MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

The role of energy in the second Emissions Reduction Plan

Date:	18 January 2024	**Priority:**	Medium
Security classification:	In Confidence	**Tracking number:**	2324-1059

Action sought		
	Action sought	**Deadline**
Hon Simeon Brown **Minister for Energy**	**Note** the contents of this briefing ahead of your upcoming stakeholder meetings **Provide feedback** on this briefing ahead of your meeting with the Minister of Climate Change	24 January 2024

Contact for telephone discussion (if required)			
Name	**Position**	**Telephone**	**1st contact**
Sharon Corbett	Policy Director, Energy Markets	9(2)(a)	
Scott Russell	Team leader, Energy Use Policy	9(2)(a)	✓
Hannah Overton-Holmes	Senior Policy Advisor, Energy Use Policy	03 966 6632	

The following departments/agencies have been consulted
Ministry of Transport

Minister's office to complete:

- ☐ Approved
- ☐ Noted
- ☐ Seen
- ☐ See Minister's Notes
- ☐ Declined
- ☐ Needs change
- ☐ Overtaken by Events
- ☐ Withdrawn

Comments

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Purpose

This briefing provides an overview of energy's role in reducing emissions to provide context for key stakeholder meetings, including with large industrials and the Minister of Climate Change.

Recommended action

The Ministry of Business, Innovation and Employment recommends that you:

a **Note** that as Minister for Energy and of Transport, you will play a key role in supporting New Zealand to meet our climate change targets through the second Emissions Reduction Plan

Noted

b **Note** we will provide you with additional advice and suggested talking points on the role of energy in reducing emissions ahead of your bilateral meeting with the Minister of Climate Change to discuss your climate priorities within the energy portfolio

Noted

c **Provide feedback** on this briefing ahead of your meeting with the Minister of Climate Change

Yes / No

9(2)(a)

Sharon Corbett
Policy Director, Energy Markets
Building and Resource Markets, MBIE

18 / 1 / 2024

Hon Simeon Brown
Minister for Energy

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Context

1. You have received a briefing from the Climate Change Chief Executives Board [BRF-3987 refers] setting out New Zealand's climate change legislative framework, how New Zealand is progressing towards the first emissions budget, and key challenges for the second emissions reduction plan (ERP2).

2. Reducing emissions from energy and industry is critical for ERP2. This briefing provides an overview of energy's role in reducing emissions to provide context for key upcoming stakeholder meetings, including with large industrials and the Minister of Climate Change. This should be read alongside advice on the energy challenges for hard-to-electrify activities [briefing 2324-1067 refers].

As Minister for Energy and of Transport, you will play a key role in supporting New Zealand to meet our climate change targets

3. The Minister of Climate Change is responsible for leading a cross-government process to develop ERP2.You will play a key role in developing actions to support energy and transport contributions to meeting emissions budgets.

4. Emissions from energy use make up 40 per cent of New Zealand's total emissions (including 18 per cent energy for transport). To support New Zealand to meet our emissions budgets and the 2050 target, we need a transformed energy system with much lower reliance on fossil fuels and increased reliance on renewable electricity and new fuels.

5. As shown in Figure 1, the majority of emissions reductions are expected to come through reducing emissions from energy use in the second emissions budget period (2026-2030).

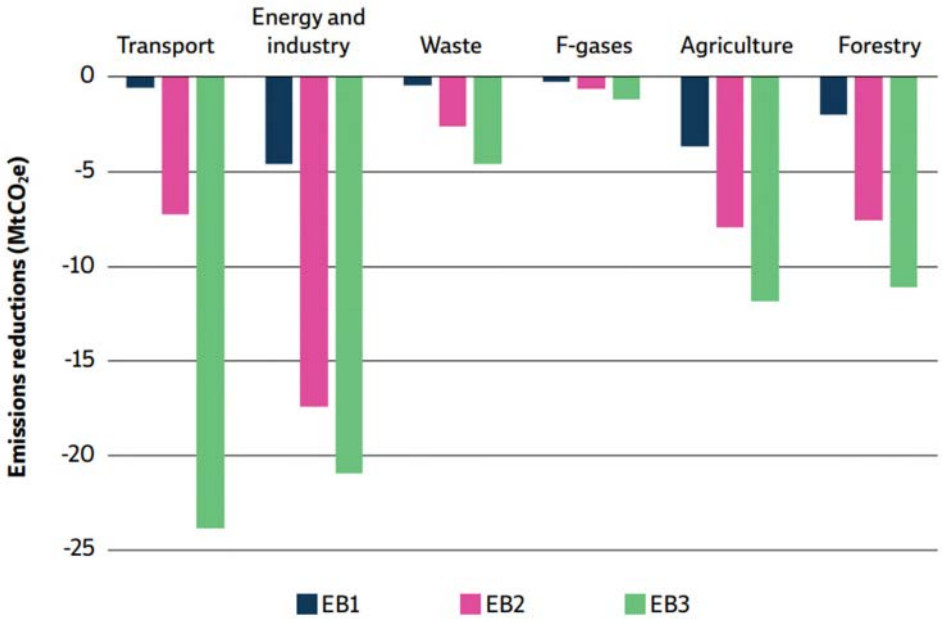

Figure 1: Additional reductions required to meet the first three emissions budgets. Source: Climate Change Commission 2023 Advice on the direction of policy for the Government's second emissions reduction plan

