Submission

Accelerating renewable energy and energy efficiency

Introduction

Fonterra is a co-operative owned by around 10,000 New Zealand dairy farmers and their families. Every day we seek to ensure our farmers, the economy and every New Zealander gains the greatest benefit from our dairy industry.

As a farmer-owned co-operative, we are deeply invested in New Zealand's success and take a long-term view for our industry and the country. We believe a healthy environment is the foundation for both a strong economy and a sustainable dairy industry. The unique attributes of New Zealand's environment must be protected and enhanced for generations to come.

Our business produces 20 per cent of New Zealand's greenhouse gas emissions. 90 per cent of these emissions come from our farmers' businesses; 9 per cent from the manufacturing process and 1 per cent from transporting our products from New Zealand to consumers around the world.

We are New Zealand's largest exporter with 30 manufacturing sites spread across New Zealand. Each factory is unique in the volume of milk it processes, the products it makes, the available energy sources and the age of assets. Ten of our sites rely on coal as a primary source of energy. Seven of these sites are in the South Island where there is no gas available, or feasible alternatives at the scale we require them.

Due to the Dairy Industry Restructuring Act 2001, we have a statutory obligation to take any additional milk volume which enters the market. In effect, we must carry sufficient surplus capacity to process this milk, and this needs to be taken into consideration when considering our energy footprint.

We know we must lower our emissions and we have committed to achieving net zero emissions by 2050, on the way to using 100 per cent renewable energy for our manufacturing operations. We have set an interim target of achieving a 30 per cent reduction in our absolute emissions by 2030 based on 2015 levels.

In order to achieve these goals, we must transition away from using fossils fuels. In July 2019 we committed to not installing any new coal boilers or increasing our capacity to burn coal.

We are transforming our energy profile and investing in alternatives to coal. In 2018, our Brightwater site near Nelson switched to co-firing wood biomass, reducing the site's emissions by 25 per cent. Last month we announced that we will convert the coal boiler at our Te Awamutu site to burn wood pellets next season, cutting our national coal consumption by 10 per cent. We are progressing our 'electric milk' program, by looking to electrify parts of our processing at our Stirling site in Otago.

Another important step towards our transition to lower emissions is increasing the energy efficiency of our plants. Since 2003, we have increased the efficiency of our existing assets and are on target to reach a 20 per cent reduction in energy intensity by 2020, based on 2003 as the baseline year.

While acknowledging that 90 per cent of our emissions come from our farmers' businesses, New Zealand's dairy farmers are amongst the most carbon-efficient dairy producers in the world. The emissions intensity of our co-operative's New Zealand dairy production is approximately one third of the global average. A litre of milk produced in New Zealand creates 0.91 kg of CO_2 emissions – compared to the global average of 2.5 kg of CO_2 emissions. This efficiency has come through New Zealand's pastoral farming system, significant research and investment, and our farmers' willingness to continually adapt and improve their farming practices.

Our team of Sustainable Dairy Advisors work with our farmers to create individual Farm Environment Plans (FEPs). These industry-leading plans give farmers a roadmap to improve the environmental footprint of their farm. Every Fonterra farmer will have a personalised plan by 2025 and they will have a farm-specific report detailing their biological greenhouse gas emissions by the end of this season.

Our industry must continue evolving to remain economically and environmentally sustainable in a globally competitive market. We support action being taken to reduce both industrial and agricultural emissions.

Summary

Fonterra welcomes the opportunity to submit on the Accelerating Renewable Energy and Energy Efficiency discussion document.

We strongly support the goal of reducing New Zealand's emissions and believe a New Zealand Inc. approach is key to addressing our collective decarbonisation challenge. There are many proposals within this document which we support, and for those which we do not, we have provided constructive alternatives.

In order to meet New Zealand's decarbonisation targets, the proposal to ban new coal fired boilers for low and medium process heat does not go far enough. We would like a ban on all new coal boilers regardless of the temperature they produce.

We also support a transition period for phasing out existing boilers, especially those that produce low and medium heat. The timing of this transition needs to align with increasing the availability of alternative energy sources.

We encourage the Ministry to do additional work on the transition period as the current wording in this document does not account for the benefits that co-firing coal boilers and heat recovery systems can offer as mechanisms for reducing emissions. We are happy to share our data to support this work.

The challenge for our business of reducing our reliance on coal is not insignificant.

Since 2015, we have reduced our coal related emissions by 5.5 per cent per cent by increasing the efficiency of our existing assets, and utilising wood biomass. By altering our boiler at our Te Awamutu site from coal to wood pellets later this year, we will see an additional 10 per cent reduction from next season.

Our transition to more renewable energy will require a staged approach over time. We are determined to go as fast as we can but are faced with a number of significant challenges that must be overcome. In some parts of the country, the infrastructure isn't set up to handle our substantial energy requirements and where there are renewable alternatives, such as wood biomass or wood pellets, these are not available at the scale we require them.

We are also faced with considerable financial challenges. In addition to the very significant capital investment required to convert or replace our boilers, renewable alternatives have higher ongoing costs when compared to coal. The transition to renewable fuel sources will require substantial investment which must balance with our need to produce products in a globally competitive market.

