

2 October 2017

Low Emissions Economy Inquiry  
New Zealand Productivity Commission  
PO Box 8036  
The Terrace  
Wellington

By email: [info@productivity.govt.nz](mailto:info@productivity.govt.nz)

## **Low Emissions Economy**

Dear Commission

Thank you for the opportunity to participate in this inquiry. This letter captures our high level points, with our more detailed responses to the questions you raise contained in Appendix A.

### **Climate Change, our greatest challenge, but also our greatest opportunity**

As one of the largest electricity suppliers in New Zealand, we believe New Zealand can harness its natural advantages and turn one of the world's greatest challenges into New Zealand's greatest opportunity.

To do so we need a clear strategy and stable and sound policy supported by all political parties. New Zealand is an innovative, adaptable nation with an abundance of renewable energy resources with the opportunity to lead the world in reducing emissions, and, in doing so, to profit and prosper from the shift to a low emissions economy.

### **Hope is not a strategy. New Zealand needs a climate change plan**

Contact agrees with the recommendation by the Parliamentary Commissioner for the Environment (**PCE**) that New Zealand's response to climate change must be depoliticised. Decisions around how New Zealand responds to climate change and how we move to a low emissions economy cannot be at the mercy of our three-yearly election cycle. Ensuring a smooth transition to a low carbon economy is not just the responsibility of the current Government, but also the Governments that succeed them for decades into the future.

For these reasons we support the PCE's recommendation that New Zealand develops a Climate Change Transition Bill which sets emissions targets in legislation, sets carbon budgets, requires policy to be developed that meets those budgets and that we have a Climate Change Commission - an expert body to provide objective analysis and advice. This would provide predictability, reduce New Zealand's risk of an abrupt transition and ensure co-ordination between corporates and government agencies to achieve those targets.

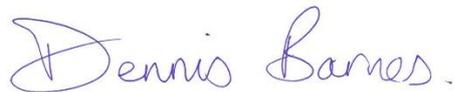
Likewise we believe in market mechanisms and their ability to drive the best outcomes. However, we believe the ETS must be strengthened, the cap and transitional period removed, and the ETS's initial ambition, to cover all sectors and all gases, realised.

**New Zealand has natural advantages - let's use them**

While there is frequent commentary around the fact that approximately half of New Zealand's emissions are biological gases originating from agriculture, and therefore are more challenging to deal with, New Zealand is uniquely placed to move to a low emissions economy because New Zealand has an abundance of renewable energy resources. This privileged position provides significant opportunities for New Zealand, including the ability to deploy these resources to decarbonise transport and business, for example, through electric vehicles and the conversion of manufacturing processes from fossil fuels to low carbon energy. A move to electric vehicles would also significantly improve New Zealand's energy security.

New Zealand is a small country, but we are a small country with an unrivalled opportunity. We would be delighted to engage further with the Commission and look forward to contributing to New Zealand delivering on this important opportunity.

