

2 October 2017

Low-emissions economy inquiry
New Zealand Productivity Commission
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Dear sir/madam

Christchurch City Council submission on the Low Emissions Economy Discussion Paper

Christchurch City Council staff welcome the opportunity to submit on the New Zealand Productivity Commission's Low Emissions Economy Inquiry. Please find the submission attached.

If you require clarification on the points raised in this submission or additional information, please contact Kevin Crutchley, Resource Efficiency Manager at kevin.crutchley@ccc.govt.nz or 03 941 8209.

Yours faithfully



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Christchurch City Council

Christchurch City Council submission to the
Emission's Economy Issues Paper

Productivity Commission's Low

In this submission, reference to battery electric vehicles means zero tail pipe emission, battery electric vehicles.

	Question	Council comment
1	How can the Commission add the most value in this inquiry?	<ul style="list-style-type: none"> By providing evidence based recommendations and advice, taking international experience and ideas into account.
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?	<ul style="list-style-type: none"> Drive changes through influencing consumer behaviour: <ul style="list-style-type: none"> Government and local government to take a greater leadership role by ensuring preferential procurement of low emissions products and services; Encourage the uptake of internationally recognised low emission product and service certification; Provide support to consumers interested in switching to low emission economy technologies, e.g. installing battery electric vehicle charging infrastructure; Require labelling of consumer products sold in New Zealand to show the amount of GHG's typically emitted across their lifecycle. Specifically with regards to transport: Almost half of the national vehicle kilometres travelled are within urban centres, not between urban centres. Therefore, greater focus should be placed on urban centres where viable low emission alternatives to vehicle trips exist.
3	To what extent is it technically and economically feasible to reliably measure biological emissions at a farm level?	<ul style="list-style-type: none"> While measuring biological emissions at farm level accurately is difficult, thus making it difficult to include agriculture in the NZ ETS at the farm level, there is likely still value in providing indicative numbers on agricultural emissions (e.g. GHG emissions per kg of beef) to consumers to continue raising awareness which will drive change and signal the need for change in this sector.
4	What are the main opportunities and barriers to reducing emissions in agriculture?	<ul style="list-style-type: none"> The main barriers are likely to be consumer demand for low cost food and, with regards to exports, the distance to markets and the associated 'food miles'. No liabilities associated with agricultural emissions. The main opportunities are likely:

		<ul style="list-style-type: none"> ○ Leveraging New Zealand's expertise in this sector to develop low carbon agricultural technology/processes and products; ○ Change to growing a more diverse range of products which are less GHG intensive but involve greater value add in New Zealand and which can be shipped with a minimum of emissions (i.e. minimising the use of air transport or refrigeration during transport) and marketing these aspects. The co-benefit of such a change would be greater resilience to both consumer behaviour/market changes and to climate change hazards (floods, droughts, storms etc).
5	What are the issues for government to consider in encouraging alternative low-emissions land uses?	<ul style="list-style-type: none"> • Incentivising higher density living to reduce the need to travel (reduce urban sprawl) and to make shared transport (car share, bike share, public transport) a more viable option. • High density living can be further incentivised with increased funding for walking, cycling and public transport, ahead of road capacity projects, to make short trips easier by modes other than private vehicle. • Limit government funding of irrigation schemes to projects which make legally binding commitments to use the irrigated land for low emission agricultural/horticultural products.
6	What are the main barriers to sequestering carbon in forests in New Zealand?	<ul style="list-style-type: none"> • Carbon price and price uncertainty.
7	What policies, including adjustments to the New Zealand Emissions Trading Scheme, will encourage more sequestering of carbon in forests?	<ul style="list-style-type: none"> • Policies which result in greater carbon price certainty. • Relax limitations on which trees can be awarded carbon credits.
8	What are the main barriers to the uptake of electric vehicles in New Zealand?	<ul style="list-style-type: none"> • Purchase price. • Current availability of different types of battery electric vehicles (for different applications). • Travel range limitation. • Limited regulation of older, high emission internal combustion engine vehicles. • New Zealanders generally keep ownership of their vehicle for a long period of time before replacing or upgrading their vehicle. • Lack of incentive to trade-in old vehicles for battery electric vehicles to assist with the cost of change. • A network of charging infrastructure to make vehicle travel and transport outside New Zealand's centres more feasible for people and freight.