We welcome this discussion document as part of the ongoing national conversation about how New Zealand transitions to a low emissions energy future. While the challenge ahead may not be simple, we look forward to continuing to work with others to ensure New Zealand meets its climate change commitments.

Our Co-operative, empowering people, to create goodness for generations,
You, me, us, together
Tātou, Tātou

Fonterra New Zealand site map

Accelerating renewable energy and energy efficiency - Have your say

Introduction

* 1. **Name (first and last name)**

Privacy of natural persons

* 2. **Email**

Privacy of natural persons

* 3. **Is this an individual submission, or is it on behalf of a group or organisation?**

☐ Individual
☒ On behalf of a group or organisation

* 4. **Which group do you most identify with, or are representing?**

☐ Iwi or hapū
☐ General public
☐ Environmental
☐ Local government
☐ Research institute / academia
☐ Transmission or distribution sector
☐ Industry or industry advocates
☐ Central government agency
☐ Other (please specify)

☐ Electricity sector
☐ Community organisation
☐ Energy intensive and highly integrated industry
☒ Large energy user
☐ Oil and gas sector
☐ Biomass or geothermal sector
☐ Consultant, financial services etc
☐ Coal sector

*5. **Business name or organisation (if applicable)**

Fonterra Co-Operative Group

*6. **Position title (if applicable)**

Manager, NZ Government Affairs

* 7. **Important information about your submission (important to read)**

The information provided in submissions will be used to inform the Ministry of Business, Innovation and Employment's (MBIE's) work on *Accelerating renewable energy and energy efficiency*.

We will upload the submissions we receive and publish them on our website. If your submission contains any sensitive information that you do not want published, please indicate this in your submission.

The Privacy Act 1993 applies to submissions. Any personal information you supply to MBIE in the course of making a submission will only be known by the team working on the *Accelerating renewable energy and energy efficiency*.

Submissions may be requested under the Official Information Act 1982. Submissions provided in confidence can usually be withheld. MBIE will consult with submitters when responding to requests under the Official Information Act 1982.

We intend to upload submissions to our website at www.mbie.govt.nz. Can we include your submission on the website?

☒ Yes
☐ No

* 8. **Can we include your name?**
☐Yes
☒No

* 9. **Can we include your organisation (if submitting on behalf of an organisation)?**
☒Yes
☐ No

10. All other personal information will not be proactively released, although it may need to be released if required under the Official Information Act.
Please indicate if there is any other information you would like withheld.

Accelerating renewable energy and energy efficiency - Have your say

11. **[FOR INDIVIDUALS] Where are you located?**

☐ Northland / Te Tai Tokerau
☐ Auckland / Tamaki-makau-rau
☐ Waikato
☐ Bay of Plenty / Te Moana-a-Toi
☐ Gisborne / Te Tai Rāwhiti
☐ Hawke's Bay / Te Matau-a-Māui
☐ Taranaki
☐ Manawatū-Whanganui
☐ Wellington / Te Whanga-nui-a-Tara
☐ Tasman / Te Tai-o-Aorere
☐ Nelson / Whakatū
☐ Marlborough / Te Tauihu-o-te-waka
☐ West Coast / Te Tai Poutini
☐ Canterbury / Waitaha
☐ Otago / Ōtākou
☐ Southland / Murihuku
☐ Outlying Islands, including Chatham Islands

12. **[FOR ORGANISATIONS] In what region or regions does your organisation mostly operate?**

☒ Northland / Te Tai Tokerau
☒ Auckland / Tamaki-makau-rau
☒ Waikato
☒ Bay of Plenty / Te Moana-a-Toi
☐ Gisborne / Te Tai Rāwhiti
☐ Hawke's Bay / Te Matau-a-Māui
☒ Taranaki
☒ Manawatū-Whanganui
☐ Wellington / Te Whanga-nui-a-Tara
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☐ Marlborough / Te Tauihu-o-te-waka
☐ West Coast / Te Tai Poutini
☒ Canterbury / Waitaha
☒ Otago / Ōtākou
☒ Southland / Murihuku
☐ Outlying Islands, including Chatham Islands

Please refer to the Fonterra New Zealand site map provided above.

Accelerating renewable energy and energy efficiency - Have your say

Areas you wish to provide feedback on

The *Accelerating renewable energy and energy efficiency* discussion document examines a range of barriers and issues, and seeks feedback on a range of options. The document is divided in two parts:

- **Part A: Encouraging greater energy efficiency and the uptake of renewable fuels in industry (process heat)**
- **Part B: Accelerating renewable electricity generation and infrastructure (renewable electricity generation)**

Each part has multiple sections. You are invited to provide feedback and respond to questions in as many, or as few of the sections as you would like, depending on your interests.

13. **<u>Part A</u> relates to process heat.**
Please indicate which sections, if any, you would like to provide feedback on.

☒ Section 1: Addressing information failures

☒ Section 2: Developing markets for bioenergy and direct geothermal use

☒ Section 3: Innovating and building capability

☒ Section 4: Phasing out fossil fuels in process heat

☒ Section 5: Boosting investment in renewable energy and energy efficiency technologies

☒ Section 6: Cost recovery mechanisms

14. **<u>Part B</u> relates to renewable electricity generation.**
Please indicate which sections, if any, you would like to provide feedback on.

