

8 June 2018

Low-Emissions Economy
New Zealand Productivity Commission
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SUBMISSION TO THE PRODUCTIVITY COMMISSION INQUIRY ON THE LOW-EMISSIONS ECONOMY DRAFT REPORT

INTRODUCTION

Venture Taranaki welcomes the opportunity to provide this submission to the New Zealand Productivity Commission on its Low Emissions Economy Inquiry draft report.

Venture Taranaki agrees that it is important to investigate how New Zealand can maximise the opportunities and minimise the costs and risks of transitioning to a lower net emissions economy, while at the same time growing income and wellbeing.

Finding 3.3 of the Low-emissions Economy draft report notes that “New Zealand can achieve low GHG emissions by 2050” via a “pathway relying on a combination of three key drivers – the expansion of forestry, the electrification of transport, and changes to the structure and methods of agricultural production.”

While Venture Taranaki agrees with many of the findings and recommendations in the report there are some key issues where we suggest either a change in emphasis or a different approach be considered. These suggestions form the core of our submission, which is summarised below:

- **Agriculture**

Venture Taranaki agrees that changes to the structure and methods of agricultural production are important drivers towards reducing New Zealand greenhouse gas emissions but does not agree with the recommendation that the agricultural greenhouse gases - a short lived gas - should be included in the NZETS. The agricultural gases should not be included in the ETS until such time as cost effective methane reduction technologies are available and trade competitors are similarly included in emissions pricing schemes.

- **Forestry**

Afforestation offers excellent opportunities for mitigation but more attention is required on overcoming the barriers to small forest owners to joining the NZ ETS.

- **Electrification of transport**

Venture Taranaki agrees that the electrification of transport is one key driver but suggests that the opportunities that electrification provides for reducing emissions are both deeper and larger than just transport and these opportunities should be expanded and discussed further in the report.

- **Oil and Gas**

Venture Taranaki urges review of Recommendation 5.1 which seeks the phasing out of subsidies that support the ongoing production and use of fossil fuels. Gas, is a valuable transition fuel, and fast-tracking initiatives to phase out natural gas may result in heightened prices and energy security risks.

- **Long-lived v short-lived gases**

Venture Taranaki agrees with the recommendation that the Government should establish separate domestic targets for short-lived and long-lived gases. Furthermore, New Zealand should also seek to build global consensus around the approach of setting different targets for long and short lived gases.

- **Innovation/technology**

Venture Taranaki agrees with Recommendation 5.3 that the Government should strengthen the national innovation system in relation to its low emission focus, and supports proactive initiatives that scan for new low emission technologies, identifies those with promise and assists New Zealand firms and regions with their uptake.

- **Laws and Institutions**

As the report notes in Finding 7.3 New Zealand's current emissions reduction response is not "fit-for-purpose". Venture Taranaki agrees there is a lack of "stability and predictability" and a "lack of a clear plan". Venture Taranaki agrees with finding 7.10 that there should be an independent Climate Commission to drive development of planning and monitoring regimes to achieve emissions reductions. It is vital that there is long term planning and consistency of policy if businesses are to invest with confidence.

- **Regional economies and a Just Transition**

Venture Taranaki believes insufficient attention has been dedicated in the report to the potential impacts that the transition to a lower net emissions economy will have on regions, such as Taranaki, where impacts will be far reaching. Just as relatively high emitting New Zealand is seeking a just transition to a lower emissions economy compared to other countries, those regions of New Zealand with economies that will be most affected by emissions reductions should also have processes and support to enable a just transition.

VENTURE TARANAKI, TARANAKI REGIONAL ECONOMY, CLIMATE CHANGE AND EMISSIONS REDUCTION

Venture Taranaki Trust is the Regional Development Agency for Taranaki. The Trust is owned and funded by New Plymouth District Council and also has contracts in place to deliver services with South Taranaki District Council and Stratford District Council.

The Trust is also a regional business partner with Callaghan Innovation and New Zealand Trade and Enterprise and has recently put in place several Provincial Growth Fund contracts with the Ministry of Business Innovation and Employment.