Yours sincerely



Dennis Barnes  
**Chief Executive**

APPENDIX A

Questions	Response
<p><b>About Contact Energy</b></p>	<p>Contact is one of New Zealand's largest listed companies. We keep the lights burning, the hot water flowing and the BBQ fired up for over half a million homes and businesses across New Zealand.</p> <p>We're committed to a sustainable, low carbon energy future for New Zealand. To us, this means balancing our commitment to lower carbon, renewable energy, while maintaining reliable economic access to energy for our customers. We generate electricity from hydro, geothermal and gas and have one of the most flexible generation portfolios in the country.</p> <p>For Contact, a low carbon economy is more than an idea. Our commitment to it runs through our entire business:</p> <ul style="list-style-type: none"> <li>• Our asset mix of hydro and geothermal has allowed us to maintain 80% renewable generation – despite the one-in 80-year event, where hydro lakes were critically low in the final quarter of financial year 2017.</li> <li>• Contact has put significant capital into developing a lower carbon business. This includes:             <ul style="list-style-type: none"> <li>○ investments in renewable energy (geothermal and hydro) and Contact's decision to close our Ōtāhuhu power station, having seen our direct (or Scope 1) emissions fall by 53% since 2012.</li> <li>○ conducting distributed energy trials that will enable continued progress towards a low carbon economy. Trials include innovation in generation, with solar and battery trials controlled by a real-time app which 30 households are currently trialling in Wellington.</li> </ul> </li> <li>• Currently 25% of Contact's vehicle fleet is electric and we are part of various industry initiatives encouraging the use of electric vehicles (EVs) among commercial and industrial customers including offering free trials of EVs.</li> <li>• Assisting customers with energy efficiency is core to Contact's offer. Contact has the capability to assist major coal and other fossil fuel users to switch to renewable, lower carbon fuels like electricity and geothermal heat through collaborative partnering. This will enable Contact's customers to migrate to a low carbon economy.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Contact operates in partnership with its customers, for example we supply Fonterra’s dairy plant in Te Rapa with electricity and steam, and Tenon wood processing plant in Taupō with direct heat from its geothermal resource.</li> <li>• Contact recently launched a first for a New Zealand corporate: a green borrowing programme enabling green investment funds globally to invest in Contact.</li> </ul> <p>In terms of the Emissions Trading Scheme (ETS) Contact is a mandatory participant in respect of the following activities:</p> <ul style="list-style-type: none"> <li>• Using geothermal fluid for generating electricity or industrial heat</li> <li>• The use of natural gas and LPG</li> <li>• Owning pre-1990 forests if deforestation occurs</li> <li>• Operating electrical switchgear that uses more than one tonne of sulphur hexafluoride.</li> </ul> <p>Contact has also opted in for participation of the following:</p> <ul style="list-style-type: none"> <li>• Purchasing domestic natural gas and LPG &gt; 2 petajoules per year.</li> </ul> <p>Contact has decided not to opt in for owning post-1989 forests.</p>
<p><b>1. How can the Commission add the most value in this inquiry?</b></p>	<p>By ensuring that this inquiry:</p> <ul style="list-style-type: none"> <li>• drives New Zealand’s climate change response;</li> <li>• results in a transition plan being put in place to drive New Zealand towards a lower carbon economy, including being explicit about areas of optimisation and coordination between agencies</li> </ul>
<p><b>2. Chapter 3 of this issues paper mostly looks at ways to reduce emissions directly at their source. What other approaches would help identify opportunities to effectively reduce emissions?</b></p>	