☐ Section 7: Enabling renewables uptake under the Resource Management Act 1991

☒ Section 8: Supporting renewable electricity generation investment

☐ Section 9: Facilitating local and community engagement in renewable energy and energy efficiency

☒ Section 10: Connecting to the national grid

☐ Section 11: Local network connections and trading arrangements

Accelerating renewable energy and energy efficiency - Have your say

Section 1: Addressing information failures

This section explains the issues relating to information failures and asymmetries and seeks your views on options to:

Require large energy users to publish Corporate Energy Transition Plans

- **(including reporting emissions annually), and conduct energy audits every four years**
- **Develop an electrification information package for businesses looking to electrify process heat, and offer co-funded low-emissions heating feasibility studies for Energy Efficiency and Conservation Authority's (EECA's) business partners, and • Provide benchmarking information for food processing industries.**

Option 1.1 would require large energy users to report their emissions and energy use annually, publish Corporate Energy Transitions Plans and conduct energy audits every four years.

15. **Please explain your answer**

There is a need for all energy users to indicate to the Government what their future emissions may be. This reporting will assist in ensuring appropriate policy can be developed to assist in closing the gap between New Zealand's Carbon Budgets and actual projected emissions.

Those companies that are part of the Climate Leaders Coalition have committed to setting emission reduction targets and publicly reporting their emissions.

This voluntary provision of information will assist with the transparency of emissions and projected reductions that can assist the Government with understanding forecast emission reductions.

The verification of emissions is already covered by the New Zealand Emissions Trading Scheme (NZ ETS) as companies either have their energy supplier surrender units based on the energy purchased, or they choose to opt-in as point of obligation and surrender units directly to the Government.

Proposed disclosure requirements are also currently being consulted on and consideration should be given to potential duplication between proposals.

Fonterra supports triple bottom-line against our healthy people, healthy business and healthy environment goals. We have been reporting our social and environmental performance for a number of years and our third annual sustainability report has been independently assured against Global Reporting Initiative (GRI) standards. As part of this, we report our progress towards our emissions reduction targets.

16. **Which parts (set out in Table 3 of Section 1 in the discussion document) do you support?**

☐ Target group - companies with an annual energy spend of greater than $2 million per annum

☒ Public reporting

☐ Government reporting

☐ Energy auditing

☐ Compliance

17. **Please explain your answer**

Fonterra supports public level reporting of emissions and energy use, with all other levels of reporting left up to the discretion of individual companies, their boards and their shareholders.

We ask that consideration be given to replacing the proposed annual energy spend threshold for reporting with annual tonnes of carbon dioxide emitted. This would provide greater transparency to both the Government, industry and public on what emitters are doing to achieve their decarbonisation targets (the objective of the proposal).

18. **What public reporting requirements (listed in Table 3) should be disclosed?**

☐ Annual corporate level energy use and emissions, split out by a range of sources, including coal, gas, electricity and transport

☐ energy efficiency actions taken that year

☐ Plans to reduce emissions to 2030

☒ Other (please specify)

Fonterra believes that all New Zealand organisations should regularly publicly report their target emission reduction level, the steps they are taken and by when their emissions reduction level will be achieved.

19. **In your view, should businesses be expected to include transport energy and emissions in these reporting requirements?**

☒ Yes

☐ No

Please explain your answer

We support the inclusion of transport emissions in public reporting requirements as they represent 18 per cent of total carbon emissions – the second largest emissions sector in New Zealand.

The Marginal Abatement Carbon Cost (MACC) report from Ministry for the Environment (MfE) has shown that most carbon reduction solutions for the transport sector will have negative MACC carbon costs by 2030. These activities, including rail freight utilisation and the electrification of public transport, should therefore be prioritised.

Fonterra includes the carbon emissions of our tanker fleet (500 tankers) in our current corporate reporting. As part of our decarbonisation journey, we have been undertaking tanker efficiency improvements since 1990. This has resulted in a 22% reduction in tanker emission intensity (L of fuel used per 100km travelled).

20. **For manufacturers: what will be the impact on your business to comply with the requirements?**

☐ No impact

☒ Some impact

☐ Significant impact

Please provide specific cost estimates if possible

Any increase in reporting will of course incur increased costs. If a specific energy audit was required, in addition to the public reporting we already undertake, we estimate it would cost $50,000 per site for an external engineering consultancy to conduct this audit. As we have 30 manufacturing sites across New Zealand, this would cost an estimated $1.5 million every four years, plus additional internal resourcing costs.

21. **Option 1.1. Suggests that requirements to publish Corporate Energy Transition Plans should apply to large energy users, and proposes defining *large energy users* as those with an annual energy spend (purchased) of greater than $2 million per annum.**

Do you agree with this definition?

☐ Yes

☒ No

22. **If you selected no, please describe what in your view would be an appropriate threshold to define 'large energy users'.**

We recommend the following would be a more appropriate definition of a large energy user than the definition in the discussion document:
"All businesses/organisations that emit greater than 250,000 tonnes of Carbon Dioxide equivalent per annum."