The Taranaki economy has had the highest level of GDP per capita of any New Zealand region – \$70,863 compared to a national average of \$56,482 (2016/17).

The prime drivers of this well above average level of GDP per capita in Taranaki have been the dairy and oil and gas industries.

All of New Zealand's commercially developed and producing oil and gas fields are domiciled in the Taranaki region, as well as value-adding petrochemical plants.

Farming, particularly dairy farming occurs on the region's high producing fertile lands, whilst sheep and beef dominate on the more rugged eastern hill slopes. Four Fonterra plants are based in the region.

As well as creating significant wealth for New Zealand these sectors are also major contributors to New Zealand's current relatively high levels of greenhouse gas emissions. Both sectors face significant challenges from a move to a low emissions economy as does the wider Taranaki economy.

Venture Taranaki acknowledges these challenges and has already begun working with key regional stakeholders and industry on projects which will help the transition to a low emissions economy.

The Taranaki region has also made considerable investment in biodiversity, riparian planting and zero-waste strategies.

A new regional development strategy and Action Plan for Taranaki – Tapuae Roa – has recently been launched. When the Tapuae Roa Action Plan was launched in April 2018 it was announced that several projects had received funding support from the Provincial Growth Fund alongside local investment. Amongst these projects were several which encourage the development of a low emissions economy:

- A Business Case for the New Energy Development Centre
- A Roadmap for the establishment of H2 Taranaki
- A Business Case for developing a Taranaki Future Foods Accelerator

- Future Foods – a report on major regional food opportunities
- A Business Guide to tree planting on Taranaki hill country farms

The government's support for these projects is a tangible and appreciated first step towards transitioning the Taranaki and New Zealand economies to a low emissions future.

Considerably greater levels of investment from a range of sources will be required to advance that transition. For that funding to be committed with confidence it will require the development of a consistent and coherent policy framework which we suggest should also include the use of appropriate economic incentives.

The preparation of the Low Emissions Economy Draft Report by the Productivity Commission is intended as a substantial step towards developing that framework. However, a poorly developed framework could, if implemented, compromise international competitiveness, investment, well-being and regional economies.

The following commentary focuses on key chapters in the report, pertinent to our submission.

CHAPTERS 2 - 4

Whilst the report adopts a New Zealand perspective, climate change must be regarded as a global issue. The elevated concentrations of greenhouse gases in the atmosphere that create climate change risk and the solution pathways are dependent on the collective actions of countries and peoples. There is ultimately no point in putting in place a framework which reduces New Zealand's emissions but exports those emissions to other countries producing no net global reductions.

New Zealand's long-term emissions target – reducing net emissions to zero by 2050 – is a very ambitious goal and requires a significant shift from business-as-usual.

Venture Taranaki considers that New Zealand's main focus for prioritisation of emissions reduction should be on reducing emissions of long-lived gases through greater efficiency, reducing waste and the implementation of new technologies in transport, heating, industry and agriculture.

Transport is by far New Zealand's fastest growing emission source and should be a key focus of immediate actions and interventions.

The Commission is recommending the retention and refinement of the New Zealand Emissions Trading Scheme, NZETS, rather than replacing it with a carbon tax. Venture Taranaki agrees that the NZ ETS needs to be made more credible, effective and easier to understand and implement.

The NZETS currently includes energy, fishing, forestry, industrial processes, fuels and synthetic gases. Agriculture is currently exempt as it is in most countries.

Venture Taranaki does not agree with the recommendation (also included in Chapter 10 - Land Use) that the agricultural emissions of greenhouse gases, predominantly methane a short lived gas, should be fully included in the NZETS. Agricultural emissions should not be included in the ETS until such time as cost effective methane reduction technologies are available and trade competitors are similarly including agriculture in emissions pricing schemes.

Continuing investment in research, technology and innovations which focus on agriculture and ways to reduce methane is critical.