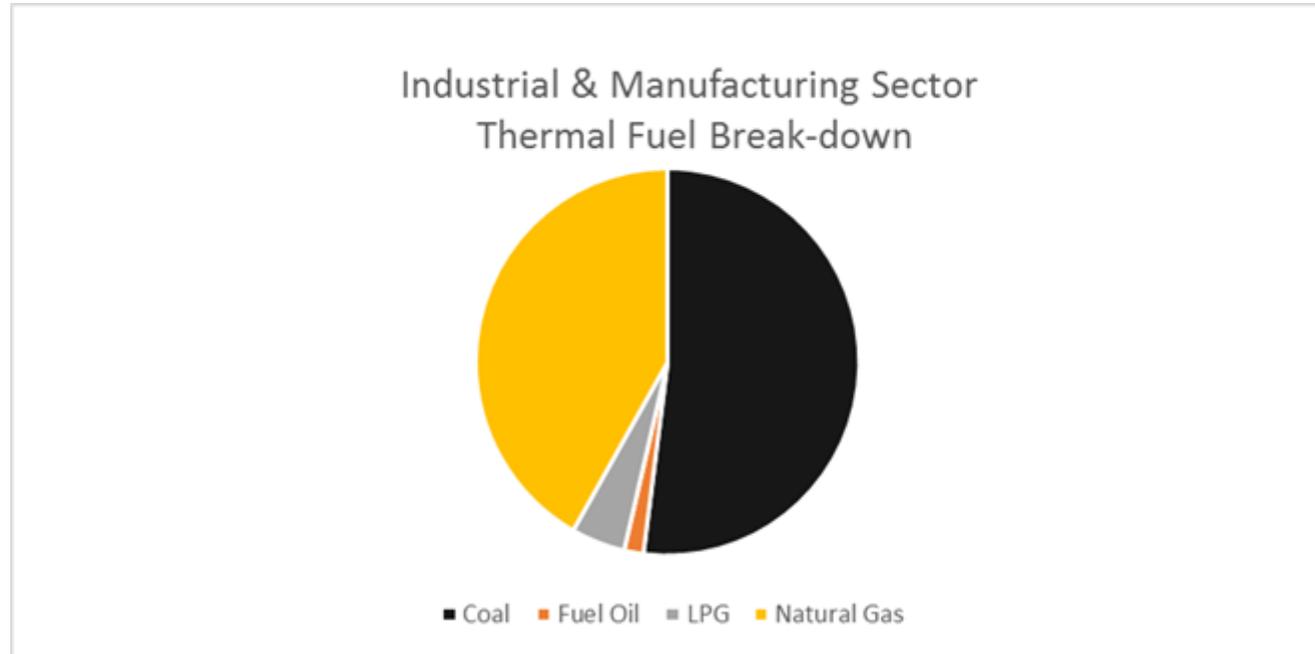
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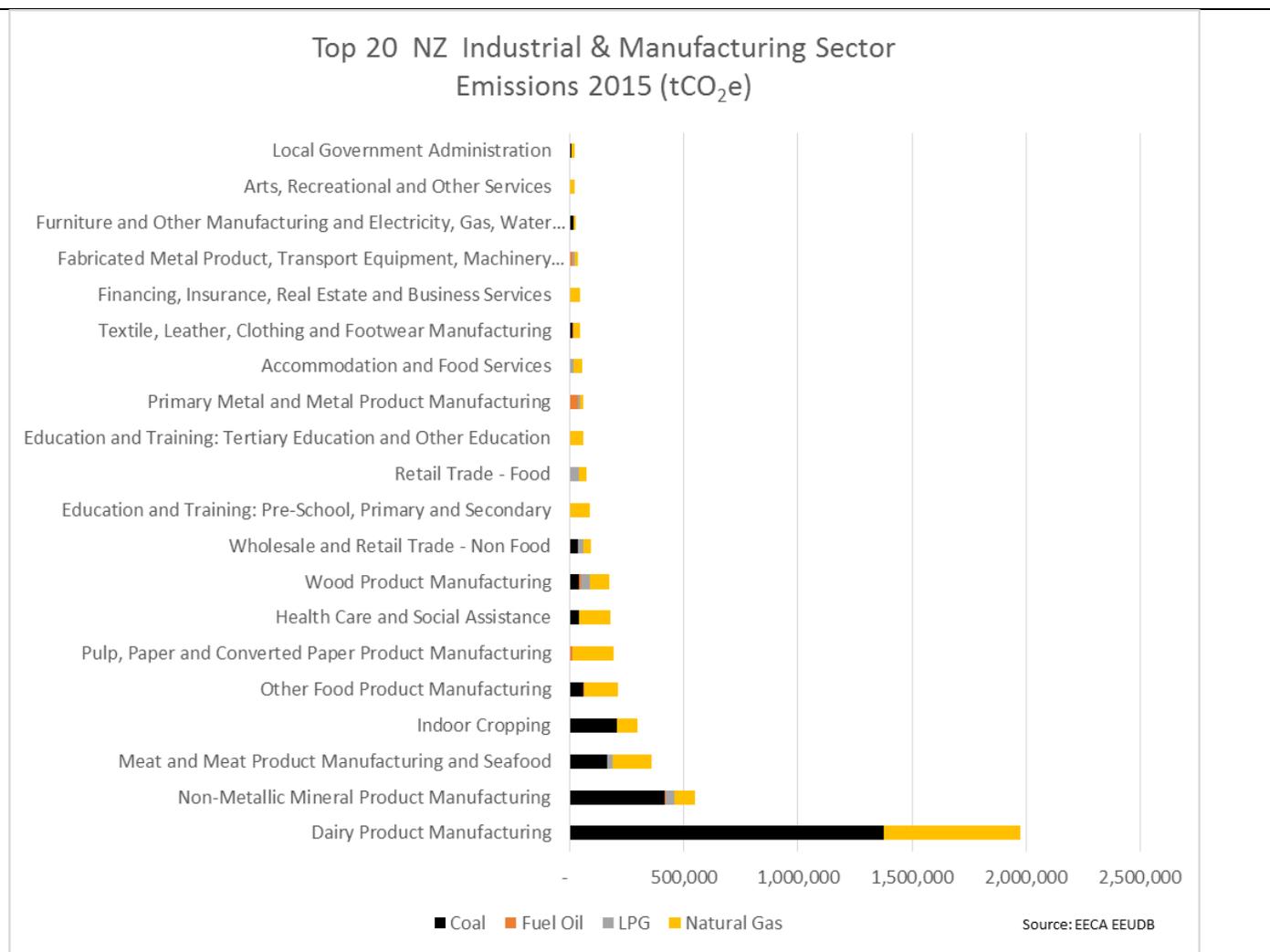
<p><b>3. To what extent is it technically and economically feasible to reliably measure biological emissions at a farm level?</b></p> <p><b>4. What are the main opportunities and barriers to reducing emissions in agriculture?</b></p>	<p>We understand others will comment on these points, including the Parliamentary Commissioner for the Environment and Motu Public Policy and Research who have undertaken significant work in this area.</p>
<p><b>5. What are the issues for government to consider in encouraging alternative low-emissions land uses?</b></p>	<p>Biodiversity. In encouraging low-emissions land use we must ensure that consideration is given to wider environmental and ecosystems impacts of different activities, for example, impact on waterways, land and plant species. We also need to ensure that we do not encourage monocultural species harvesting at the expense of biodiversity in New Zealand through carbon offsetting practices.</p> <p>Other issues for consideration include:</p> <ul style="list-style-type: none"> <li>• ensuring, to the extent practicable, that conversion or retirement makes economic as well as environmental sense</li> <li>• the management of pests and weeds</li> <li>• the social impacts on rural communities; and</li> <li>• the speed and volume of carbon conversion and sequestration.</li> </ul>
<p><b>6. What are the main barriers to sequestering carbon in forests in New Zealand?</b></p>	<p>For Contact, as a landowner with the ability to plant trees, this comes down to the cost of carbon: 1200 hectares of land would offset 48,000 tonnes of carbon dioxide (CO<sub>2</sub>) equivalent – this is only one quarter of our emissions from geothermal. At a low carbon price, a decision to plant would be marginal as we have other means of generating income from the land through leases. The requirement to surrender 80% of the carbon sequestered over the duration of growth is a deterrent as well, as in our case it would leave Contact vulnerable to both volatile harvesting prices and carbon prices.</p>