Energy spend is not necessarily connected to a reduction in carbon emissions. In order for decarbonisation policy to be accurately informed, the definition of a large energy user should be based on the gap between total carbon emissions by sector, emissions reductions achieved and the carbon budget.

24. **Is there any potential for unnecessary duplication under these proposals and the disclosures proposed in the MBIE-Ministry for the Environment discussion document** *Climate-related Financial Disclosures – Understanding your business risks and opportunities related to climate change, October 2019*?

☐ No

☒ Yes (please explain)

There is potential for unnecessary duplication under these proposals and the disclosures proposed in the discussion document 'Climate-related Financial Disclosures – Understanding your business risks and opportunities related to climate change'.

As previously stated, Fonterra supports reporting of annual emissions, what our emission reduction targets are, and progress made to achieve this.

Accelerating renewable energy and energy efficiency - Have your say

Section 1 - Option 1.2: Electrification information package and feasibility studies

The questions on this page relate to Option 1.2

Option 1.2 : Develop an electrification information package for businesses looking to electrify process heat, and offer EECA's business partners co-funded low-emission heating feasibility studies

25. **Do you support the proposal to develop an electrification information package?**

☒ Yes

☐ No

26. **Would an electrification information package be of use to your business?**

☐ Yes

☒ No

27. **Do you support customised low-emission heating feasibility studies?**

☐ Yes

☐ No

While this would not be of use to our business, it may be useful to other businesses.

28. **In your view, which of the components should be scaled up / or prioritised?**

	Scale-up	Prioritise
Regularly publishing information on electricity reliability for large sites.		X
Providing information about ways to increase reliability and resilience of electricity-supplied plant and systems.	X	
Co-funding low-emission heating feasibility studies for EECA's business partners.	X	

29. **Would a customised low-emission heating feasibility study be of use to your business?**

☐ Yes

☒ No

30. **Please describe any components other than those identified that could be included in an information package.**

While an electrification information package for businesses looking to electrify process heat would not be of use to our business, we recognise that it may be of use to other organisations. The development of such information would be best undertaken by the Electricity Distribution Businesses and Transpower.

We would like to see further consideration of EECA's funding model as large majority of funding is being directed towards engineering consultants rather than actual carbon reduction outcomes. We would also like to see further consideration about what EECA's technology demonstration fund can contribute towards capital projects. As the fund is capped at $250,000 and can only be used by first movers of technologies, many businesses miss out as they are not the first mover. This level of funding is significantly below what decarbonisation projects actually cost.

We suggest the MBIE look at the Australian Clean Energy Regulator Emissions Reduction Fund and design a contestable fund that any carbon reduction project could apply to and the projects with the highest carbon reduction for lowest cost would receive funding.

Electricity supply reliability is best handled by the Electricity Authority as the regulating agency that already has quality of supply metrics.

Accelerating renewable energy and energy efficiency - Have your say

Section 1 - Option 1.3: Provide benchmarking information for food processing industries

31. **Do you support benchmarking in the food processing sector?**

☐ Yes

☒ No

32. **Would benchmarking be suited to, and useful for, other industries, such as wood processing?**

☐ No

☐ Yes (please specify)

We decline to answer this question and will leave it to other industries to comment on what would be useful for their industry.

33. **Do you believe government should have a role in facilitating this or should it entirely be led by industry?**

☐ Government should have a role

☒ Should be led entirely by industry

34. **Please explain your answer**

Industry and industry associations are best placed to decide if benchmarking would be of value to their industry.

We recognise that this may be of use to other businesses and industries, however, because of the scale and uniqueness of our business, we would be concerned at how to anonymise benchmarking data. The sharing of this data could pose a large risk to commercial sensitivity.

We see little value in benchmarking within our business as each of our 30 manufacturing sites have different assets of various ages; different technology; different product requirements; and there are natural differences in energy efficiency. We undertake energy analysis across our assets, utilising energy pinch studies of individual plants to identify where energy could be recovered and what technology could deliver it.

Accelerating renewable energy and energy efficiency - Have your say

Section 2 - continued: Developing markets for bioenergy and direct geothermal use

Facilitating the development of bioenergy markets and industry clusters on a regional basis

44. How could Government best facilitate bioenergy markets?

Please be as specific as possible, giving examples.

The Government can help facilitate bioenergy markets like it has done in the past via the Wood Energy South project in Southland (2014-17). The Government also has access to GIS mapping and the forest estate volume and age information from Ministry for the Environment (MfE).

We see there is potential to develop a fuel supply tool model that would allow an end user to select their location and the model would then identify the quantities and quality of biomass available by price. The model would be annually updated based on the MBIE / EECA installed boiler database to correct for increases in usage to ensure it was modelling what fuel was available to other users.

We acknowledge the Government has work underway to stimulate bioenergy markets by converting public thermal plants to bioenergy. This will encourage suppliers to develop supply chains which will lead to increases in volumes offered and reductions in price through competitive tendering.

45. In your view, how can government best support direct use of geothermal heat?

Geothermal heat has geographical limitations to where it could be utilised by process heat. There is considerable financial cost and risk associated with drilling that is a hurdle to adoption.