Emissions reduction and climate change adaptation should not be viewed as stand alone, or single issue, considerations. The Commission should adopt a more holistic, systems-based approach when identifying and considering potential tools, and assessing impacts on business, investment confidence, employment, communities and regional economies.

CHAPTER 5: INNOVATION

Venture Taranaki agrees with Recommendation 5.3 that the Government should strengthen the national innovation system by clarifying its low-emissions objectives and that this scope should not only include science and research but requires action across a broad front which also includes knowledge dissemination and learning, skills, infrastructure, regulation and finance.

Adopting a broad innovation framework for emissions reductions would also provide for a systems based approach that would deliver co-benefits across policy programmes and Government's policy imperatives.

Venture Taranaki supports recommendations 5.2 that "New Zealand should establish the transition to a low-emissions economy as a high priority within its national innovation system" and 5.4 that proposes Government investigate and implement cost-effective models for scanning new low emission technologies around the world, identifying those with promise for New Zealand adaptation or implementation; and also helping New Zealand firms to improve their absorptive capability for external knowledge, including low-emissions technology.

Strengthened connections between available research (global and New Zealand) and deployment of this research via e.g. an online 'hub' or other such initiatives would be welcomed by agencies such as Venture Taranaki. Currently there is no ready way to 'peer inside the cupboard' of the latest knowledge pertaining to low emission work and this could greatly accelerate new thinking and technology transfer. Agencies such as Callaghan Innovation, could play a more pivotal role in this regard.

Venture Taranaki urges review of recommendation 5.1 which seeks the phasing out of subsidies that support the ongoing production and use of fossil fuels.

This is because natural gas, is likely to prove a valuable transition fuel that can replace other higher emissions fuels. Fast-tracking initiatives to phase out natural gas may lead to increased use of higher emission fuels such as coal and result in heightened prices and energy security risks.

Furthermore, skills and innovations within the oil and gas industry are instrumental and transferable to the renewable/low carbon energy technologies industry. They should be viewed as an asset in the face of change, capable of contributing to a low emission future, retooled, rather than eliminated.

CHAPTER 6: INVESTMENT

Venture Taranaki agrees that there needs to be strong government support for innovations that can help produce a low emissions economy. This reflects the risks involved in such innovations and the long timeframes and scale of investment involved in their implementation.

New Zealand will be a technology taker in many areas but in agriculture is likely to be a technology leader reflecting the sector's significance and degree of local specificity.

Venture Taranaki notes that there is no specific comment in this section on the issue of investment horizons for the development of new infrastructure. This is of particular relevance to the electrification of the country's energy eco-system – both with the development of new generation capacity and the roll out of infrastructure for electric vehicles – both battery powered or fuel-cell powered. To encourage widespread adoption infrastructure for electric vehicles will need to be rolled out before there is mass adoption. There is opportunity for the government to support the rollout of infrastructure in a similar manner to how the rollout of broadband was supported.

Venture Taranaki notes that the government has recently made available considerable regional development funding via the Provincial Growth Fund which has a focus on several strategic priorities including "Climate change and environmental sustainability". This could be applied to the rollout of relevant infrastructure.

CHAPTER 7: LAWS AND INSTITUTIONS

As noted in Finding 7.3 the country's current emissions reduction response is not "fit-for-purpose" and has a number of deficiencies including "a lack of stability and predictability", "lack of a clear plan for reducing domestic emissions and meeting existing emissions reduction targets", inadequate central government leadership" and "poor policy coherence".

A stable and consistent policy and institutional framework is required to provide investment certainty to support all sectors of the economy in their transition towards a low carbon economy.

Recent changes in policy setting, such as those which relate to the oil and gas industry, have highlighted the importance of planning, and impacts that can occur on regional economies and investment certainty.

With respect to the primary sector there are also long investment cycles, and rely on land use and biological systems that take time to adjust and adapt.

Sudden change and inadequate planning and appreciation of the time, investment and availability of options to change can compromise not advance emissions reductions and technology uptake, as well as incomes, well-being and international competitiveness.