	<p>Options to buy into permanent offset sites would be desirable with the option to reforest some marginal land anywhere across the country. Preferably protected, so units did not have to be surrendered on harvest.</p>
<p><b>7. What policies, including adjustments to the New Zealand Emissions Trading Scheme, will encourage more sequestering of carbon in forests?</b></p>	<p>We expect others to comment more fulsomely on these points but we believe the key to driving planting is economics, and removing the political risk of changes to ETS settings.</p> <p>Adjustments could include:</p> <ul style="list-style-type: none"> <li>• the need for a strengthened ETS</li> <li>• removal of transitional measures</li> <li>• an ETS framework which is underpinned by medium and long term targets based on credible pathways to get there.</li> <li>• access to all units (international and domestic) must have solid environmental integrity</li> <li>• if auctioning is to be introduced by the Government, an undertaking that units will be backed by real emission reductions to ensure that the price signal for the cost of abatement is based on market fundamentals</li> </ul>
<p><b>8. What are the main barriers to the uptake of electric vehicles in New Zealand?</b></p>	<p>Contact is committed to transitioning its lease fleet to electric vehicles (EVs) (where suitable replacement EVs exist). Over 25% of our lease vehicles are already full electric or plug-in hybrid electric vehicles. Converting lease fleets like Contact’s to EVs can play a key role in supplying the quality used car market in New Zealand, helping to make electric vehicles more accessible to most New Zealanders and accelerating EV uptake in New Zealand. As we have migrated our own fleet to EVs one of the biggest challenges we have faced is how fleet companies value them at the end of life. This is due to a lack of data.</p> <p>According to EECA research other barriers to the uptake of EVs are the cost of acquisition, consumers’ uncertainty about the technology, consumers’ perception that EV charging infrastructure is not easy to find/is not widely available, and range anxiety.</p> <p>As a technology taker, two of these key drivers are largely outside of New Zealand’s control, in the absence of a direct subsidy (EV cost and range).</p>

	<p>Hydrogen produced from low carbon electricity may have a valuable role to play in decarbonising heavy road transport in NZ as does the development of greater options for heavy duty vehicles.</p>
<p><b>9. What policies would best encourage the uptake of electric vehicles in New Zealand?</b></p>	<p>Evidence suggests the following policies and actions would encourage the uptake of electric vehicles:</p> <ul style="list-style-type: none"> <li>• a higher carbon price</li> <li>• fuel efficiency standards on all imported vehicles</li> <li>• the introduction of a tail pipe emissions intensity based road user levy (over time, with the support of technology, this levy could be combined with real time, time of use charging for road usage (signalling also the cost of peak hour road usage).</li> <li>• increased consumer education around EV technology and the installation of more high-profile EV charging infrastructure. N.B. Contact is working with a local authority to provide conveniently located fast charging options in central city locations.</li> <li>• a policy/ information that encouraged a proportion of large company leases to be electric would also assist in increasing the volume of second hand electric vehicles on the market.</li> </ul>
<p><b>10. In addition to encouraging the use of electric vehicles, what are the main opportunities and barriers to reducing emissions in transport?</b></p>	<p>In addition to extending the above policies to support low emission vehicle uptake more broadly, including low emission heavy vehicles, the development of an integrated electric rail to port strategy, encouraging the carriage of more freight by electric rail is worthy of consideration. Other opportunities to reduce transport emissions include:</p> <ul style="list-style-type: none"> <li>• greater access to industrial electric vehicles.</li> <li>• cheaper public transport</li> <li>• congestion charging.</li> </ul>
<p><b>11. What are the main opportunities and barriers to reducing emissions from the use of fossil fuels to generate energy in manufacturing?</b></p>	<p>Around 4.5 million tonnes of CO<sub>2</sub> emissions are released every year from the industrial and manufacturing sector from the burning of fossil fuel.</p> <p>As the charts below show, this is dominated by production of steam and hot water for the dairy industry by burning coal or gas in conventional boilers. We believe there is a significant opportunity for New</p>