46. What other options are worth considering?

The Government may wish to look at how it could assist Local Government to develop local biogas system. This could be achieved by using a bio-digester to capture bio-methane from waste food. This energy could then be recycled in the local energy system or reinjected into the national grid.

Accelerating renewable energy and energy efficiency - Have your say

Section 3: Innovating and building capability

This section explains the issues around technology risk for process heat users, and the lack of viable low carbon solutions for emissions-intensive and highly integrated (EIHI) industries. It seeks your views on options to:

- **Expand Energy Efficiency and Conservation Authority's (EECA's) grants for technology diffusion and capability-building, and**
- **Collaborate with EIHI industries to foster knowledge sharing, develop sectoral low-carbon roadmaps and build capability for the future using a Just Transitions approach.**

Technology diffusion and capability-building

47. **Do you agree that de-risking commercially viable low-emission technology should be a focus of government support on process heat?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

Please explain your answer

Fonterra supports the view that the Government can de-risk the commercial viability of low emission technology, but the current scale of support for process heat decarbonisation via EECA's funding pools is not appropriate to the size of investment that must be made.

In comparison, the Government's Low Emission Vehicle Contestable Fund has committed $23.8 million in Government funding which has been matched by $50 million in applicant funding to progress 139 projects to accelerate the uptake of low emission vehicles.

In Australia, the funding is based on a percentage of the total project cost and takes into account the size of the carbon reduction.

Fonterra suggests MBIE consider combining the current technology funding into an overall carbon reduction pool where the best carbon reduction projects would be partially funded. The key difference in this approach is that the percentage of total capital funded is based on level of risk.

48. **Do you agree that diffusing commercially viable low-emission technology should be a focus of government support on process heat?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☒ Agree

☐ Strongly agree

Please explain your answer

As noted earlier, a carbon reduction funding pool should be established and could base the funding on a scale to account for residual risk to the companies that next implement the technology. The current funding model only assists first movers, although this does not necessarily de-risk the installation at another.

49. **Is Energy Efficiency and Conservation Authority (EECA) grant funding to support technology diffusion the best vehicle for this?**

☒ Yes

☐ No

50. **For manufacturers and energy service experts: would peer learning and lead to reducing perceived technology risks?**

☒ Yes

☐ No

51. **For manufacturers and energy service experts: would on-site technology demonstration visits lead to reducing perceived technology risks?**

☒ Yes

☐ No

52. **Is there a role for the Government in facilitating this?**

☒ Yes

☐ No

Please expand on your answer

There is a shortage of research focussed on alternative fuels functioning at higher temperatures and their suitability for commercial implementation. Government and industry collaboration and support is needed for research into how heat pumps can deliver the megawatt scale that is required by users of high temperature boilers.

Accelerating renewable energy and energy efficiency - Have your say

Section 3 (continued): Innovating and building capability

On this page, we are seeking your feedback on industrial innovation and transitioning to a low-carbon future.

53. **For emissions-intensive and highly integrated (EIHI) stakeholders: What are your views on our proposal to collaborate to develop low-carbon roadmaps?**

We are strongly supportive of roadmaps as a collaborative tool between Government and a business or industry. Their use helps identify where complementary policy measures are required to remove roadblocks, they help track performance and they set clear expectations about what will be achieve between both parties.

In 2017 we partnered with the Ministry for the Environment to develop a Roadmap to a Low Emissions Future. The activities outlined in that roadmap have been completed and we seek to work with the Ministry for the Environment (MfE) and the Ministry of Business, Innovation and Employment (MBIE) to create a new roadmap that accelerates our pace of change.

54. **Would low-carbon roadmaps assist in identifying feasible technological pathways for decarbonisation?**

☒ Yes

☐ No

Please expand on your answer

As a collaborative tool, roadmaps help to ensure that Government expectations on industry carbon reduction volumes are built from the bottom-up and are achievable. Their use helps to identify where complementary policy measures are required to remove roadblocks to decarbonisation and an accelerated transition in process heat applications.

55. **What are the most important issues that would benefit from a partnership and co-design approach?**

We see the alignment of grid upgrades to cope with new connections and increased demand as an important issue that would benefit from a partnership and co-design approach.

Accelerating renewable energy and energy efficiency - Have your say

Section 4: Phasing out fossil fuels in process heat

This section explains the issues around long-lived process heat investments and emissions lock-in, and seeks your views on options to:

- **Deter the development of any new coal-fired process heat, through a ban on new coal-fired process heat equipment for low and medium temperature**
- **requirements, and Require existing coal-fired process heat equipment supplying end-use temperature requirements below 100°C to be phased out by 2030.**

Deterring the development of any new fossil fuel process heat

57. **Do you agree with the proposal to ban new coal-fired boilers for low and medium temperature requirements?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

58. **Do you agree with the proposal to require existing coal-fired process heat equipment for end-use temperature requirements below 100 degrees Celsius to be phased out by 2030?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

59. **Referring to Question 57 - is this ambitious or is it not doing enough?**

☐ Ambitious

☒ Not doing enough

Please explain your answer

Fonterra supports a ban of all new coal boilers regardless of the temperature they produce.

