.

MR GARDINER: All of them?

MR MCRAE: All of them. So, we've got a bit of a firestorm coming ahead of us, and we're saying, that when you come in to get your consent in place of the mining privilege, we're not going to be saying, you'll automatically have the same take. We're going to say, you're going to have to show us that there is no better take, be it ground water, or surface water or something else. And trying to redistribute the water and in some of the community meetings, for example, Manuherikia, we're sort of suggesting and some of them are starting to listen, and even talk back to us in reasonable terms. That perhaps the bottom third of the valley should be taking water out of the Clutha, and the top two thirds can get water out of the Manuherikia, instead of the whole of the valley coming from the Manuherikia because most of the water is being used at the bottom of the

valley anyway. So, we're saying that by taking water from the top, running it all the way down isn't the best use of that bit of water. It's better off used up the valley somewhere.

[2.30 pm]

CHAIR: And in your proposed plan change is there any reference to energy, hydro or anything?

MR MCRAE: No, again we stay neutral on it.

CHAIR: Neutral.

MR MCRAE: Yeah, on it. We've got submissions wanting hydro specifically identified, and we'll deal with that through the hearings process. And so we've got things like, some policies around local use of local water. If you're going to be exporting water away from where it's sourced then you're going to need to expect to have less certainty on that consent in the long run than the local supply. And there'll be review clauses built in around recognising local demand. So that, if you're taking it around the hill and then off way up to the next valley somewhere, you can expect that as the demand grows here you're going to end up losing some of that.

CHAIR: So, the plan change, I'm sorry I'm not familiar with it, perhaps I should I have a look at it. But as far as the allocative mechanisms you're using it's mainly traditional to comeback to - apply for resource consent and we'll look at the merits of it.

MR MCRAE: Absolutely, yeah.

CHAIR: Is that - have you introduced a policy foundation in the plan change at all or?

MR MCRAE: Yes.

CHAIR: You have?

MR MCRAE: For what we're doing there's a - we've retained what's in the plan at the moment and introducing a policy frame around the local use of local water. Some community management of that, those takes, and exporting of water is sort of the bottom end of any priority that might be taking on water. So there's a policy frame going in around there, then there's some massaging of some of the rules to recognise that. 'Cos at the moment we've got water that's going 50 to 80 kilometres of water races, that's a lot of dry country.

CHAIR: Now, as you mentioned the difficulty with value judgments and the ethical matters which of course are vexed, and we are receiving a lot of submissions that the actual, not only the local authorities, but also the generators, would like some assistance of how you deal with value judgments when you're dealing with a nationally beneficial use of resource, renewable resource, and local concerns for whatever. So, it's basically very much a Section 6 versus Section 7 matter. And Section 7 is where the authority for energy matters is found. The Otago Regional Council, with your significant experience with the Clutha and I see you've got water conservation orders, for instance, the Nevis one going at the moment, and you've been - the Hinerangi, you've had a lot of experience with this sort of thing. These policies, in your opinion, are they too general to be of assistance? Or are they policies where you believe that your council or your people under your direction, as policy director, could actually work out some wording that would really assist you? In other

words, if you were told at a national level, this is of a national interest, nationally significant that you do it this way, and you do this in your plans. Rather than being left to try and deal with these value judgements or whatever. Have you thought of any wording?

MR MCRAE: No, I haven't sorry.

CHAIR: Now, to be fair to you we've also asked some of your colleagues, Canterbury's coming back with suggested wording. It would be actually quite helpful if you could think about that. Because there's no point in us - we can certainly draft things, but at the end of the day we would like you to have an input into that.

MR MCRAE: Fair enough, yeah. They're looking for something that we would expect to come in through Policies 4 and 5.

CHAIR: Absolutely.

MR MCRAE: Okay.

CHAIR: That would be really helpful and it may well be that we come out with - we're still thinking about - we haven't even discussed in detail, but we come out with some interim and then get back to you on it. But we do need - we'd be grateful for your input. And if you could just send that to Josie. Thank you very much.

MR MCRAE: No problem.

CHAIR: Is there any other matters? It would be really good to get your expertise.

MRS BAUMANN: And if anything else occurs to you; if you go back, you've been there and done some of this.

CHAIR: And with your Waikato experience.

MRS BAUMANN: Yeah.

CHAIR: Well thank you very much for that. Look forward to seeing you again hopefully.

Audio File: Otago Fish and Game

[2.40 pm]

CHAIR: Well thank you very much Mr Watson, I won't introduce the panel because our names are there but just to let you know that what you say is actually being recorded and will go up on the website, okay. But look, we're very grateful for your attendance we realise that you've got a lot on your plate at the moment, and please present in anyway you like. We looked at your material a bit, just fire away, so thank you very much.

MR WATSON: Thank you, I thought I'd read most of the submission I put before you, it expands on aspects of the earlier written submissions. So perhaps starting from paragraph 3, "Sports fish and game populations are the product of natural ecosystems (primarily rivers, lakes and wetlands) which are habitats for the various fish and game species throughout their life cycles. The health and quality of these habitats dictates the productive capacity of the populations and provides a surplus of fish and game for harvest by anglers and hunters. Fish and game populations in New Zealand are almost exclusively wild, self sustaining populations and as such are dependant on habitat quality and diversity."

"Freshwater angling is an important recreational activity in Otago with almost 20,000 licences sold each year in all categories. It is also a key component of a range of nature based tourism activities which visitors come to Otago to enjoy from both within New Zealand and overseas. Many of these activities are based on rivers. Rivers are an extremely important component of Otago's landscapes."

