

Concluding Statement on the Conference And Closing

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Dr J Morgan Williams: Parliamentary Commissioner for the Environment.

So, where to next, and what are some of the things we should be focussing on?

I will start with a general observation. There are three basic resources that are fundamental to society's security in a sustainability context and they are worth reflecting on. They are soils, water, and energy. There are others but these three are very important in New Zealand; they are absolutely fundamental to our basic qualities of life supported by our biotic economy.

Turning to the conference the first observation I'd make, one that came through very clearly, is that New Zealand has plenty of passion and capability focused on designing and delivering our energy futures. I'll come back to how we harness this passion and capability.

A second observation is that the conference, and the media in the energy area over the last couple of years, has been rather supply-side focused. We have had a few defining events, and that's tended to shape the debate.

Another point of note is that the supply-side focus tends to be led by a few players, (a point made by several people), whereas demand-side focus is scattered more widely across society. That's a really important one to think about because there's a lot of design issues on both sides, but particularly on the demand side. Think of buildings, transport systems, appliances; the list goes on and on.

A point of relevance here, that we've identified in several Parliamentary Commission for the Environment studies, is that we all need to focus on barriers to change. Barriers to adoption of new technologies, which start with barriers in our minds, are very widespread. We don't tend to focus on them. Until we do, we can't often start making progress.

OK. Let's look to the future - what's needed? The **first** 'action area', which you've all identified, is the need to develop a long-term vision and strategy. In other words, know where we're going - the big game plan.

To take a vision and strategy forward needs some key building blocks. The first is that it is essential to have good research capacity in a big systems sense. This is one of the things the New Zealand energy sector desperately needs. The individuals are largely around but it's how we bring them together and resource them that needs attention.

Across the Tasman, for example, some divisions of CSIRO have been doing a lot of systems work relating Australia's resource base to population, and thus Society's demand side. They have just released a study, the first in the world, that links three population scenarios to resource demands and impacts across a large number of resource sectors. It is a sophisticated linking of resource flows, infrastructure designs, changes in technologies, and abilities of (for example) the Sydney air shed to carry certain amounts of pollutants with different technology mixes through time, changes in population, and so on. (See CSIRO Website for a report entitled "Future Dilemmas: Options to 2050 for Australia's Population, Technology, Resources and Environment". http://www.cse.csiro.au/research/Program5/National_Futures.htm) We don't have such capacity in New Zealand and until we do, we can't get a robust "energy futures" dialogue going.

Recently together with 18 other Kiwis, I went and looked at the Brazilian city of Curitiba. One of the contributions to the success of that city's management of growth over 35 years (from half a million to 1.6 million in a region with 2.7 million people now) is that they have an urban planning and research institute. It had been a knowledge powerhouse for the evolution of the city since 1965 and tightly linked in to the infrastructure planning and development of the city.

The second thing about a long term vision and strategy that seems to be fundamental is to have a process which will keep it alive. Strategies and visions are not an end in themselves. We often put them together with lots of enthusiasm, but to be effective we must keep them evolving for 10, 20 or 30 years, as Curitiba has. In the New Zealand context, what we need to do is think about a model that will survive our very short electoral cycles.

There are a number of ways we might approach keeping strategies alive, evolving and on target. One model that we (PCE) looked at was the one developed to facilitate implementation of the mental health strategy. You might say, "That's a long way from energy!" But it is a model which addresses the needs of a multi-player sector. The model consists of a Mental Health Commission charged with the responsibility of ensuring all the mental health agencies and stakeholders are delivering the intent of the strategy. It has a limited life, initially it was five years, but was extended to eight. So, if you're going to have an electricity industry/sector strategy, which we need, think about how you design (with the players), something that will keep it alive and evolving.

The **second** 'action' area that seems to be coming through relates to how we break out of existing paradigms? How do we get beyond business as usual? If you look back through history, what tends to shift us are major shocks; defining events. These tend to be catalytic events that jolt us and send us off on another pathway. We have got to look at our energy futures in terms of how we shockproof them. We need to think about what the tipping points are going to be. For example, there's enormous potential instability in the Middle East, the world's relationship to Islam. I don't think we can begin to understand how much that could influence our energy futures.

So we need to think about lessons from history in terms of the tipping points, and what this means if we only plan for incremented change.

A **third** matter that needs improved understanding is the role of markets and governments in allocating resources such as water, electricity, fossil fuels etc, and in investing in long term public good infrastructures like roads, dams, sewers and airports. Research that I am seeing is suggesting markets are efficient at allocating resource flows; the rapid movement of materials, energies, goods, services through economies; but they're not as good at assigning the original price to a resource - witness Maui. Similarly, markets are sometimes not as good at dealing with infrastructure investments with design lives of 20 to 100 years. So what this suggests is that we need more rigorous analysis of where market mechanisms work really well, because they certainly do in some places, and where don't they work well. I believe that's a tension we've getting in the evolution of our electricity industry, which is one of the reasons why we've got an Electricity Governance Board. We've not had clarity of understanding of where markets can deliver to society's needs versus other mechanisms such as regulation.

My **fourth** point is a need to critically examine public/private partnerships. In the Brazilian city of Curitiba public/private partnerships are used for the city's public transport and housing. They appear to have delivered a lot to the city's citizens and businesses; for example, the public transport systems operational costs, delivered by 12 bus companies, are fully funded from the passenger fares.

My **last** point, which has been raised, is the sophistication of our energy consumers; that is their power to influence choices. In other words it's not simply a matter of "educating the consumer", it's about raising the whole understanding about where energy fits into advancing the quality of life of New Zealanders – because that's the end game. Going back to the Brazilian city. We kept asking the business and civic leaders "What are three critical things that have contributed to this city's development over the last 30 years?" They said "Our focus is on quality of life, on education and the city's infrastructure; out of these economic opportunity grows." And the city's GDP has grown at about 6-7% per year for the last eight years.

So I believe improving understanding, across society, as to energy's contribution to "quality of life" is essential. As with water, we all need to appreciate its true value and focus on using it efficiently.

That's enough from me. I would like to conclude by saying that I and my electricity team (led by Doug Clover, Principal Environmental Investigator), look forward to working with you in what is a tough but exciting field, where there's extraordinary opportunities for New Zealand. I sincerely believe that, and believe New Zealand has got a lot of the capabilities to be a leader in the development of a more sustainable electricity future.

Thank you for the opportunity to contribute.

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Rob Whitney:

In closing I want to say very little, but I do want to thank all the participants in the conference, and especially the speakers and the session chairs, particularly the session chairs today who had a big ask. We gave them a big task and I think they have done a wonderful job.

I want to thank you all on behalf of the Energy Federation and if I may, John Blakeley, on behalf of the Sustainable Energy Forum for participating in the conference and supporting us.

And I want to thank our sponsors.

Without all these sponsors that have helped in a variety of ways, this conference would not have been possible. And finally I thank my fellow committee members who put all the background work in, and Trevor Matheson has organised the conference and then went off to Japan. So thanks very much and have a good evening.

And I promise we will do something with the information coming out of the conference. And we will look to move forward this analysis further so we can proceed to the next stage.

Thanks very much.

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