Zealand to substitute these heat requirements from coal to New Zealand's low carbon, largely renewable electricity which is underpinned by hydro, geothermal and wind. One of the major barriers to this is the cost of connecting these isolated boilers to the national grid.





Barriers to reducing these emissions include the cost of connecting or increasing the connection capacity of processing sites to the national grid, the cost of existing long-life assets which burn fossil fuel having

	<p>already been incurred, long term fuel supply contracts, the low cost of fossil fuel and the current low price of carbon.</p>
<p><b>12. What changes will be required to New Zealand’s regulatory, institutional and infrastructural arrangements for the electricity market, to facilitate greater reliance on renewable sources of energy across the economy?</b></p>	<p>Ultimately New Zealand’s response to climate change must be depoliticised. Decisions around how New Zealand responds to climate change, and how we move to a lower carbon emissions economy, cannot be at the mercy of our three-yearly MMP election cycle. For that reason, we believe New Zealand needs to put in place a United Kingdom type climate change act, supported by all political parties. Additionally, New Zealand’s ETS needs to be reworked to deliver:</p> <ul style="list-style-type: none"> <li>• an ETS that incentivises a transition to low carbon electricity – we note the current price signals have delivered negligible results, at relatively high cost; and</li> <li>• real, verifiable emissions reductions or removals.</li> </ul> <p>Other changes we believe should be considered are as follows:</p> <ul style="list-style-type: none"> <li>• A national policy statement (NPS) on low carbon energy usage by industry. Currently we have an NPS on renewable electricity generation but no equivalent on industrial energy use.</li> <li>• Taxing or pricing externalities such as vehicle tail pipe emissions and including nitrates in the ETS e.g nitrogen fertiliser.</li> <li>• The development of market mechanisms that reward intra-day and seasonal firming capacity (generation or demand flexibility). This is because of the important role gas plays in meeting electricity demand during times of low hydro inflows and when the wind isn’t blowing. For industrial consumers, in the North Island, natural gas can provide a reliable supply of process heat, displacing coal and complementing renewable process heat in locations where renewable fuels are unavailable or impractical. It is inevitable that the role of natural gas will change as the future unfolds, but for now it provides secure, affordable, clean and relatively low-carbon energy to New Zealand homes and businesses.</li> <li>• The consideration of a single electricity regulator with responsibility for regulating price, quality and all other market settings (along the lines of Ofgem in the UK).</li> <li>• Certainty around transmission pricing.</li> </ul>

	<ul style="list-style-type: none"> <li>• Requiring geothermal to pay per emission instead of an average emissions factor. This would encourage technological options to reduce emissions from geothermal too.</li> <li>• A willingness to extend direct Government funding beyond agricultural research and irrigation, and beyond EECA’s strategies for energy efficiency and encouraging low emission vehicle uptake, to the substitution of fossil fuel usage for process heat production, with lower carbon electricity.</li> <li>• Enabling the development of competitive, open access markets for the provision of lower cost, new technology ‘non-poles and wires alternatives’ to traditional distribution and transmission investments, enhancing the efficiency of New Zealand’s electricity delivery infrastructure.</li> </ul>
<p><b>13. What evidence is there on the possible physical effects of future climate change on sources of renewable energy in New Zealand, such as wind, solar and hydro power?</b></p>	<p>While we have 80 years of data, the link between climate change and hydrological flows is currently inconclusive.</p>
<p><b>14. Apart from the regulation and operation of the electricity market, what are the main opportunities and barriers to reducing emissions in electricity generation?</b></p>	<p>A significant amount of zero carbon electricity capacity is available in the form of additional hydro generation at existing locations. However, accessing this would require changes to the Resource Management Act (RMA) to increase and nuance the management of hydro storage. This can displace thermal generation and the need to store large volumes of thermal fuel such as coal.</p> <p>Adequately rewarding intra-day and seasonal firming capacity (generation or demand flexibility), is also necessary to support an expanded electricity system (higher total load and higher total volume of low carbon electricity generation).</p> <p>The smart management of increasing levels of behind the meter distributed generation and battery storage can also help to reduce and flatten peak demand and the potential need for more gas fired peaking plants in the future.</p>