"Adverse Trends in Freshwater Resource. Freshwater resources in Otago are used for a wide range of commercial and community uses as well as for the maintenance of environmental quality and aquatic ecosystems. Competition for the use of these resources is increasing. Freshwater resources are finite in terms of both the quantities of water available and their natural configuration. Trends in the changing character of freshwater resources are a loss of free flowing natural rivers, increase in still water

reservoirs through dam construction, increases in depleted, regulated, modified and polluted rivers."

"Despite 18 years of water management under the RMA, freshwater resources are not in good shape due primarily to growing adverse effects of land use intensification via non-point source pollution. In general terms adverse effects of water use are most evident in the lower reaches of catchments but degradation and loss of natural values," that should be, "is moving steadily in an upstream direct. Headwater areas are the least affected."

[2.00 pm]

"The NPS for renewable electricity has the potential to create additional major pressures on the few remaining rivers with hydro development potential unless it clearly favours some forms of renewable energy over others based on the relative significance of the adverse environmental effects. The danger is that power companies will see the NPS in its present form as a green light for new hydro development."

"Central Otago District provides a good example of the extent to which river resources have been modified or lost. At the present time there is only one river (the Nevis) that flows naturally from its source to its confluence without significant modification. All the other rivers of any size (Clutha, Kawarau, Lindis, Fraser, Upper Taieri, Teviot, Manuherikia) have been dammed, diminished, channelised, or have fluctuating flows or serious non-point source pollution. Further major hydro development has been proposed recently for the Clutha River by Contact Energy despite major wind farm developments within the district."

"As far as the Nevis River is concerned, Pioneer Generation Limited has plans to build a 40 megawatt hydro station on the Nevis despite its very high natural, recreational and cultural values. The idea of leaving one river in its natural state seems eminently sensible, particularly when tourism is such an important industry within Otago but it may not happen."

Policy 3, this is NPS Policy 3, "While Policy 3 addresses environmental considerations of the move to renewable energy, it is not sufficiently clear

or emphatic. Having particular regard to the relative degree of reversibility, it's presumably intended to steer developers towards first, geothermal, and second, wind power because of the hierarchy of reversibility with geothermal being the most reversible, hydro being the least reversible and wind somewhere in between. The policy should be strengthened by making reference to other environmental considerations apart from reversibility such as: A, the relative contribution to national power supply from any particular region by comparison with its power requirements." And by way of explanation, "Electricity development does not come without environment cost and it is only fair that these environmental costs should be shared across the country rather than concentrated in any one region. B, the proximity of potential renewable energy production sites to areas of significant energy demand. Energy production sites should be steered towards areas of significant demand to address national grid capacity issues and transmission losses."

"Achievability of the NPS Objective without Hydro Development. Recent evidence given by the Honourable David Parker in support of Otago Fish and Game's application to amend the water conservation order to prohibit dams on the Nevis River mentioned earlier, concludes that the NPS objective of 90 percent renewable energy by 2025 can be achieved without damming every last river noting that there is significant renewable energy development in the pipeline - under construction, consented or in the consent process. A copy of his evidence is attached for your information."

"In conclusion the proposed NPS for Renewable Electricity Generation is important from a global environmental viewpoint but is likely to have unintended consequences within New Zealand unless Policy 3 is strengthened and clarified. It is important that those parties developing electricity generation facilities are steered away from development of New Zealand's remaining rivers for hydro power towards the more reversible options, geothermal and wind (the latter in less sensitive areas)."

"Other environmental issues should be addressed in Policy 3 as well. For example, encouraging the siting of new renewable generation capacity

close to areas of significant demand makes a lot of sense from the point of view of transmission losses and security of supply."

"It is also important that the burden of environment cost is spread equitably across the country and not concentrated in any one region."

"Otago has already paid a high price in terms of rivers lost for power production. Those few with high landscape, natural and recreational values should be retained as far as possible. The alternative, developing them all, will only meet additional demand for a short while but will permanently remove an important element of the New Zealand landscape." Thank you.

CHAIR: Thank you very much.

MRS BAUMANN: I'm jumping into your comments about Policy 3, and you noted again in the conclusion this idea that everybody should bare an equal burden. How practically can that burden - some areas be more - having more resource than others?

MR WATSON: Yes, no, I accept that natural characteristics of different regions have spread and obviously have serious difficulty in developing geothermal power options down here. But at the same time I think that there should be some consideration given to that aspect. In Otago we do generate very much more power than we use, and yet power companies use the self sufficiency argument on the West Coast in favour of some dams, well if that's the case, they should also perhaps apply that to Otago, which is very much more than self sufficient. So yes, I accept the point you're making but I do think that it's something that there should be some kind of pressure on to encourage.

MRS BAUMANN: Moving to an area you don't discuss, and I just wanted to see if you had a view about. This is allied to what we've just been talking about. And that is whether you and your organisation would favour the

idea of having areas in New Zealand which were, for example, no go areas for energy development or that kind of approach to planning?

[2.50 pm]

MR WATSON: Well I think that conservation orders usefully provide for that at the present time through a process.

MRS BAUMANN: I'm sort of thinking more upstream in the sense of through a district plan, rather than having to go through an audit?

MR WATSON: Well I think the difficulty is that district councils tend not to get involved in that sort of thing; they generally see anything in the form of development within a region as effective without looking at the downside.

MRS BAUMANN: If they were directed to sort out the areas?

MR WATSON: Well I think it would be a useful that there are some areas which should become no go areas, and I think that while Fish and Game didn't get involved in the wind farm debate in Otago. It did expose an awful lot of interesting and relevant information about where you should site wind farms and where some perhaps shouldn't be sited. So I think it was an important learning experience for all parties.