9	What policies would best encourage the uptake of electric vehicles in New Zealand?	<ul style="list-style-type: none"> • Incentives for trade-in of internal combustion engine vehicles when replacing with battery electric vehicles. • A wider goal should be developed that would encourage fewer people driving alone, resulting in fewer cars on the road, reduced car ownership and fewer km travelled. • Encourage local authorities to put a higher weighting on battery electric vehicles during the procurement of public transport services. • Energy efficiency ratings for battery electric vehicles that can be used to compare different models. • Policy clearly concentrating on promoting zero tail pipe emission battery electric vehicles and not incentives for plug-in electric hybrids or electric range extender vehicles. This is because: <ul style="list-style-type: none"> ○ Unlike plug-in electric hybrids or electric range extender vehicles, battery electric vehicles operate with zero tail pipe emissions which has associated environmental and health benefits, especially in urban centres; ○ Battery electric vehicles are lower maintenance; ○ The range (distance) of battery electric vehicles available in the market is increasing rapidly and is expected to match the range of internal combustion vehicles in the near future; ○ A growing range (models) of battery electric vehicles is coming to market soon, catering for diverse user requirements (such as light and heavy commercial vehicles).
10	In addition to encouraging the use of electric vehicles, what are the main opportunities and barriers to reducing emissions in transport?	<ul style="list-style-type: none"> • Tighter vehicle emission regulations for new and used vehicles. • Incentives for businesses and households to trade-in internal combustion engine vehicles for battery electric vehicles. • Policies and investment to support a low emissions transport system, e.g. policies which reduce reliance on single occupancy private vehicles but support multi-modal travel and an increase in walking, cycling, public and shared transport. This should be supported with land use policies and technology which reduce people's need to travel longer distances on a regular basis. • Policies which enable working from home (reducing commuter traffic). • Rail and sea should also play a role in reducing national transport emissions. A greater focus on rail for moving inter-regional freight would be a quick win.

		<ul style="list-style-type: none"> • Government support for the uptake of battery electric, zero tail pipe emission marine transport. • Government support for the uptake of battery electric, zero tail pipe emission aviation transport. • Encourage and enable remote communication and discourage air travel in particular. • Support local/regional economies to reduce transport of goods. • Support electric bikes as they enable longer distance commuting for a range of age and ability of riders, reducing reliance on travel by private, single occupancy vehicle. • Battery electric vehicles will reduce emissions. However, all vehicles (regardless of power source) have a significant impact on the environment associated with their manufacture (including mining and processing of raw materials, manufacture and transport of components, assembly and distribution) and their disposal/recycling. Also, all vehicles create demand for roads, car parks, tyres and ultimately sprawl. • Reduce the cost of public transport, e.g. subsidise bus fares.
11	What are the main opportunities and barriers to reducing emissions from the use of fossil fuels to generate energy in manufacturing?	<ul style="list-style-type: none"> • The main barrier is likely to be the capital cost of lower emission technologies.
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?	<ul style="list-style-type: none"> • Feed-in tariffs for electricity generated from renewable energy by households and organisations, fed back into the grid. • Support the implementation of smart grids.
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?	<ul style="list-style-type: none"> • There is evidence of climate change causing greater frequency of extreme weather events, which will impact New Zealand's hydro sector in particular (floods, droughts).
14	Apart from the regulation and operation of the electricity market, what are the main opportunities and barriers to reducing emissions in electricity generation?	
15	What are the main opportunities and barriers to reducing emissions in industrial processes (such as the production of steel, aluminium and	<ul style="list-style-type: none"> • For energy intensive industrial processes, Government should encourage greater use of renewable energy.

	cement) and in product use (such as the use of hydrofluorocarbons in refrigeration and air conditioning equipment)?	
16	What policies and initiatives would best promote the design and use of buildings that produce low greenhouse gas emissions?	<ul style="list-style-type: none"> • Include high rating requirement in the building code to design and build low emission buildings. • Promote and for government funded or occupied buildings require buildings with: <ul style="list-style-type: none"> ○ Low emission rating (set minimum rating for design standard); and with ○ a building management system (to make building users and operators aware of the building's performance with regards to emissions).
17	What are the main opportunities and barriers to reducing emissions in waste?	<ul style="list-style-type: none"> • Increase waste levy significantly for solid waste being sent to landfill (including a levy for waste taken to cleanfills).
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?	<ul style="list-style-type: none"> • A key beneficial interaction can be expected from the decreasing demand for fossil fuels through the promotion of battery electric vehicles, which will reduce New Zealand's reliance on (mostly) imported fossil fuels and the associated positive impact on New Zealand's trade balance and improved resilience.
19	What type of direct regulation would best help New Zealand transition to a low-emissions economy?	<ul style="list-style-type: none"> • Adopt similar regulations in place in the European Union, which appear to drive genuine change. • Low emission performance requirements for imported vehicles. • Emissions tests and emission limitations for imported vehicles and existing fleet. • Set a target date for all New Zealand vehicle imports to be limited to battery electric vehicles. Suggested target date: 2030.
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?	<ul style="list-style-type: none"> • Greater long-term carbon market certainty (i.e. certainty with regards to market rules).
21	What type of market-based instruments would best help New Zealand transition to a low-emissions economy?	