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<p><b>15. What are the main opportunities and barriers to reducing emissions in industrial processes (such as the production of steel, aluminium and cement) and in product use (such as the use of hydrofluorocarbons in refrigeration and air conditioning equipment)?</b></p>	
<p><b>16. What policies and initiatives would best promote the design and use of buildings that produce low greenhouse gas emissions?</b></p>	<p>More stringent regulations for energy efficiency in commercial buildings for example, introducing mandatory double glazing requirements. These are 50 year assets, with high relative energy costs due to their low efficiency.</p> <p>Additionally a significant proportion of commercial buildings use the inefficient/outdated fluorescent tubes. Some targeted education around the benefits of LED lightbulbs may be useful for businesses to address this.</p>
<p><b>17. What are the main opportunities and barriers to reducing emissions in waste?</b></p>	
<p><b>18. Policies to lower emissions from particular sources, technologies and processes can have interactions with emission sources in other parts of the economy. What are the most important interactions to consider for a transition to a low emission economy?</b></p>	<p>Interactions to consider include that wind and solar photovoltaics, as well as hydro during times of low rainfall, require the use of thermal fuel for firming.</p>

<p><b>19. What type of direct regulation would best help New Zealand transition to a low-emissions economy?</b></p>	<p>We support the PCE’s recommendation that New Zealand develops a Climate Change Transition Bill which sets emissions targets in legislation, sets carbon budgets, and requires policy to be developed that meets those budgets, and that we have a climate change commission – an expert body to provide objective analysis and advice. This would provide predictability and reduce New Zealand’s risk of an abrupt transition.</p> <p>Likewise we support an ETS that covers all sectors and all gases as was initially envisaged.</p> <p>Other regulation could include a sinking lid on coal consumption for electricity generation and industrial energy use and implementing more stringent efficiency standards in key target areas (vehicles/buildings).</p>
<p><b>20. Acknowledging the current review, what changes to the New Zealand Emissions Trading Scheme are needed if it is to play an important part of New Zealand’s transition to a low-emissions future?</b></p>	<p>A reworking of the ETS so that it:</p> <ul style="list-style-type: none"> <li>• includes all sectors / gases</li> <li>• sees the removal of the cap and transitional period</li> <li>• encourages the right behaviours</li> <li>• delivers more effective carbon pricing, pricing that incentivises a transition to lower carbon electricity – the current price signals have delivered negligible results at relatively high cost</li> <li>• delivers real, verifiable emissions reductions or removals in the New Zealand economy</li> <li>• encourages uptake of green/low carbon debt instruments.</li> <li>• provides regulatory certainty.</li> </ul>
<p><b>21. What type of market-based instruments would best help New Zealand transition to a low-emissions economy?</b></p>	<p>Ultimately, international markets will decide the effectiveness or otherwise of New Zealand’s carbon market settings through demand for our products, such as agricultural products, tourism etc.</p>
<p><b>22. What type of support for innovation and technology would best help New</b></p>	<p>While support for innovation and technology can certainly help New Zealand’s transition to a low-emissions economy, it is not the key to our transition; New Zealand’s focus needs to be on the development of effective and consistent policy settings across the wider economy.</p>