Your priorities to electrify New Zealand and supercharge electric vehicle infrastructure will be critical to reducing energy emissions

6. Consistent with your Electrify NZ goals, electrification will be the key way to meet New Zealand's early emissions budgets.

7. Many technologies such as electric boilers, heat pumps and electric vehicles are commercially available and are, or are soon expected to be, cost competitive with fossil fuel alternatives on a whole-of-life basis. The bulk of the emission reductions in the second emissions budget are therefore expected to come from electrification and particularly from food manufacturing (i.e. process heat) and a growing amount from household transport (i.e. EV uptake). These areas have significant abatement potential at a relatively low cost compared to other sectors, and there are proven options for decarbonising low and medium temperature process heat, and for improving energy efficiency.

8. As shown in Figure 2, approximately 45 per cent of New Zealand's energy and industrial process emissions are already well suited to electrification, provided there is an appropriate enabling regulatory environment – this includes emissions from light and medium transport and low and medium temperature heat. A further 15 per cent may also be suited to electrification – this includes mobile plant (such as off-road vehicles) and some heavy vehicles.

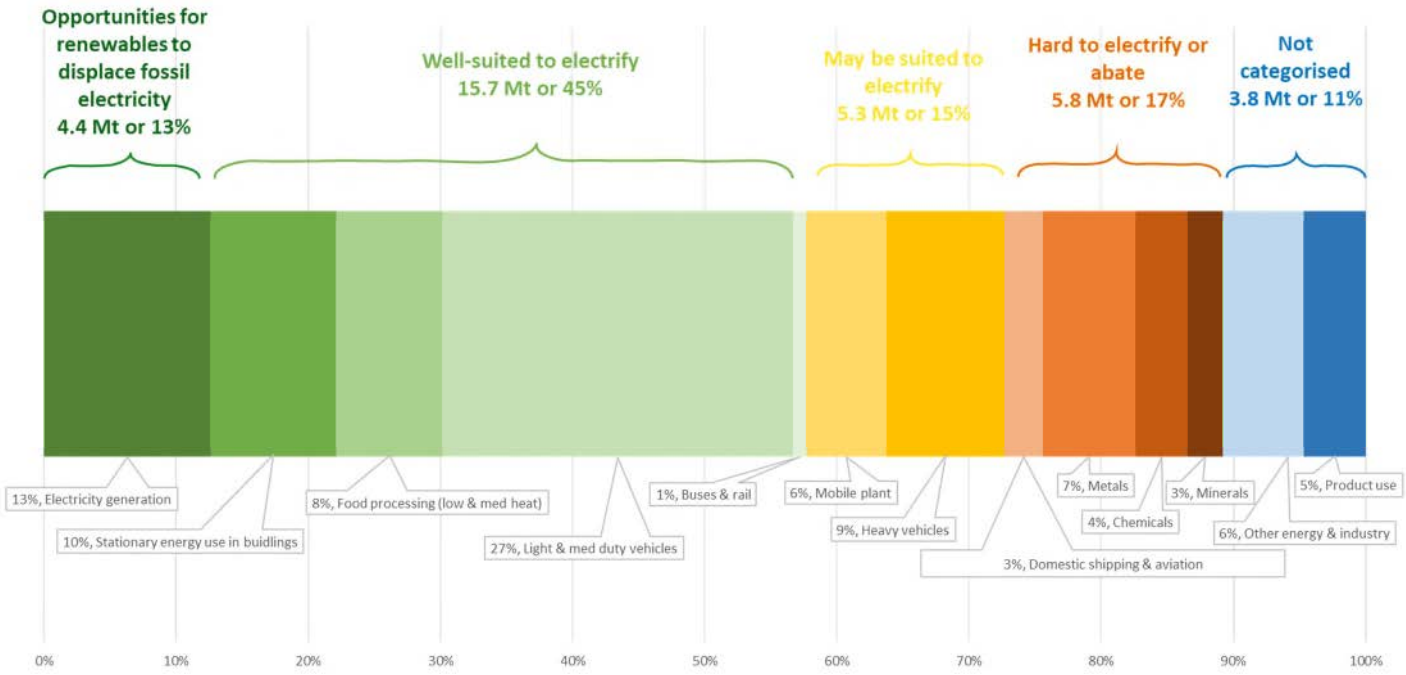

Figure 2: New Zealand's energy, industrial process and product emissions 2021

9. Analysis suggests electricity demand will increase by around 70-170 per cent above current levels by 2050, and potentially substantially more to meet demand from aviation and a potential hydrogen industry. Meeting this demand will require a very large and rapid increase in generation, transmission and distribution infrastructure.