22	What type of support for innovation and technology would best help New Zealand transition to a low-emissions economy?	<ul style="list-style-type: none"> • Regulation plus incentives and best practice support. • Encourage new zero emissions technology into New Zealand. • Fund researching international best practice processes and technologies.
23	How can New Zealand harness the power of financial institutions to support a low-emissions transition?	<ul style="list-style-type: none"> • Government and local Government procurement of financial services includes a weighting with regards to evaluating the providers' investments and loans in low emission activities, e.g. based on low emission indices. • Government and local Government requires financial institutions it deals with to invest their funds in low emission activities only.
24	What type of alternative approaches (such as voluntary agreements or support for green infrastructure) would best help New Zealand transition to a low-emissions economy?	
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?	<ul style="list-style-type: none"> • Set a target to eliminate transport related GHG emissions, e.g. zero fossil fuel use in the transport sector by 2050. • Government Policy Statement on land transport funding allocation for walking, cycling and public transport modes. • Increased funding for electric vehicle charging infrastructure and for incentivising the uptake of battery electric vehicles. • Enabling the implementation of zero emission zones, e.g. in New Zealand's central business districts.
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?	<ul style="list-style-type: none"> • In the transport sector, the rapid change of transport related technologies (e.g. artificial intelligence, autonomous vehicles etc.) are likely to be the greatest uncertainties affecting New Zealand business and households in considering investments in transport related assets. • Feed-in tariffs for electricity generated from renewable energy by households and organisations, fed back into the grid (legislated for a sufficiently long period to guarantee a return on investment).
27	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?	<ul style="list-style-type: none"> • Tax incentives.

28	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?	<ul style="list-style-type: none"> • New Zealand's current framework does not drive change sufficiently quickly for New Zealand to be a best practice adopter or leader in the low emission economy space. • The framework needs to include a clear pathway of support to achieve low emission targets. • Update New Zealand's Climate Change Response Act (2002) to be similar to the UK Climate Change Act (2008). • Introduce national climate change targets that local government and businesses have to meet. • Introduce national climate change mitigation guidelines.
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?	<ul style="list-style-type: none"> • Yes New Zealand needs an independent body. • The Parliamentary Commission for the Environment could undertake this role.
30	How can adaptability best be incorporated into the system supporting New Zealand's low-emissions transition?	
31	What types of analysis and underlying data would add the greatest value to this inquiry?	
32	What should be the mix, and relative importance of, different policy approaches (such as emissions pricing, R&D support, or direct regulation) in order to transition to a low-emissions economy?	
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?	<ul style="list-style-type: none"> • Changing to a low emissions economy is an opportunity for New Zealand to build on its reputation in its global markets. Not changing to a low emission economy will eventually impact on New Zealand's ('green and clean') reputation negatively in all markets, from agricultural products to tourism.
34	Who are the most important players in driving forward New Zealand's transition to a low-emissions economy?	<ul style="list-style-type: none"> • Central government. • Local government. • Business sector representative organisations.

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?	<ul style="list-style-type: none"> • Clear, early communication and education on the need and benefits of change and the likely consequences on different types of businesses and on households.
36	What are the essential components of an effective emissions-mitigation strategy for New Zealand that will also be economically and politically sustainable?	<ul style="list-style-type: none"> • Identify and specifically support those components of mitigation strategy that 'play to New Zealand's strengths', such as a change to battery electric vehicles (due to its high proportion of renewable electricity, New Zealand is one of the few countries in the world where a change from fossil fuel driven vehicles to battery electric vehicles makes an unequivocally positive difference to the environmental impact of the transport sector while at the same time benefiting New Zealand's trade balance and resilience).
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?	
38	How should the issue of emissions leakage influence New Zealand's strategy in transitioning to a low-emissions economy?	
39	What do you see as the main benefits and opportunities to New Zealand from a transition to a low-emissions economy?	<ul style="list-style-type: none"> • Fulfil New Zealand's ethical and moral obligation to limit climate change, given its impact. • Maintain New Zealand's strong reputation in global markets (food and tourism in particular). • Assist in limiting global migration.
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?	<ul style="list-style-type: none"> • Christchurch City Council's "Strategic Priorities" include "Climate Change Leadership" as well as "Informed and proactive approaches to natural hazard risks". Council's view is that a shared vision, which includes climate change leadership can be created through education regarding the impacts and hazard risks climate change will have on New Zealand and the opportunities that would exist for New Zealand if it took a climate leadership role.