<p><b>Zealand transition to a low-emissions economy?</b></p>	<p>New Zealand does not need to lead the world with innovative new technology; agricultural emissions can be addressed to some degree through afforestation and land use changes, transportation by falling battery and vehicle costs and industrial emissions can be solved by incentivising users to switch to low carbon electricity by using largely pre-existing technology.</p> <p>In addition to the policy changes, this transition could be expedited by Government led initiatives. This could include:</p> <ul style="list-style-type: none"> <li>• a contestable energy efficiency and low carbon energy transition fund focused on accelerating asset upgrades– borrowing from the EECA levy/Crown Irrigation models.</li> <li>• funding of R&amp;D and pilot projects as well as marginal projects that may not proceed in the near term without support e.g. the development of a low carbon electricity hydrogen production facility as part of a long-term goal of exporting low carbon hydrogen or fuelling parts of the New Zealand transport sector not readily capable of being fuelled on electricity.</li> </ul>
<p><b>23.How can New Zealand harness the power of financial institutions to support a low-emissions transition?</b></p>	<p>With the right market settings there are significant opportunities for financial institutions, businesses and Government to work collaboratively, particularly with the Government already being a significant investor in financial institutions through the likes of ACC and the NZ Super Fund, which can look at investments over a much longer time horizon.</p> <p>One means of mobilising the capital markets to support the transition to a low carbon economy in New Zealand is the development of a domestic “green” debt (and investment) market. As you may be aware, Contact Energy recently announced the launch of its Green Borrowing Programme, the first for a New Zealand company. We would be happy to discuss this further with the Commission.</p>
<p><b>24.What type of alternative approaches (such as voluntary agreements or support for green infrastructure) would best help New Zealand</b></p>	<ul style="list-style-type: none"> <li>• A carbon price where emitters face the true cost of their externalities.</li> <li>• Right now the Transmission Pricing Methodology (which is yet to be resolved) is causing significant uncertainty and complexity for parties considering connecting to the national grid. Resolving this</li> </ul>

<p><b>transition to a low-emissions economy?</b></p>	<p>will provide certainty for parties looking to make long term investment decisions about whether or not connecting to the national grid is feasible for them</p> <ul style="list-style-type: none"> <li>• Developing engineers of the future with process heat, software, machine learning, communications, distributed generation and other ICT skills will be critical to New Zealand successfully transitioning to a low emissions economy.</li> </ul>
<p><b>25. In addition to “core” climate policies and institutions, what other changes to policy settings or institutional frameworks are required to effectively transition New Zealand to a low-emissions economy?</b></p>	<ul style="list-style-type: none"> <li>• The acceleration of the Government’s fleet conversion to electric vehicles.</li> <li>• A low carbon Government procurement policy.</li> <li>• Low carbon policy requirements incorporated into agricultural, transport and industrial policy.</li> <li>• A national policy statement (NPS) on low carbon energy usage by industry. Currently we have an NPS on renewable electricity generation but no equivalent on industrial energy use.</li> </ul>
<p><b>26. What are the main uncertainties affecting New Zealand businesses and households in considering investments relevant to a low-emissions future? What policies and institutions would provide greater confidence for investors?</b></p>	<p>The impact of the low carbon transition on affordability, or household expenses.</p> <p>In the electricity sector this might be a good opportunity to replace the low user fixed charge with something new aimed at access to energy/affordability.</p>
<p><b>Q27. What approaches, such as regulatory frameworks or policy settings, would help embed wide support among New Zealanders for effective reduction of domestic greenhouse gas emissions?</b></p>	<ul style="list-style-type: none"> <li>• Cross party agreement on climate change and the establishment of a United Kingdom-type climate change act which sets out a clearly articulated plan to achieve our targets and holds the country to account on that plan.</li> <li>• The realisation of New Zealand’s ETS ambition i.e. the ETS must include all sectors and all gases.</li> <li>• Market settings that encourage the shift to a low emissions economy.</li> <li>• Access to support for those who are disadvantaged and adversely impacted by the transition to a low carbon economy.</li> <li>• Greater public transport support.</li> </ul>

<p><b>Q28. Is New Zealand’s current statutory framework to deal with climate change adequate? What other types of legislation might be needed to effectively transition towards a low-emissions economy?</b></p>	<p>As it stands now, between 1990 and 2015, New Zealand’s net emissions have risen by 64%. While there has been a significant increase in New Zealand’s population during this period, the ETS as it currently stands is not driving behaviour change. This is because the current carbon price is either insufficient to drive behaviour change, the cost is not being seen by end users i.e. it is just being absorbed, or both.</p> <p>We think New Zealand should:</p> <ul style="list-style-type: none"> <li>• adopt the well-reasoned recommendations of the Parliamentary Commissioner for the Environment and enact a Climate Change Transition Bill</li> <li>• realise the original intention of the ETS, by including all sectors and all gases.</li> </ul>
<p><b>29. Does New Zealand need an independent body to oversee New Zealand’s domestic and international climate change commitments? What overseas examples offer useful models for New Zealand to consider?</b></p>	<p>Yes. we support the PCE’s recommendations that New Zealand develops a Climate Change Transition Bill which sets emissions targets in legislation, sets carbon budgets, and requires policy to be developed that meets those budgets and that we have a Climate Change Commission – an expert body to provide objective analysis and advice. This would provide predictability and reduce New Zealand’s risk of an abrupt transition.</p>
<p><b>30. How can adaptability best be incorporated into the system supporting New Zealand’s low-emissions transition?</b></p>	
<p><b>31. What types of analysis and underlying data would add the greatest value to this inquiry?</b></p>	