MRS BAUMANN: And do you think communities could aid in that and identify areas in which the values are so high, or conversely areas in which if you had to have development that would be more appropriate?

MR WATSON: I think they could, but I think that somehow you would have to have a policy direction to local government to actually pick up on that otherwise they won't do it, that would be my fear.

MRS BAUMANN: That's obviously something that's been suggested to us, that we give a direction along those lines.

MR WATSON: Yes.

MRS BAUMANN: That's all from me.

DR CHAPMAN: I'm wondering if there's - well, our last Otago Regional Council presenter indicated that there was a tendency on the part of district councils not to identify no go areas, to shy away from that on the grounds that land owners didn't particularly appreciate having their options limited. And in some sense it could reduce the property values of the land and I can understand that. What would your response be to that impediment?

MR WATSON: Well I'd agree that I think district councils are probably more the problem than regional councils. And I guess some kind of inclusion in a national policy - some policy element in the Policy Statement could well be the answer to that. I can't think of anything else apart from that to put downward pressure on local bodies to do that.

DR CHAPMAN: Yes. One of the issues I suppose going back to this question of the concentration of development in certain areas. One of the issues is, well, Meridian's response, if I can offer an interpretation of what I've seen to date is that there's no particular reason, given here in equitable or unequal, perhaps I should just say, distribution of resources you've mentioned already. There's no particular reason to say this should be an equal share across regions of generation, or that one has to accept differentials if you like in capacities to generate the different sorts of capacities. It strikes me that there is some merit in that argument that there has to be some inequality if you like. What's your response to that?

MR WATSON: Yes, but practically there's a difficulty there, because with all the rivers with hydro potential in Otago, then you're not going to go looking elsewhere or similarly for wind farm sites. But at the same time, I get the impression that power companies go for what suits them best, and very rarely look at environmental sensitivity in a serious way before they make

a decision about where they want to site a wind farm or a hydro dam. And I think Meridian's proposed dam on the Mohikinui is an example of a river that's obviously in a pristine condition and yet they're just climbing in there with some gusto. Similarly they've built the Hayes wind farm in terms of landscapes and also the pioneer example. Power companies don't tend to classify their options on environmental sensitivity. In my experience they just go for what suits them best in terms of potential capacity and somehow, I think, trying to sort of balance off that with the idea that at some point you should say enough is enough in any one area.

DR CHAPMAN: Yes so they're going to capacity and presumably cost, cost effectiveness. And you're positing a counter argument of environmental sensitivity?

MR WATSON: Yes.

DR CHAPMAN: So it's a question of weighing values as I think others have remarked. Now, is there a way through that by looking at increasing value of scarcer and scarcer resources, in other words, for example, if all rivers in Otago region have been dammed or altered or interfered with in one way or another, then one can argue that the remaining river the Nevis has particular scarcity value, it's like an upward slope and supply curve to use economic jargon. So could one include that as a sort of criterion that one would look to in an NPS, for example?

MR WATSON: Well I certainly think it be a very useful addition, because the response we get to environmental sensitivity is that any scaric (ph) of renewable energy generation is nationally important. And there's no weight given to that increasing rarity or environmental sensitivity.

DR CHAPMAN: So it would be a way of underlining the particular value of a resource as it became more and more scarce by comparison.

MR WATSON: And we hope that wind power would be seen as more of an open book, than relatively limited hydro potential opportunities now in New Zealand. Whereas wind power is much more - yes.

DR CHAPMAN: Yes. Would you see the possibility of using the same argument in the context of wind though, for example, in areas of particular development like the Manawatu where landscape of a certain quality was becoming scarcer and scarcer in that particular district?

MR WATSON: Yes, I think you do need to spread development so that it doesn't consume all the landscapes in any one area. And in an ideal world some overview of all the hydro potential, and some classification of what's most sensitive to least sensitive, that scale, as well as what's most economically viable would be helpful.

DR CHAPMAN: Now we may run into problems with that sort of formulation though in the sense that a classification always requires a great deal of information. But in principle by contrast we just think that something like - I mean as a particular resource became more scarce, particular regard would need to be had to its unique value or scarcity. It might be a little simpler to formulate.

[3.00 pm]

MR WATSON: Yes I agree completely, I think that trying to do a classification across the country would be impossible. We've sort of tried that a bit with rivers and they've always got bogged down, they've ended up as lists in the Ministry of Works publications somewhere which don't have a lot of information but they never really achieve what people set out to achieve. So I think that that's right and you could direct and then expect that decision makers would sort of undertake that kind of exercise in the decision making. It would also give organisations like ours some sort of a

toe hold for an argument about whether a particular resource was rare or not.

DR CHAPMAN: Yes. What I'm trying to explore is the possible range of approaches to this. I mean, one approach is to say, well, we just classify all the areas where you can put wind or hydro, it may not be much of any particular sort in particular districts, but that's the sort of positive list. In the negative list, the no go area that Geraldine was talking about, and that's another option, and then a third option is perhaps to just register the principle of increasing scarcity as a resource of a particular sort whether it be landscape or river or became scarce. If you had to choose between those where would you end up?

MR WATSON: Well I think that the combination is a good one. In some respects having a range of things to be considered, I'm not sure if I'd like to - I guess the rarity would be a priority if you wanted me to identify one.

DR CHAPMAN: I mean one of the factors that's playing in our minds I guess is the indication we've had from local authorities that they'd be resistant to a classificatory approach. Just purely on the grounds of the burden it would place on rate players to undertake an assessment of those sorts. So that does raise a question for us, well what's a cost effective means of proceeding, but to indicate rarity or scarcity or particular value to be avoided.

