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Expert roundtables on thorny questions for a net-zero NZ

Summary of Roundtable 4: Directing Mitigation Policy and Action for Results

13 April 2018

SUMMARY HAIKU

First to see the light;
New Zealand can show the world
what is possible.

INTRODUCTION

This was the fourth and final roundtable bringing together diverse experts from New Zealand and overseas to shed new light on particularly thorny questions for New Zealand's low-emission transition. The road to a net-zero future is paved with challenging questions for which there are no definitive answers – just choices to be made under uncertainty and consequences to be faced under risk.

Motu convened the roundtable in collaboration with the New Zealand Productivity Commission, the Institute for Governance and Policy Studies at Victoria University of Wellington, and the Environmental Defence Society.

His Worship Justin Lester, Mayor of Wellington City, provided opening remarks. Keynote speakers Prof Cameron Hepburn (Oxford University and Grantham Research Institute) and Jason Gray (California Air Resources Board) together with Murray Sherwin and Geoff Lewis from the Productivity Commission and Dr Suzi Kerr from Motu gave presentations which are available online. Distinguished panellists and experts discussed challenges surrounding the design of an integrated climate change policy package for New Zealand.

This summary is intended to synthesise the range of issues raised during the presentations and discussion. It does not present a comprehensive account, consensus view, or conclusions shared by individual participants. Issues raised during the wide-ranging discussions have been loosely grouped into three themes: social change, policy and regulation, and the Productivity Commission's low-emission inquiry.

PRESENTATIONS

His Worship Justin Lester welcomed participants. He noted that the debate has shifted from "Is this real?" to "What is the right action to take?" Wellington has the lowest emissions per capita in New Zealand, and its strategic focus for mitigation is transport and waste. He said he believes New Zealand can take big, bold and audacious steps on this issue as it has done for other issues in the past, and reminded participants that actions speak louder than words.

Prof Cameron Hepburn presented on "Policy for a Net-Zero New Zealand." He explained that stabilising temperatures implies net zero emissions of long-lived GHGs. Different studies identify different time frames for achieving this globally. He suggested that a goal of net-zero emissions for New Zealand by 2050 would be an appropriate one in the global context. Achieving that kind of ambitious target will require a policy package addressing technology, infrastructure, economics, finance and carbon removal. Regarding technology, he recommended building a portfolio of "bets" and mentioned Mission Innovation, in which 20 large countries are doubling clean-energy R&D. Regarding infrastructure, he recommended avoiding assets that will need to be written off. For example, it would be preferable not to invest in natural gas a stepping stone to renewable energy, but instead to make the jump to renewable energy. Regarding economic incentives, he emphasised the importance of a credible long-term carbon price signal. For effective finance, investors need clarity over business strategies. Regarding investment in fossil fuel companies, Oxford advises investors to look for companies' commitment to net-zero emissions, development of a profitable net-zero business model, and quantified mid-term target for reducing emissions. He noted the potential merits of introducing a Green Investment Bank to stimulate finance. He also

noted the importance of net-negative-emission technologies. When developing an integrated policy package, it is important to coordinate policy setting under an ETS cap to "avoid killing no birds with two stones."

Cameron briefly discussed the UK experience with integrated mitigation policy. The UK is not on track to meet its future legislated carbon budgets. One of its policy success stories has been its carbon price floor, which has helped to remove coal from the grid. He noted an initiative in Leeds to convert the natural gas system to hydrogen, and one in Sweden to develop carbon-free steel using hydrogen. Studies suggest it would be feasible to ban ICEs from 2030. Households have faced higher energy prices but lower energy costs because of increasing efficiency. He said that policy approaches need to be resilient to political shocks. He noted that we had time 20 years ago, but we don't have time now.

Jason Gray presented a "California Climate Policy Update." California is on track to reach its 2020 target of returning emissions to 1990 levels. Its climate change policy is integrated to achieve multiple mandates for emissions, air quality and public health, and it includes both an ETS and regulations for both capped and uncapped sectors. Its ETS covers 80% of state emissions. ETS obligations have fallen for those subject to regulation, but the ETS price floor has maintained a carbon price across the economy. About 60% of the mitigation effort can be attributed to policies, and 40% to the ETS. In December 2017, California adopted a new Scoping Plan for achieving its 2030 target (40% below 1990 levels). It includes measures for increased renewable energy and energy efficiency, short-lived GHGs, transport, sustainable community development, and adjustments to its ETS. Its ETS currently operates with an Allowance Price Containment Reserve which will be changed in the future to a hard price ceiling. The cap has been developed using transparent processes. He discussed the protocols for offset units that are accepted in the ETS. California's ETS is currently linked to those in Quebec and Ontario. So far, over US$7.1 billion in revenue has been raised by ETS auctions and the carbon price is influencing investment decisions. ETS changes for the post-2020 period will be agreed by December 2018.