10. Getting the regulatory settings right for renewable electricity generation, transmission and distribution and EV infrastructure will be crucial to ensuring that there is adequate supply, at the right pace, to electrify the economy.

The Emissions Trading Scheme, along with supporting policies, will also play a key role in unlocking electrification…

11. To meet our climate change targets, New Zealand will need measures to drive business and household energy use towards electrification, in addition to unleashing renewable energy supply.

The Emissions Trading Scheme can support electrification, however its current architecture is not likely to deliver rising prices in the long-term

12. The Emissions Trading Scheme (ETS) is a fundamental climate policy tool that puts a price on emissions to incentivise emissions reductions and removals (afforestation). For emissions pricing to drive energy and industrial emissions reductions, prices need to be:

    a. **stable enough** to provide sufficient certainty to businesses, and

    b. **high enough** to make switching to low emissions alternatives economically preferable.

13. The ETS price is currently approximately $70. Average abatement costs (the cost per tonne of greenhouse gas emissions reductions) for industrial emissions reductions projects have been rising over the last few years. Many of the projects that have been implemented are 'low hanging fruit' and remaining projects are likely to be more expensive. Some businesses are also shielded from emissions pricing by industrial allocation.

14. The energy system needs rising prices in the long-term to decarbonise emissions and meet the net zero 2050 target. However, the current ETS architecture cannot deliver this as the design of the scheme largely incentivises forestry removals (mainly exotic afforestation) and minimal gross emissions reductions. There is also a large stockpile of units in the market.

15. The Minister of Climate Change is responsible for ETS policy, and 9(2)(f)(iv)

The effectiveness of emissions pricing also depends on other factors that affect the decisions of businesses and consumers

16. Alongside the ETS, the Government can play a role in addressing the market failures that can hinder the effectiveness of emissions pricing and in supporting clean energy infrastructure development. This can help to ensure an economically efficient transition and enable cost-effective emissions reductions. For example:

    a. Consistent with Electrify NZ, ensuring an enabling environment for new electricity infrastructure so end-users can be confident to switch.

    b. Providing clear information, for example on whole of life costs of different options, or more generally by setting clear policy direction.

    c. Helping to address coordination failures, such as the first mover disadvantage for new electricity connections.

…and enabling innovation where energy use is hard to electrify

17. As outlined in the accompanying briefing, electrification is not currently possible or practical to implement for sectors and activities comprising approximately 17 per cent of energy emissions [briefing 2324-1067 refers]. This includes some large industrial firms and forms of heavy transport, such as shipping and long-haul aviation.

18. Addressing emissions in these activities is important for economic resilience and for meeting future emissions budgets. ERP2 could be a vehicle for clearly signalling how the Government sees its role and priorities regarding these sectors and committing to enabling actions.

19. 9(2)(g)(i)

ERP2 is a key opportunity to take a system-wide view of actions to progress your priorities for the energy transition

20. Issues and opportunities in the energy sector are often closely linked and decisions need to be taken with wider system implications in mind. Sector participants are calling for a coherent plan that considers long-term opportunities and trade-offs. Without this, there is risk of an uncoordinated and inefficient combination of policies at cost to security of supply, economic efficiency and affordability.

21. Care also needs to be taken to avoid the short-term rising costs, reduced reliability, and transitional impacts that could arise during the transition to a more highly renewable energy system. The transition also presents new economic opportunities due to New Zealand's abundant renewable energy resources. These include the potential for creating skilled jobs in our regions to build and maintain new renewable generation.

22. ERP2 provides an opportunity for you to develop a system-wide package of actions that:

    a. supports both the increased supply of renewable electricity and the electrification of products and processes currently powered by fossil fuels

    b. enables innovation to address hard to electrify energy use.

Next steps

23. ERP2 must be published by 31 December 2024 and public consultation is likely to occur around May 2024. To meet this timeline, you will have key policy decisions to make over the next few months. This includes:

    a. Confirming your level of ambition for energy emissions reductions in ERP2 and direction on priority policies you wish to focus on.

    b. Confirming your long-term priorities for the energy transition, to ensure strategic and consistent direction across future emissions budgets.

24. We will collaborate with Ministry of the Environment and Ministry of Transport officials to provide you with further advice and suggested talking points on the role of energy in ERP2 ahead of your bilateral meeting with the Minister of Climate Change to discuss your climate priorities within the energy portfolio. We welcome any direction you would like us to take for this initial advice.

25. We will send you separate advice this week providing more advice on the energy challenges facing firms with activities that are hard to electrify [briefing 2324-1067 refers].