The proposal to only ban new coal boilers that are producing low and medium heat does not go far enough to meet New Zealand's climate challenges.

In 2019, Fonterra committed to not installing any new coal boilers or increasing our use of coal.

60. **For manufacturers: what would be the likely impacts or compliance costs on your business of a** *ban on new coal-fired process heat equipment?*

This proposal would have no impact on our business as we have already committed to not installing any new coal boilers.

61. **For manufacturers: what would be the likely impacts or compliance costs on your business of** *requiring existing coal-fired process heat equipment supplying end-use temperature requirements below 100°C to be phased out by 2030.*

We support a transition period for phasing out existing coal-fired boilers that produce low and medium heat. The timing of this transition needs to align with increasing the availability of alternative energy sources and reflect the level of change that would be required to transition.

We strongly encourage the Ministry to do some additional consideration into the definition of 'end use'.

We also support further consideration of co-firing and heat recycling, and how these processes, which reduce our emissions, may become untenable as an unintended consequence of this proposed policy.

We have coal-fired steam boilers that generate 40bar 250°C steam that is then used for a mixture of medium temperature purposes. Most of the heat produced by a boiler is used for machinery such as spray dryers at 210°C and then recycled for other purposes such as space heating at 30°C and heating water for cleaning the factory.

If we were unable to use the recycled heat from a boiler for space heating and heating water for cleaning, we would be required to install additional energy sources. This would be inconsistent with our sustainability goals and divert capital away from investments that reduce our emissions. We also see this as being inconsistent with the Government's intention of reducing emissions.

A simplistic way of considering heat recycling is, if this process was translated to a domestic home, currently you could heat the lounge, kitchen and dining room with one heat source. You could then use a simple heat transfer system to heat other areas such as the bedrooms. Under this proposal, the energy source that heats the lounge, cannot heat any other area and the home owner would need to install additional heating sources for each other room.

We would appreciate the opportunity to discuss this further.

<u>Government departments</u>
We support the accelerated phase out of coal use by Government departments for example at schools, universities, councils, prisons, and hospitals. We hope that moving to energy alternatives such as biomass, will also encourage the further development of the biomass industry which could also be utilised by other users.

An additional benefit of this move would be that it would allow officials to closely evaluate the costs of moving away from coal use and will also provide departments with a clearer indication of transition costs and implementation feasibility.

<u>Small and medium sized business</u>
Fonterra supports the use of complementary measures to assist small to medium sized businesses with coal boilers that are used for under 100°C end use only, to transition. The complementary measures could be interest free loans; a contestable funding similar to the Australian Clean Energy Regulator Carbon Reduction Fund; through to accelerated depreciation funded by the revenue generated from the fixed price ETS option and the future cost containment reserve auctions.

64. In your view, could national direction under the Resource Management Act (RMA) be an effective tool to support clean and low greenhouse gas-emitting methods of industrial production?

☒ Yes

☐ No

65. If yes, how?

National direction under the RMA may act as an additional incentive to encourage clean and low greenhouse gas-emitting methods of industrial production.

66. In your view, could adoption of best available technologies be introduced via a mechanism other than the RMA?

☒ Yes

☐ No

Please explain your answer

We believe the adoption of best available technologies can be introduced via mechanisms other than the RMA. Through complementary measures, the Government can encourage the adoption of low-carbon solutions. For example, the expansion of minimum energy performance standards (MEPS) under ECCA would be an effective tool to help encourage greater industry collaboration for the adoption of new industrial unit operations (i.e. boilers, refrigerators etc).

Accelerating renewable energy and energy efficiency - Have your say

Section 5: Boosting investment in energy efficiency and renewable energy technologies

This section explains the issues relating to underinvestment in energy efficiency and renewable energy technologies. It seeks your views on whether the Government should be considering these issues and how these issues could be addressed.

67. **Do you agree that complementary measures to the New Zealand Emissions Trading Scheme (NZ-ETS) should be considered to accelerate the uptake of cost-effective clean energy projects?**

☐ Strongly disagree

☐ Disagree

☐ Neither agree nor disagree

☐ Agree

☒ Strongly agree

68. **Would you favour regulation, financial incentives or both?**

☐ Regulation

☒ Financial incentives

☐ Both

☐ Neither

Please explain your answer

As previously mentioned, we see a mechanism like a contestable fund for carbon reduction projects, as an effective tool to help drive an efficient transition.

The funding of complementary measures such as this fund, could come from the revenue generated to date from industry using the fixed price option for New Zealand Units (NZU's) in the Emission Trading Scheme (ETS). MBE could consider utilising revenue generated from the cost containment reserve (CCR) and explore changing the ETS so NZU's can be traded between companies or sectors. This would allow the market to find and fund the lowest MACC solutions and drive more emissions reductions.

As connection to the grid is a significant cost and time hurdle to electrification, we suggest MBIE consider reviewing the transmission investment and pricing regulations beyond the current Transmissions Pricing Methodology (TPM) to explore how it can accelerate electrification.