MR WATSON: Yeah, no I think from that point of view a scarcity direction would be perhaps the most attractive. Because I think the no go area does tend to require classification first, doesn't it?

DR CHAPMAN: Yes, it does yeah, but it can be a statement. The other question I had really was around your proposition of giving weight to minimising transmission loss and recognising the - not contribution that every region makes. But where development is a long way from the end

users it's not so useful, whereas closer to users is useful. I guess the question I have is, how can we practically incorporate that or how could we consider perhaps incorporating that in a policy? Some would argue that it needs questioning about development that close to end users is already incorporated in by the market, in other words developers will gravitate to those areas where there's a ready market, because it lowers the cost of the whole operation; West Wind is close to Wellington, for example. So one could argue that it's already take into account to some extent by the market. But is that a factor that you'd like to see explicitly incorporated in the policy?

MR WATSON: Yes I think I would, it's particularly relevant in Otago where there's a lot of generation capacity in place there's more planned and yet, a lot of the power has to travel a long way, with transmission loss, before it gets used. It did strike me that maybe it was hidden amongst Policy 2, or sort of intended to be included in Policy 2, but in some respects having something more explicit does seem to be more desirable.

DR CHAPMAN: To some extent one could argue that it's covered by Policy 1, Bullet 2, which talks about maintaining and increasing security supply at local, regional and national by diversifying the type or location. But one could strengthen that potentially by talking about the advantages, the cost advantages or the transmission stability advantages of local use.

MR WATSON: Yes, well I think that would be an improvement to do that.

DR CHAPMAN: So being more explicit about that benefit?

MR WATSON: Yeah.

DR CHAPMAN: Yes, that's in Policy 1, yeah.

MR WATSON: From Fish and Game's point of view of course, we're well aware of the large geothermal electricity production potential in the North Island,

and so that fits nicely with this concept. And also it's the least, or the most reversible, and so again minimises environmental impacts, is the most efficient in terms of transmission losses and things like that, and other infrastructural issues. So, yes I think that would be an improvement.

DR CHAPMAN: Okay, thank you very much.

CHAIR: Mr Watson, have you had a chance to look at the draft National Policy Statement on fresh water?

MR WATSON: Yes I have, I haven't looked for a little while but -

CHAIR: But have you made a submission?

MR WATSON: Yes we have.

CHAIR: Did you turn your mind to how that might relate to this National Policy draft?

MR WATSON: I don't recall that I did, I think that probably our focus in that was mostly long point source pollution issues, and rather than hydro development threats. That's my recollection anyway.

CHAIR: There is reference, I think it might be Policy GA, 1GA or something in that draft about structures and I just wondered whether you'd thought about that?

MR WATSON: Yes, I'm not sure that I don't recall making a point of that.

CHAIR: I'd be grateful if you could have a look at that and get back to Josie because we're not sure whether we're ahead or - after that inquiry, we're ahead at them moment but we'll see. The other thing is in the draft policy statement we're inquiring into there's reference to small and community scale distributed renewable electricity generation which refers to electricity generation capacity of less then 4 megawatts. We've had some

submissions that that might be better to 10, now those submissions relate to the way the electricity regulations lie and but, what is the Fish and Game's view on the small community projects?

MR WATSON: There are a number of small hydro schemes in place in Otago ranging in size from less than a megawatt up to 4, I think the Taviot scheme is, we haven't been all that happy with every single one but we have been comfortable retrofitting of small schemes onto irrigation dams like Paul's Dam, I don't think that's proceeded yet but it's something that's likely to occur. I think we would favour keeping that level lower because otherwise you create another incentive to develop small streams in addition to the big developers working over the large rivers. So I think it would be a favourite staying where it was.

[3.10 pm]

CHAIR: Yes, well we had a number of submissions on scale which is a sustainability issue really not only with rivers but with wind farms and various things. And we've had some evidence about generating capacity of large irrigation raised for instance having a small turbine something like that. And I realise that there will be implications for your organisation, wherever there's a water course there's fish in it. With the with region C tag, do you - we've heard evidence today about a view that would be helpful with reconsenting if there were working parties set up in each case. So rather than having a direction rather than being left to the resource consent conditions there would be a direction in a district plan or regional plan or whatever. That before you move through your reconsenting process there needs to be some community group that works with the applicant. Have you got any views on that?

MR WATSON: I'm not sure that our experience would support that I think if you get sort of hardened positions within the community you're probably going to have conflict down the line. We've been involved in reconsenting of the

Waipouri scheme, just outside Dunedin here, and the Contact Clutha dams. Both of those were relatively non-controversial, and they're reasonably, we were both arguing for what we wanted but we got to a common position without too much difficulty. I don't know that we needed help to get and we didn't end up in any appeals with either case. Also we've been involved in the reconsenting of a number of irrigation schemes in Central Otago, and none of those ended up in appeals as well, and we accepted the reality of existing bricks and mortar and had to work within that obviously, in seeking more up to date environmental mitigation measures. So yes I'm not sure that because in most of those cases the applicants were working one to one with us, so being involved in a bigger working party I'm not sure that would have worked particularly well.

CHAIR: Yes it may be a matter of scale.

MR WATSON: Yes.

CHAIR: That sort of evidence has come from the likes of the Matapouri scheme. Well thank you very much and that further information if you could just give it to Ms -

MR WATSON: Yes.

CHAIR: And we appreciate you presenting today thank you Mr Watson.

ADJOURNED [3.15 pm]

RESUMED: [3.30 pm]

*Audio **File: Pioneer generation***

CHAIR: Welcome. We, just to let you know, that we are recording everything you say, which well end up on the website. So it's out in the ether. And we're comfortable with however you want to approach, if you want to speak to your submission or read it or whatever. And I won't introduce us because you have already met us all over the adjournment. Thank you for attending.