The potential impacts require consideration of a just transition for regions, communities and impacts on industries.

Venture Taranaki agrees with finding 7.10 that there should be an independent Climate Commission to drive development of planning and monitoring regimes to achieve emissions reductions. It is vital that there is long term planning and consistency of policy if businesses are to invest with confidence.

Venture Taranaki agrees with recommendation 7.5 that the government “should have a statutory duty to prepare and publish a long-term economy-wide low-emissions strategy”. Such a strategy should be based on the advice provided by the independent Climate Commission and should be based on robust scientific evidence.

Venture Taranaki also notes that just as relatively high emitting New Zealand is seeking a just transition to a lower emissions economy compared to other lower emitting countries, those regions of New Zealand with economies that will be most affected by emissions reductions should also have processes and support to enable a just transition.

CHAPTER 8: SHORT-LIVED AND LONG-LIVED GASES

Venture Taranaki agrees with the recommendation that the Government should establish separate domestic targets for short-lived and long-lived gases.

There are many potential strategies and pathways to a low-emissions economy.

New Zealand has to choose the approach that best suits its unique circumstances – including its significant agricultural base with a high proportion of methane, a short-lived gas, within its emissions profile.

Alongside a near future focus on long-lived gases emissions reductions, work must continue both to develop a long term solution to achieving reductions in methane production from ruminant animals and to further refine emissions intensity in agricultural production.

Venture Taranaki supports Recommendation 10.8 that the Government should increase its yearly funding for research on agricultural mitigation technologies to a level that better reflects the potential value of successful outcomes.

New Zealand should also seek to build global consensus around the approach of setting different targets for long and short lived gases.

CHAPTER 9: POLICIES FOR AN INCLUSIVE TRANSITION

Venture Taranaki agrees with the draft report (page 238) which highlights the need ‘for a smooth, just and prosperous transition’ to a low-emissions economy.

However the Productivity Commission also advocates a sharp instigation of changes in order to transition effectively towards the desired low emission goals. The draft report acknowledges this will have impacts on households and potentially large employers. The report proposes policies that could assist those households who are anticipated to carry a ‘disproportionate burden of the transition’ to a low emission economy.

However report coverage appears minimal concerning the potential impact of transition for regions, where, due to industry sector clustering, variations will exist and some regions will carry a ‘disproportionate burden of the transition’ relative to others.

The size/scale of impact of the shift towards a low emission future will be significant for the Taranaki region, where there is a high concentration of oil and gas, petrochemical and dairy farming businesses. The impacts of the change will not only have direct consequences for the economic and social fabric but will also flow to aligned industries and communities, with quantitative, qualitative and, undoubtedly, unintended consequences.

The Draft Report suggests that assistance for struggling firms is likely to fail and believes that agencies are not well set up to assist with retraining. The report recommends ‘assistance should be centred on the needs of individuals, rather than regions’.

Venture Taranaki believes that insufficient consideration has been given in the draft report to the anticipated impacts on regions and how the Government can work with regional stakeholders, economic agencies, industries and communities, to support the transition to a low emission future.

Venture Taranaki notes that the government has recently made available considerable regional development funding via the Provincial Growth Fund which has a focus on several strategic priorities including “Climate change and environmental sustainability”.

Targeted investment via the PGF will assist with just transitions for affected regions of New Zealand.

Taranaki leaders have recently embarked on a *Regional Economic Development Strategy and Action Plan: Tapuae Roa*, in conjunction with the Government, to develop a more prosperous future. *Tapuae Roa* is an example of cooperation where local government, iwi, business and community leaders and the regional development agency, with the support of central government, can come together in a constructive way to chart a way forward for the region.

The merits and commitment of the Government to a ‘Just Transition’ should be reflected more strongly within the Productivity Commission report.

CHAPTER 10: LAND USE

Venture Taranaki agrees with the analysis that rural land use will change and will need to adapt during the transition to a low-emissions economy.