69. **In your view what is a bigger barrier to investment in clean energy technologies, internal competition for capital or access to capital?**

☐ Internal competition for capital

☒ Access to capital

70. **If you favour financial support, what sort of incentives could be considered?**

For many organisations, access to capital may be a challenge and we suggest the following incentives be considered:

- contestable funding (similar to the Australian Clean Energy Regulator Carbon Reduction Fund);
- accelerated depreciation funding;
- green investment funding offering lower interest rate loans than what businesses could otherwise be offered

These types of complementary measures could assist with the significant capital costs to decarbonise process heat (i.e. through wood biomass or electrification) and could be funded from the revenue generated from the fixed price ETS option and the future cost CCR auctions.

72. **What are the risks of these incentives?**

The process to access any incentive must be efficient and assist with expediting emission reduction activities. The process must be transparent and funding requirements clearly identified to ensure that they are appropriately applied.

73. **What are the costs of these incentives?**

The funding of these complementary measures could come from the revenue generated to date from industry using the fixed price option, and the revenue generated from the cost containment reserve (CCR).

74. **What measures other than those identified above could be effective at accelerating investment in clean energy technologies?**

We encourage the Government to explore changing the ETS so that NZU's can be traded between companies or sectors. This would allow the market to find and fund the lowest MACC solutions and drive more emissions reductions.

Accelerating renewable energy and energy efficiency - Have your say

Section 6: Cost recovery mechanisms

This section seeks your views on introducing a levy on consumers of coal to partially recover the cost of implementing any new policies in Part A that may be introduced.

75. **What is your view on whether cost recovery mechanisms should be adopted to fund policy proposals in Part A of the** *Accelerating renewable energy and energy efficiency* **discussion document?**

Fonterra does not support this cost recovery mechanism as it is inefficient in the collection and distribution of revenue. The proposed mechanism also defeats the purported use by diverting company funds away from carbon reduction projects.

Fonterra supports a process where the levy is waived if those funds are being used to directly fund carbon reduction projects.

Accelerating renewable energy and energy efficiency - Have your say

Section 8: Supporting renewable electricity generation investment

This chapter considers policy options to accelerate investment in supply- and demand-side renewable electricity generation and energy efficiency. We seek your views on the following:

- **Introduce a Power Purchase Agreement (PPA) Platform**
- **Encourage greater demand-side participation and develop the demand response market**
- **Deploy energy efficiency resources via retailer/distributor obligations**
- **Developing offshore wind assets**
- **Introduce renewable electricity certification and portfolio standards**
- **Phase down thermal baseload and place in strategic reserve**

This chapter also notes other options that could support investment in renewable electricity generation and includes them for your feedback, however we are not recommending further investigation of these options at this stage.

Power Purchase Agreement (PPA) Platform

108. **Do you agree there is a role for government to provide information, facilitate match-making and/or assume some financial risk for PPAs?**

	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Provide information				**X**	
Facilitate match-making				**X**	
Assume some financial risk				**X**	

109. **Would support for PPAs effectively encourage electrification?**

☒ Yes – support for PPAs would effectively encourage electrification

☐ No

110. **Would support for PPAs effectively encourage new renewable generation investment?**

☒ Yes – support for PPAs would effectively encourage new renewable generation investment

☐ No

111. **How could any potential mismatch between generation and demand profiles be managed by the Platform and/or counterparties?**

We see that PPAs will assist with any mismatch between generation and demand profiles.

112. **Please rank the following variations on PPA Platforms in order of preference.**

1 = most preferred, 4 = least preferred.

3	Contract matching service
1	State-sector led
2	Government guaranteed contracts
4	Clearing house

118. **For manufacturers: is a long-term electricity contract an attractive proposition if it delivers more affordable electricity?**

☒ Yes

☐ No

Please explain your answer

When we invest capital on new equipment for our plants, we do so expecting that equipment will be in use for the next 25 years. Long term electricity contracts provide certainty of the operational costs of running that equipment. Without some level of certainty about the on-going costs of running a particular plant, it is riskier for an organisation to invest in new equipment.

Accelerating renewable energy and energy efficiency - Have your say

Section 8 - continued

On this page, we are asking for your feedback on demand-side participation and demand response.

121. **Do you consider the development of the demand response (DR) market to be a priority for the energy sector?**

☐ Yes

☒ No

Please explain your answer

We do not consider the development of the demand response (DR) market to be a priority for the energy sector. There is already demand response aggregators participating in the electricity market. If the EA or Transpower deems that more would be of benefit, then the valuing of reserves higher will drive more demand responses to be offered. Currently the payback is minimal.

122. **Do you think that demand response (DR) could help to manage existing or potential electricity sector issues?**

☐ Yes

☒ No

123. **What are the key features of demand response markets?**

Fonterra considers that demand response markets need to be voluntary, as some industries will not be able to participate. In our business, we must process milk within a specific time period to ensure food safety standards are met so there is limited ability to participate in DR markets.

124. **Which features of a demand response market would enable load reduction or asset use optimisation across the energy system?**

Specific features of a demand response market that would enable load reduction or asset use optimisation across the energy system will depend on the need of the asset for operation of the industry.

Accelerating renewable energy and energy efficiency - Have your say

Section 8 - continued

On this page, we are seeking your feedback on energy efficiency obligations.