MS MACLON: Thank you Mr Chair. I thought I'd just give a brief run through of the evidence and then go from there. (Reads evidence. Refer reader to B. Malcon Evidence).

CHAIR: Thank you Ms Malcon. Now, would you like us to ask you questions or do you wish to make a further statement?

MR MULVIHILL: No, no we're quite happy to answer questions.

CHAIR: If we follow our normal procedures. Yes, thank you.

MRS BAUMANN: Well starting with Policy 1. (Inaudible) expansion of the benefits. Why have you picked on the ones you've identified when there arguably could be more?

MS MALCON: There could be more. That's right. There's more pointed out in case law, and I think, Genisis' case law would be a fitting case I think. We picked on these particular benefits because assisting Government to achieve international climate change obligations is quite an obvious benefit of renewable hydro electric power generation. Maintaining or

reducing transmission losses at a local scale is something that Pioneer does with its small schemes and maintaining or enhancing New Zealand's reputation as a clean green nation, New Zealand passes itself off or would like to be seen as a tourist destination and clean and green at that, so renewable electricity generation helps to achieve that. If you look at say - if we were putting in a whole lot more new non-renewable schemes, that - it doesn't look very clean and green.

MRS BAUMANN: Do you not feel that that is in effect covered off by the objective of the 90 percent?

MS MALCON: It may well be covered off by the objective, but I think by expanding on the policy you're promoting these ideas in decision makers minds. We thought that by expanding Policy 1 - you may in some plans, perhaps decision makers might just put those particular few points that were put into Policy 1, were thought by making the list a bit bigger, it makes people think about things a bit more and what other the benefits there are out there.

MR MULVIHILL: I'll just add to that. Some decision makers, well we've found, do interpret the core principle very well. Others need to find that some of these things need to be a wee bit more explicit.

MRS BAUMANN: Well moving on to your comments about Policy 2. What intrigued me is this bit about Conservation land. Remind me about the constraints about development of Conservation land.

MR MULVIHILL: Well I can comment on that a wee bit. Probably not so much the Conservational land as Crown owned land. To give you an example, and dare I say it, the Nevis, but we have a separation in the Nevis Valley where we own two pastoral leases and to actually meet in the - to actually

gain any form of tenure over those properties to ever develop any potential hydro scheme we actually have to gain a freehold title over that area. Under the existing pastoral lease legislation, as far as we can tell, development can only be for pastoral purposes. So the step there is that we are going through a tenure review, and obviously the Department of Conservation are involved in that, and there can be some conflicts in terms of their statutory or their obligations in terms of achieving the protection of public interest and I suppose our effect.

MRS BAUMANN: And really your submissions were perhaps more directed at pastoral leases than just Crown land, which may have a few hurdles but nothing like the hurdles that pastoral lease has, because it does - the way a pastoral lease is actually set up, by statutes -

[3.50 pm]

MR MULVIHILL: I suppose that's right, and the other thing too is I think we are getting really large tracks of land basically sealed off as a Conservation state. Now where we've had problems in the past is say marginal strips. During our development of the Horseshoe Bend scheme on the Teviot River, one of the major hurdles was actually finding a way to get some form of tenure over the marginal strip where we were constructing power houses down (inaudible), and this was a major hurdle for DoC to work around too, because the way that a Act is set up, originally that has changed a bit now, because we work through the concession processes, but working through that there was some really big hurdles there. We've talked about transfer of land and then it had to be transferred to the betterment of the conservation values, so there were issues there. There's sort of just those sort of aspects. Where there is a reasonable case, we feel that these areas shouldn't be just locked off for the sake of it because of some form of statute or we have to go to a special - get special

pieces of legislation put in place to enable these sort of activities. This is a reasonable case. Obviously, we're not going to pitch a case to have a go at, dare I say it, putting a wind tower on Mount Aspiring. These have got to be reasonable areas or, I think there was a case in the coast where the Dobson power scheme was flooding a small area of Conservation land and there may have been cases there for the transfer of those land, or replacement of that land with other estate that may have better fitted the conservation purposes. But there seem to be a lot of hurdles to go through that process from our point of view.

MRS BAUMANN: So really you're advocating for amendments to those statutes, the Conservation Act, etc, to -

MR MULVIHILL: Well I suppose under this policy I can't advocate for that but -

MRS BAUMANN: No. Well yeah, it's actually quite a hard nut and I'm trying to think, how would one to crack it, yeah.

MR MULVIHILL: I suppose it's like your previous respondent, whether we're going to shift back to a zoning type regime where you don't touch that area and who comes here, we've moved away from that into an effects based system, sort of moved back a bit. So we're just a bit conscious of that.

MRS BAUMANN: Shall we jump to -

MR MULVIHILL: Sorry I hope I've answered your question. I've probably created more of them.

MRS BAUMANN: Shall we jump to Policy 4 because you were in two minds. If you had to choose, which route would you like?

MR MULVIHILL: Policy 4.

DR CHAPMAN: Thinking of no go areas in Policy 4?

MRS BAUMANN: Yes. I mean you had two farm areas that were too tight -

MR MULVIHILL: I think there is a bit of contradiction here.

MRS BAUMANN: Two routes of relief and I'm just saying because you weren't too sure which - what that policy was directed at. We aren't either, so we feel we can go either way. If forced to, which way would you like to go?

MR MULVIHILL: Well I suppose we're after a policy that doesn't put undue impediments in the way. Now as soon as you make that a proactive obligation on Council, it gets a bit interesting.