However adaption takes time, should be pragmatic, appreciative of the long-term investment cycles and will need to be supplemented by information, education, assistance and support programmes.

There may be small areas within productive land that could diversify and include small areas of tree planting. Many areas within Taranaki have already embarked on riparian planting initiatives and fostered small biodiversity or woodlot developments.

Venture Taranaki supports Recommendation 10.7 that the Government should continue to refine the NZ ETS to make it easier for small foresters, and farmers, to participate.

Furthermore, removals of carbon from the atmosphere by sequestration through the establishment of forests and other woody vegetation are an important component of delivering net emissions reductions. These include farm woodlots, shelter belts, slope stability and erosion control planting and riparian planting.

In relation to Question 10.2, Venture Taranaki supports investment to develop robust and defensible methodologies to better account for the types of removals above. Such developments would recognise the significant investments already made by farmers and landowners, and Regional Councils. It would incentivise and mobilise further change, including diversification options which could operate alongside with dairy, sheep and beef farming operations.

As noted earlier in this submission Venture Taranaki does not however agree with the recommendation 10.3 that agricultural greenhouse gases should be fully included in the NZETS at this time.

CHAPTERS 11 - 12: TRANSPORT AND ELECTRICITY

The current government has set a target of New Zealand's electricity generation being 100% renewable by 2035. Currently up to 85% of electricity is generated from renewable sources over an average New Zealand year.

Chapter 12 highlights the abundant unused sources of renewable energy in New Zealand, and how technological developments are allowing "more responsive management of electricity demand and integration of distributed energy resources (such as solar power and batteries) into the system".

However, it also notes that under current technology and prices, no options exist to completely eliminate greenhouse gas emissions from electricity generation, without greatly increasing wholesale electricity prices.

These comments have also been reinforced in Transpower's recent *Te Mauri Hiko – Energy Futures* report released in May 2018 where it is suggested that electrification will significantly decarbonise the New Zealand economy.

Challenges are identified as two-fold:

- Electricity demand is expected to double by 2050 – so renewable generation will have to more than double in capacity by then to be 100% renewable.
- Providing renewable electricity for the times of peak demand is very challenging. This pressure is exacerbated at times of the year when water levels in hydro dams are low. At the moment this peak demand is met with the use of peaker power plants – mostly gas fired.

Venture Taranaki considers that one scenario which should be considered more fully by the Productivity Commission is for New Zealand to develop an energy ecosystem where hydrogen plays a key role. Although it is referenced, the opportunity is not fully explored and explained in the report.

While hydrogen is often produced by steam reformation of natural gas – a process which also releases carbon dioxide. Hydrogen can also be produced with zero or very low emissions by electrolysing (or splitting) water with renewably produced electricity. The by-product of this process is oxygen.

It is this "green hydrogen" produced from renewably generated electricity which is the focus of our comments.

Venture Taranaki suggests the report should consider more fully the opportunities of green hydrogen in the following roles:

- As energy storage for fuel cell powered vehicles – both light and likely most importantly heavy vehicles

- As an energy storage medium that can be used to store renewably generated electricity until it is required at a later date
- As a feedstock for several industrial products currently sourced from natural gas.

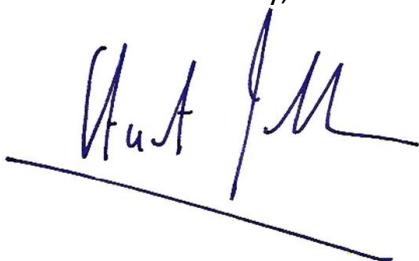
CONCLUSIONS

Venture Taranaki thanks the New Zealand Productivity Commission for the opportunity to comment on the Commissions draft report ‘Low-emissions economy’.

The document is thorough, comprehensive and clearly set out.

Venture Taranaki wishes to remain informed on progress and is available to discuss the points raised in this submission in more detail.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Stuart Trundle". It is written in a cursive style with a long horizontal line extending from the end of the signature towards the left.

Stuart Trundle
Chief Executive