<p><b>32. What should be the mix, and relative importance of, different policy approaches (such as emissions pricing, R&amp;D support, or direct regulation) in order to transition to a low-emissions economy?</b></p>	<p>New Zealand needs a mixture of market price signals and direct regulation to accelerate our shift to a low carbon economy. Contact believes that markets with the right settings will ultimately deliver the best results for New Zealand. While we do not see a role for subsidies, to the extent they result in Government picking winners, we think there may be a role for some limited subsidies around education.</p>
<p><b>33. What are the main co-benefits of policies to support a low-emissions transition in New Zealand? How should they be valued and incorporated into decision making?</b></p>	<p>Co-benefits of policies include the following:</p> <ul style="list-style-type: none"> <li>• Improvements to the health of New Zealanders. Health has been a missing dimension in climate policies. It is not widely appreciated that there are many benefits to health that are likely to accrue from a low carbon economy. These co-benefits include reducing health exposures and risks related to ambient (outdoor) air pollution, primarily from coal; indoor air pollution in homes reliant on coal and biomass fuels.</li> </ul> <p>Other benefits include:</p> <ul style="list-style-type: none"> <li>• a reduction in reliance on imported fuels</li> <li>• tourism</li> <li>• long term competitiveness of New Zealand’s exports</li> <li>• GDP growth</li> <li>• improvement in water quality through a reduction in fertiliser and effluents</li> <li>• management of societal climate change adaptation costs</li> <li>• enhanced biodiversity through afforestation</li> <li>• a reduction in erosion.</li> </ul>

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	The majority of these points are all well addressed by the Royal Society in their paper <i>Transition to a low-carbon economy for New Zealand</i> .
<b>34. Who are the most important players in driving forward New Zealand’s transition to a low-emissions economy?</b>	While political parties across the board have a role to play in driving New Zealand’s low emissions economy, there is an important leadership position that businesses can take. We believe important players include New Zealand’s farming, forestry, tourism and electricity sectors, as well as New Zealand industrials. With the right regulatory settings, business will have confidence to invest into a low carbon future.
<b>35. What measures should exist (and at what scale and duration) to support businesses and households who have limited ability to avoid serious losses as a result of New Zealand’s transition to a low-emissions economy?</b>	-
<b>36. What are the essential components of an effective emissions-mitigation strategy for New Zealand that will also be economically and politically sustainable?</b>	-
<b>37. Should New Zealand adopt the two baskets approach? If so, how should it influence New Zealand’s emissions reductions policies and long-term vision for the future?</b>	-

<p><b>38. How should the issue of emissions leakage influence New Zealand’s strategy in transitioning to a low-emissions economy?</b></p>	<p>-</p>
<p><b>39. What do you see as the main benefits and opportunities to New Zealand from a transition to a low-emissions economy?</b></p>	<p>There are many benefits from a transition to a low carbon economy. Benefits include:</p> <ul style="list-style-type: none"> <li>- reduced reliance on imported fuels.</li> <li>- improvements in the health of New Zealanders through reduced pollution.</li> <li>- an improved experience of New Zealand for our tourists and a brand proposition which lives up to its ideals.</li> <li>- New Zealand’s exports remaining competitive over the long term</li> <li>- GDP growth and greater productivity</li> <li>- mitigation of societal Climate Change adaptation costs</li> <li>- better biodiversity outcomes</li> <li>- better instream water values.</li> <li>- a reduction in erosion</li> <li>- an opportunity for New Zealand to show the world what a low carbon economy can look like.</li> </ul>
<p><b>40. What does your long-term vision for a low-emissions economy look like? Could a shared vision for New Zealand be created, and if so, how?</b></p>	<p>New Zealand is uniquely placed to move to a low emissions economy, with an abundance of renewable energy resources and our ability to grow trees well and fast, providing excellent opportunities for carbon sequestration.</p> <p>We believe New Zealand can and should create a vision for a low emissions economy, this is likely to be best achieved by a cross party working group.</p> <p>In terms of our vision for New Zealand we would like to see a low carbon (85% low carbon) energy sector by 2050, enabled by substituting transport and business fossil fuel use with low carbon electricity.</p>