MRS BAUMANN: To actually go out there and confront the issue?

MR MULVIHILL: Yeah, yeah. Without a contradicting - there's a risk of - but yeah -

DR CHAPMAN: Interesting in the sense of difficulty?

MR MULVIHILL: Yes.

MRS BAUMANN: It's challenging.

MR MULVIHILL: Challenging, yeah.

MRS BAUMANN: Yes so you really would prefer your second option there if it's open to us.

MR MULVIHILL: Yes.

MRS BAUMANN: Policy 3. Because of the suggestion that because of reversibility, it wouldn't exclude hydro but it would work against hydro. Have I got that right?

MS MALCON: That's right. I think anything can be reversed. It's a matter of time and cost as to how things can be reversed. I mean a wind farm's probably a lot easier in that you can take out the turbines. Hydro schemes and taking out a dam is going to be a whole lot more litigation that's required around that. I think that Policy 3 really just makes it harder for hydro.

MRS BAUMANN: Yes. Now we've talked about Policy 4 and you said you prefer the softer approach in the sense that it's not requiring local authorities to go out and draw lines on maps or zones on maps or anything. Policy 5, your argument is that as far as environmental degradation or effects, that up to 10 megawatts it's acceptable to be - rather than 4 megawatts?

MR MULVIHILL: Yeah these are still relatively small schemes.

MRS BAUMANN: Jumping now then to another question, you've had - which is the next area of re-consenting. You've had some obvious experience to re-consenting. Can you just tell us some of the learnings you've had or experiences you've had to support that idea renew policy.

MR MULVIHILL: Well I suppose we're pretty interested in not going back to 'before we were ever there' situations. I think it's fair enough to definitely look at effects, fixed effects that weren't originally anticipated, and ongoing effects that are annoying sort of entities etc. So it's worth looking at those. It's the ones where you get dragged back to what was it like before, that really many parties haven't really found an issue over the years. I think that's more what we're looking at.

In our consenting experience, to be perfectly honest, if you take the time and you take a culture in there of talking to people and dialogue etc, we've had a pretty good - we've had pretty good experiences and whether that's - we haven't got a litigious type approach to these things. We generally haven't been - over the last 20 years I've been involved with Pioneer Generation predecessors, we have not yet been to the Environment Court through hydro schemes. We've consented quite a few new ones. We were involved in consenting at least three or four new ones, and we've consented something in the order of two or three older ones. The re-consenting generally took quite a long time 'til we worked through it, and we ended up with outcomes that we were pretty happy with and I think the people, the stakeholders were pretty happy with. We've taken a view I suppose, sorry I'm probably - whether I'm adding value here I'm not sure, but we take a view that we are a long term operator using natural resources. Therefore, not only have we got to consider a short term gain, we've got to consider the long term relationship with the stakeholders and will try to achieve outcomes.

MRS BAUMANN: Is it true that most of your schemes, and we'll put the Nevis to one side because it isn't here, are run of the river?

MR MULVIHILL: Yeah, well generally but we have storage facilities especially on the Teviot River and at Monowai.

MRS BAUMANN: And Monowai, yes.

MR MULVIHILL: Yeah, Lake Monowai itself is quite a large storage.

MRS BAUMANN: Yes, yes that's right. I've got no more questions, thank you.

DR CHAPMAN: Just following up on the re-consenting, we earlier today had a statement about re-consenting that perhaps I could read out to you. This is from Mrs Chris Henderson and she said that, "Re-consenting these power stations provides an opportunity to redress mistakes made during the original consent process when many of the adverse environmental impacts were not so obvious." How would you respond to that?

MR MULVIHILL: Well it's true. It is an opportunity. I suppose the question mark as to what degree you go back to reversing or mitigating those issues and I suppose that's where the difficulty or the judgment call lies. And I'm probably not helping you there.

DR CHAPMAN: It's just how far back you go.

MRS BAUMANN: How much more could you claw back or however you want to think about it.

[4.00 pm]

MR MULVIHILL: Yeah it's an interesting one 'cos I'll give you example and I'm not being flippant here. In that Fraser scheme I had a fair bit to deal with DoC, in terms of the intrinsic value of water, in terms of rushing down the stream and stuff like that and I said, well look, I suggested, and you might have me on about this, but I suggested well what we should do is go up

there one and we'll get 30 people to stand on the bridge and say, look, this is the flow, judge two or three flows coming down. What do you think would be an operable flow and they said, oh yeah, no that would be a great idea. That would give you a sort of a bit of an indication. This is water that's not coming out of the stream. It's going through the hydro - and I said, well really ideally what we should do the next day is take them up there and say, well that flow will give you a shower every day, and that flow will give you a shower every two days and that flow will give you a shower every five days. Which one do you choose now? Now what I'm saying is that the connection - and we are, we have a problem in the hydro industry. There's no connection between the effect - what's going on and the impact on life. We saw the situation last year on TV where they suggested somebody suggest that we go back to six litres a minute for a shower or something like that. There was a public outcry, and I was thinking, hold on a second, there's - I don't think we've quite got that connection yet. It's a bit of a personal crusade there.