128. **Would energy efficiency obligations effectively deliver increased investment in energy efficient technologies across the economy?**

☒ Yes

☐ No

130. Should these be targeted at certain consumer groups?

We do not see a place for retailers/distributors to provide direct financial incentives for residential and commercial customers to replace inefficient equipment and fuel switch from non-renewable to electricity.

On this page, we are seeking your feedback on renewable electricity certificates and portfolio standards.

At this stage we need further information on the merits of this option before determining whether any further work is warranted. Due to the nature of the option – i.e. the scale of investment by government and/or impacts on industry – it needs to be carefully considered alongside other government decisions on Emissions Trading Scheme settings, the role of complementary measures and the pace and pathways of domestic emissions to meet the country's emission reduction targets.

139. **This policy option involves a high level of intervention and risk.**

Would another policy option better achieve our goals to encourage renewable energy generation investment?

☐ No

☒ Yes (please specify)

We see PPAs for renewable generation build as a more effective policy option to encourage renewable energy generation investment.

141. Should the Government introduce Renewable Portfolio Standards (RPS) requirements?

☐ Yes

☒ No

144. **Should RPS requirements apply to all major electricity users?**

☐ Yes

☒ No

Please explain your answer

There are other more effective policies that could be implemented that would assist with the decarbonisation of process heat.

If energy buyers are forced to a quota, there is a risk that the purchase price would be driven up because of the artificial need. A more effective way is through the competitive tendering process of renewable generation PPAs.

146. Would a government backed certification scheme support your corporate strategy and export credentials?

☐ Yes

☒ No

Accelerating renewable energy and energy efficiency - Have your say

Section 10: Connecting to the national grid

This section sets out our understanding of issues relating to transmission connections to support growth in renewable electricity and the transition to a low emissions economy.

It seeks your views on options to address:

- **the first mover disadvantage gaps in publicly available and**
- **independent information, and a lack of information sharing**
- **for coordinated investment.**

The first mover disadvantage

171. **Please select the option or combination of options, if any, that would be most likely to address the first mover disadvantage.**

We support the combination of options as listed below in helping to address the first mover disadvantage:

☒ **Option 10.1**. – Encourage Transpower to include the economic benefits of climate change mitigation in applications for Commerce Commission approval of projects expected to cost over $20 million

☒ **Option 10.2** - Put in place additional mechanisms to support or encourage Transpower, first movers and subsequent customers to agree to alternative forms of cost sharing arrangements by contract

☒ **Option 10.3.1** - Optimise asset valuations under the Commerce Commission's regime in circumstances where demand is lower than originally anticipated because expected (subsequent) customers do not eventuate

☒ **Option 10.3.2** - Provide for Transpower to build larger capacity connection asset or a configuration that allows for growth, but only recover full costs once asset is fully utilised, with the Crown covering risk of revenue shortfall

☐ None of the options above

☐ Other (please specify)

175. **Would introducing a requirement, or new charge, for subsequent customers to contribute to costs already incurred by the first mover create any perverse incentives?**

☒ No

☐ Yes (please specify)

176. **Are there any additional options that should be considered?**

☐ No

☒ Yes (please specify)

Transpower could engage on a GXP basis with large users to develop long term plans.

Accelerating renewable energy and energy efficiency - Have your say

Section 10 (continued): Connecting to the national grid

On this page, we are asking for feedback on gaps in publicly available and independent information.

178. **Do you think that there is a role for government to provide more independent public data?**

☒ Yes

☐ No

180. **Should MBIE's Electricity Demand and Generation Scenarios (EDGS) be updated more frequently?**

☒ Yes

☐ No

181. **If you said yes, how frequently should they be updated?**

☐ Quarterly

☐ Every six months

☐ Annually

☒ Every two years

183. Should the costs to the Crown of preparing EDGS be recovered from Transpower, and therefore all electricity consumers (rather than tax-payers)?

☒ Yes – it should be recovered from Transpower (all electricity consumers)

☐ No – it should be recovered from taxpayers

184. **Would you find a users' guide (on current regulation and approval process for getting an upgraded or new connection) helpful?**

☐ Yes

☒ No

Please explain your answer

While our business does not require this guide, we believe it may be of use to other business.

Accelerating renewable energy and energy efficiency - Have your say

Section 10 (continued): Connecting to the national grid

On this page, we are asking for feedback on the lack of information sharing for coordinated investment.

187. **Do you think that there is a role for government in improving information sharing between parties to enable more coordinated investment?**

☒ Yes

☐ No

Why or why not?

We see value in improved information sharing between parties to enable more co-ordinated investment. We believe that Transpower would be best placed to do this as a central body that would understand the needs of various parties and potential solutions to meet these needs.

Some consideration would need to be given about how to withhold commercially sensitive information.

188. **Is there value in the provision of a database (and/or map) of potential renewable generation and new demand, including location and potential size?**

☒ Yes

☐ No

189. **If so, who would be best to develop and maintain this?**

We see value in the provision of a database (and/or map) of potential renewable generation and new demand, including location and potential size and see Transpower and electricity distribution businesses are the best placed to develop and maintain this.

ENDS