Murray Sherwin and Geoff Lewis presented on "An Inquiry into New Zealand's Transition to a Low-Emissions Economy." This inquiry was commissioned by the previous government and endorsed by the current government with some adjustment to considerations regarding mitigation ambition. The inquiry focuses on options to maximise benefits and minimise costs from the low-emission transition while growing incomes and wellbeing. It considers how this can be supported by regulatory, technological, financial and institutional systems, processes and practices. The presentation gave a preview of some of the modelling results to be included in the draft report, which had not been released at that time. The modelling was undertaken by Vivid Economics, Concept Consulting and Motu, and explored three scenarios for technological change under two levels of target ambition (net zero emissions by 2050 and 25 Mt of CO_2e emissions by 2050). The various scenarios were exploratory, not recommendations or predictions.

Key insights were (quoted):

- Achieving net zero by 2050 is possible but, without help from technology, will require very high emissions prices
- Expansion of forestry is key, but poses a challenge after 2050
- Dairy output does not change much, but sheep & beef sees a significant decline
- Expanding the light vehicle EV fleet and clean electricity generation also important (but don't aim for zero- emissions electricity!).

Dr Suzi Kerr presented on "Challenges and Priorities for Integrated Climate Change Policy Solutions." She noted that New Zealand will have the greatest impact on global emissions where it can influence others and help them to act. New Zealand's low-emission transition will require changes to investment (including education), technology and practice and consumption patterns. In the land sector, we will need mitigation for all gases, including methane. New technologies for dairy and sheep-beef farms will not be sufficient, and we will need significant shifts toward horticulture and native and exotic forests. With reforms to management of unit supply and price and alignment with ambitious domestic mitigation targets, the ETS can deliver an emission price signal that drives low-emission investment. A price band (price floor and ceiling) can help with managing uncertainty. She emphasized that whether agriculture should be in the ETS is not the key issue for either agricultural emissions or the ETS. New Zealand has the potential to innovate in how it invests in mitigation overseas, and the "Climate Teams" model being developed by Motu is one approach. In the near term, New Zealand should act in areas that could have large long-term impact globally or where delay will raise costs. Diversifying efforts can help with managing uncertainty, but we should maintain depth in our areas of comparative advantage. We need to encourage actions by a wide range of parties. Market signals are needed in the ETS and auctioning can be started without further delay. Auctioning should be started in the ETS as soon as possible. All of us can help contribute to developing a shared vision for a thriving low emissions New Zealand and world.

DISCUSSION POINTS:

Theme: Social change

1. We can't base our thinking on what has happened in the past.
2. Farmers want to be good stewards and should be rewarded for early action.
3. In the agriculture sector, we need an ethical focus on human and animal wellbeing.
4. We need social support for change in the agriculture sector.
5. The Treaty of Waitangi and partnership approaches need to be brought into the national process for addressing climate change. Māori are already fighting at the front line on many issues and will be directly and disproportionately impacted by climate change policies. Social inequities cannot be disconnected from climate change.
6. Current methods of engagement between government and Māori/iwi are not adequate to support an effective national conversation. Māori are underrepresented on these issues.
7. Resources need to be directed into Māori communities to enable them to find and implement their own solutions. Current collaborative funding models are not adequate for this.
8. We need Tangata Whenua to tell its own story.
9. Investment cultures need to change.
10. The government needs to seriously engage with the people who will be affected the most, not just invite them to a meeting and ask them what they want. It is important to build a base for engagement. Work on Vision Matauranga can contribute to this.
11. Normalising change is essential if we want rapid transformation. EECA's programme on EVs has helped to demystify the technology and shift the norm. "We don't have to subsidise to mobilise, but we have to make it normal."
12. Where is the leadership for this going to come from?
13. Behaviour change sits at the heart of our problems. We have enough science and technology to move ahead.

Theme: Policy and regulation

14. In the past, we have seen where progress has not been linear, but exponential. However, the exponential curve can level off. To stay on an exponential path, we need to design effective financial structures that mobilise pools of capital, find new ways to deliver technology, and achieve system integration so the system works all of the time.
15. Subsides are a "time machine": they tell us what consumers will do when technologies become more affordable in the future.
16. Subsidies should be used strategically, avoiding "subsidies regret."
17. What businesses need is predictability, stability and political durability, rather than certainty.
18. Targets are useful to signal the direction of travel, but it is the policies that spur action. Targets need to be supported by pathways that avoid massive leaps of faith.