DR CHAPMAN: I don't really have too many other questions actually. I thought it was clear. Oh I know, yeah, there was a question I was going to ask you, yeah. There's recently been a report in the Otago Daily Times about local Government move to protect special areas from wind farms, which I thought was quite interesting, 26th of May. I don't know if you actually saw that. And there was some criteria suggested by, I think it was, Gore District Council, oh no, Palmerston North sorry. Palmerston North City Council, which called for a remit on the wind farm debate to be tabled at this year's Local Government New Zealand national conference, but the point I'm wanting to make is that he was proposing, this person from Palmerston North, was proposing that there be a minimum distance restriction from private residences, and an allowable maximum saturation of an area skyline and a definition of iconic areas on which turbines cannot

be built. So there's sort of three conditions there, or three criteria I guess. What do you think about that sort of approach? How should we -

MR MULVIHILL: Well again you're going back to this - in terms of zoning, you're saying, well look - and that's a big assignment in terms of creating these areas, talking about - okay, you specify conditions in terms of limiting noise etc. Yeah but they are -

DR CHAPMAN: Excluding certain things.

MR MULVIHILL: Yeah, yeah that's right. That's sort of achievable but you're sort of trying to say well look - and what's important to one part of society is not necessarily as important to others. I think, from our point of view, we are finding, resistance even concerning small wind farms. So that's happening. There's definitely, I suppose the same case where we don't want to see every river dam, we also don't want to see every hill with a wind turbine on it either. So I think you still - the question mark is there is relative benefits of both systems in terms of zoning versus - (inaudible) versus treating everyone on those merits. But I think the individual district's got to decide what the values are within a district that they want to protect, and I think it is a good policy that the District Council press on through their processes.

DR CHAPMAN: They decide if the Council - what values they - they articulate those in their plan or in their testimonial.

MR MULVIHILL: I don't really see another way.

MS MALCON: Each district or region is going to be completely different anyway in terms of what values that they have, so it is easier if it is set -

MR MULVIHILL: Set out explicitly.

MRS BAUMANN: (Inaudible) directed to do that but not -

MS MALCON: Yeah I think direction can be given, but that would be done, but I think they need to set out the criteria at their own level.

MRS BAUMANN: Through the normal sort of democratic process. Can I get back - because another topic has just occurred to me, thinking about your business and we have heard submissions about the way that hydro and wind provide each other with a hedge. Have you got any comments about that from your business model?

MR MULVIHILL: Well I think we gave evidence in the past few days from our point of view we don't see wind as being the panacea from New Zealand's energy needs. Our reasons for that is you can't store it, and you've almost got to 100 percent backup. In our case we don't - at a smaller scale level we don't see while - we are still base load producers in terms of what we can produce out of the hydro schemes and the wind. We will take it as it comes. Whether we start matching up the fact that we turn - we cut back our storage. If we've got the wind producing, yeah it's a bit - we're too smaller scale to consider that -

MRS BAUMANN: To have that as an important part of your business model.

MR MULVIHILL: Yeah. There may be opportunities especially for the larger generators to do that. I couldn't say I'm an expert on that at all. I wouldn't have a real feel for that.

DR CHAPMAN: You're feeding into a grid which does that effectively at a bigger scale, yeah.

MRS BAUMANN: And don't have retail -

MR MULVIHILL: No we don't have retail

MRS BAUMANN: But Gentaylors (ph) have that.

DR CHAPMAN: You're not a Gentaylors (ph).

MR MULVIHILL: No.

MRS BAUMANN: No, well you could be.

MR MULVIHILL: Well I don't know about that. That's a whole new set of things.

MR GARDINER: I'm just interested in the size of your company. Are there many others like yours around the country, because I'm looking at the size of four versus ten, I'm trying to understand -

MR MULVIHILL: Yeah, well I suppose King Country would be about the similar size, but TrustPower and Genesis and that and all those other larger ones are far bigger -

MS MALCON: TrustPower's probably the next step up and -

MR GARDINER: It's probably (inaudible), while we have the threshold at four.

MR MULVIHILL: Well we couldn't figure it out either.

MR GARDINER: But from your point of view, given what I'm seeing in paragraph 40 and 41, that doesn't make sense, your 7.6 to you, there's a small -

MR MULVIHILL: There's still a quite small charge.

MR GARDINER: But within the current definition that would be not small?

MR MULVIHILL: No.

CHAIR: In the submission I'm not sure who - there was reference to activity status, non-complying activity status, have you given much thought to using the activity status of smaller projects as a way of encouraging, bearing in mind that we have here a policy to identify the fact that renewable energy, or electricity, is the national interest or nationally significant, and the inferior plans at the district or local authority level are going to have to, under this draft policy, do something to recognise or promote the - well if we say 10, because 10 megawatts is probably - now you can do it by activity status I suppose you could say it doesn't attract the full discretionary activity status or something like that, but have you thought about that? In a planning context you could do -

MS MALCON: We hadn't thought about that in terms of our submissions, but you could allow for a smaller scale scheme perhaps as a controlled or restrictive discretionary activity. That would, I guess, enable that activity to be developed more easily.

CHAIR: Yes and your restrictions would cover the environmental issues, your restrictions on it, for restricted discretionary. It's just, you can have general words but then how do you actually implement them if you are a local authority and when it comes to your proposed wind farms, what size towers are you looking at?

MR MULVIHILL: The ones we've got at the moment are around about 45 metres high, and they are going up to I think to the wing tips, around about 65 metres.

[4.10 pm]

CHAIR: So are they imported or are they the local Christchurch -

MR MULVIHILL: No, they are imported, yeah. They are actually second hand turbines.

DR CHAPMAN: Are those the 750 kilowatt ones?

MR MULVIHILL: Yeah. The other ones we were looking at - we haven't really looked at - we are still on the consenting side of this Mount Stewart -

CHAIR: Mount Stewart, right. So what is, I don't know the zoning of Mount Stewart, but what - do you know -

MS MALCON: No.

CHAIR: Is that a discretionary activity or -

MR MULVIHILL: I'm sorry I don't know.

CHAIR: No, that's all right.

MR MULVIHILL: We've only just purchased the property and I'm not an expert in that area.

CHAIR: Right. But how - yes, because just picking up on some of your answers before. We have had a number of submissions saying that from a national perspective rather, than a local perspective it's pretty clear those areas are much better for wind than those that aren't, and you've seen the maps so - And clearly in some of those areas, District Councils have identified outstanding natural landscapes and things like that, so you know there's going to be difficulties locating a wind farm there, but some areas, there's just nothing. There were no controls.

There's nothing that you can look at as a relevant consideration, but could be very good for wind, and then there's a real difficulty because the parties then get into opposite camps and it's a value judgment basically, and quite expensive it seems, the way these run on and once again, I'd be really interested to know whether from a planning perspective, designing planning instruments, resource management instruments, how you could actually use the identification of these areas as the basis for promoting renewable energy or electricity, while at the same time protecting other values.

Now that's - I understand what you're saying about zoning, I can see that, but we are getting submissions to say it would be really helpful to say - encourage in that area, don't encourage in that area. Because the other values in that area are just so paramount. The Section 6 values for instance and it's just not worth it. Whereas that area encourage it and this is the criteria. Tell us, rather than us going through all these lengthy hearings all the time and tell us how many is too much, as far as cumulative effects, give us some direction. That's the message we're getting from other people. So you can see the conundrum, the dilemma.

MS MALCON: I can, and if you go back to the alternative approach I guess, maybe not no go areas as such, but if you were looking at values like an

outstanding landscape area, you could, in terms of the activity status, make it a lot harder to develop renewable electricity generation in that area. That gives a new developer I guess a steer as to how difficult it's going to be to do something in that area of whether they should perhaps be looking at another area. I think you can - in some outstanding landscape areas you can possibly still do some activities, but maybe make the activity classification a lot higher.

CHAIR: And it may be a question of scale. Your towers are considerably lower than some others for instance, which is a landscape choice.

MR MULVIHILL: Yes. Can I just say something in terms of - and I'm a planner and they keep quoting me these discretionary and limited discretionary and whatever. My impression of the processes involved in getting consents is that you don't know, no matter what you want people to have the ability to have their say, but in doing that you don't want them to have the ability just to hold you up for the sake of it. We always want people to have the ability to have their say. I think there should be - if you end up with a process of locking people out, I think it's not long - in short term it might be a gain to a company, but long term there's always issues.

CHAIR: Yes. Well it may be too that we have enough experience now, and I'm talking about wind farms now, to say that these are the criteria that we should focus on rather than should we have renewable electricity. That argument which comes up each time now. That could be a policy that should have renewable electricity - but it's really just raising things, I just wonder whether or not you considered - it's more of a drafting issue, but I take your point and it would be unusual to suggest that something be controlled if there are other Section 6 values or a set of values.

The question of scale and sustainability is an issue and you are the first submitter who has come to us with this scale of operation. Tomorrow we hear from a larger generator company, and I'd be interested in your views about whether you think the National Policy Statement should be - could be beefed up when it comes to promoting smaller scale rather than larger scale. The larger scale inquiry, because of the nature of it is probably going to be more extensive because of the size, whereas -

MR MULVIHILL: We've had Fish and Game coming to us for years saying, well we were saying, well look we think small scale is good and they're saying, the cumulative effect of 10 or 20 of yours is far greater than the single effect of a large - but that argument could be played both ways, and you usually find it being played both ways as well. So yeah it is - unfortunately it is a horse for a course. That's a cop out I suppose, but just sort of start saying, well a particular size has a (inaudible) and a cumulative basis, you run into a bit of a issue.

CHAIR: Yes, so it's up to the community to decide whether small is beautiful.

MR MULVIHILL: But I mean it's also up to a developers, such as our own. The expectations of providing something that is acceptable has become - the bar is getting higher all the time and we've got to meet that, and it's not just here, it's overseas. I don't what to digress again but I mean I was just at a meeting in Brazil at which one of the people involved was from Sweden, and the large electricity company there has gone to the stage over there where they actually have a vote, a community vote on the transfer of water between two spots. You may be aware of this, I don't know and it was 51/49 or something like that.

MRS BAUMANN: Very close.

MR MULVIHILL: Very close and they stuck by it. We are rich enough to have these arguments, these debates and that's - I'm not suggesting we go there, but I'm just saying -

CHAIR: Yes, but it's really to hear from you as to how best a National Policy Statement could promote renewable electricity while not compromising the other values -

MR MULVIHILL: I think raising the profile was - the District Plan -

CHAIR: Yes. The thing with the hydro though which you're involved in, often there are several districts involved so we get into the regional water plan issues and we've asked the Otago Regional Council first to go away and come back with some suggestions because we're - you probably at the Nevis would go through, is that in one district is it?

MR MULVIHILL: Yes it is.

CHAIR: Oh well that's - yes, whereas the Clutha for instance -

MR MULVIHILL: Yeah, you're over several -

CHAIR: That's several districts. We'll work through it. But thank you very much for your presentation and if there's anything else you wish to - as a result, coming out of this, you wish to raise, just send it to Josie.

MR MULVIHILL: Thank you.

CHAIR: Do think about that activity status issue and the criteria - how you say the criteria should be to the community and I can understand that, it's a

question of whether some criteria such as these wind districts should be dealt with at a national level that we need to grapple with.

MS MALCON: We'll definitely have a look at the activity status.

CHAIR: Yes, thank you.

MR MULVIHILL: Yeah you've given us food for thought in terms of whether -

CHAIR: Right, thank you very much.

MS MALCON: Thank you.

ADJOURNED [4.20 pm]