19. New Zealand needs to determine what targets and share of global action are appropriate, and what environmental gains to pursue and at what cost.
20. One of the barriers to change in the agriculture sector has been grandparenting of nitrogen emission rights using OVERSEER. OVERSEER is good at the farm level but not effective at a catchment level. Using nitrogen toxicity in water as the bottom line has protected business as usual. One recommendation is to implement a Farm Emissions Policy that is monitored independently and adequately enforced. Nitrogen limits need to be strengthened with a focus on ecosystem health and GHG and water policies need to be better aligned.
21. Using risk-based environmental scorecards for monitoring relative on-farm performance is proving useful for driving change.
22. Other good mitigation practices are to retire vulnerable land and making better use of good land, reducing stocking rates, reducing anthropogenic nitrogen and winter cropping, using fewer better animals, optimising diets, and using more plants.
23. Māori want to enable multiple uses for their land. Further consideration is needed regarding incentives for planting Manuka, including under the ETS.
24. The mitigation potential in the waste sector should be recognized.
25. We need to consider the second-order effects of our technology choices. One example is EVs that run out of power when they get stranded during a storm.

Theme: Productivity Commission's low-emission inquiry

26. An audience member asked whether the modelling commissioned by the Productivity Commission had accounted for the mitigation potential from improved pest control in existing native forests. The answer was no.
27. An audience member asked if co-benefits had been accounted for in the modelling of mitigation costs. Some co-benefits were accounted for in regard to mode shift scenarios around public transport, cycling and walking.
28. A point to emphasise is that doing this modelling is not advocating for these pathways. The scenarios were selected to explore what may be possible.
29. The modelling does take account of free allocation and its impact on competitiveness. Vivid applied assumptions about industrial closures and leakage risks.
30. An audience member commented that the assumptions for tree planting are not realistic because there isn't enough land.
31. The modelling is suggesting that New Zealand can reach its targets at a relatively low emission price. Should we be content with low prices, or should we set our prices high enough to drive ambitious technological change? Or should we strengthen our targets?
32. It matters less to business what the carbon price is than whether the carbon price is competitive.

CONCLUDING REMARKS

Catherine Leining from Motu offered some summary points and reflections on key issues raised during the roundtable.

In the mihi, Tama Kirikiri referred to the motu, or island, of New Zealand. The challenge for all of us is to seek the best outcome for our motu.

The Mayor spoke of taking big, bold and audacious steps. When he noted the government's decision regarding cessation of future oil and gas exploration, some audience members responded with angry remarks because of the communities whose livelihood would be affected. Policy decisions need to be taken with regard to the transition pathways toward alternatives for those who will be affected.

The modelling commissioned by the Productivity Commission shows that ambitious targets are feasible, but the rate of change needs to be rapid. The land sector can help in the near term, but New Zealand needs to be able to sustain net zero emissions once the forest sink potential has been exhausted.

How the modelling results are framed is important, particularly with regard to the characterisation of costs, co-benefits and the scope of mitigation activities considered.

There are three useful reference points for setting carbon prices. The first is the social cost of carbon, which reflects the damages from each additional tonne of emissions. The second is target-consistent prices that trigger transformational changes in technologies and practices. The third is the price that is socially and politically acceptable during the transition.

In the near term, New Zealand should focus on the actions with large global impact and where there is urgency in acting to avoid lock-in. Diversifying efforts should not come at the expense of pursuing adequate depth in our areas of comparative advantage. We need to create real options and be responsive to evolving opportunities. We need engagement by a wide set of actors, not centrally planned solutions.

There is no one process that can deliver the solution, and we will need policies beyond a reformed ETS.

Current approaches to engagement between government and Māori/iwi are not adequate to address the challenges, and solutions to climate change issues need to be integrated with solutions to social inequities.

The leadership for responding to the challenge of climate change will need to come from all of us: government, businesses and communities, and from the ground up. People need resources in order to be able to lead.

Catherine concluded with a series of haiku which summarized the key outcomes from all four roundtables.

Roundtable 1: To lead or follow? Lead where you have expertise. Leaders can take risks.	**Roundtable 2:** Transforming land use is vital to achieve our net zero future.	**Roundtable 3:** Our ETS needs predictable processes with safeguards for price	
Roundtable 4: Net zero will mean fast technology change or high carbon prices	Cross-party support is critical to achieve investment success	First to see the light; New Zealand can show the world what is possible.	He tangata, he tangata, he tangata. It is the people.

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