MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

Draft Energy Content for ERP2 and CPMG Talking Points

Date:	19 September 2024	**Priority:**	Medium
Security classification:	In Confidence	**Tracking number:**	2425-0610

Action sought		
	Action sought	**Deadline**
Hon Simeon Brown **Minister for Energy**	**Agree,** subject to your feedback, that MBIE can submit the energy content to MfE for inclusion in ERP2 **Note** our advice and talking points responding to the Minister of Climate Change's letter and your upcoming attendance at CPMG.	23 September 2024

Contact for telephone discussion (if required)			
Name	**Position**	**Telephone**	**1st contact**
Scott Russell	Manager, Energy Use Policy	9(2)(a)	✓
Nick Gillard	Senior Policy Advisor, Energy Use Policy		

The following departments/agencies have been consulted

Minister's office to complete:

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- ☐ Withdrawn

Comments

MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

Draft Energy Content for Final ERP2 and CPMG Talking Points

Date:	19 September 2024	**Priority:**	Medium
Security classification:	In Confidence	**Tracking number:**	2425-0610

Purpose

To provide you with:

- draft energy content for inclusion in the second Emissions Reduction Plan (**ERP2**),
- advice on the Minister of Climate Change's request for you to consider additional policies for inclusion in ERP2, and
- talking points to support your attendance at the Climate Priorities Ministerial Group (**CPMG**) meeting on Monday 23 September 2024.

Executive summary

We have written a draft energy chapter for inclusion in ERP2 and now seek your agreement, subject to any feedback you provide, to submit this content to MFE on 1 October 2024.

On 6 September 2024, the Minister of Climate Change wrote to you encouraging you and your officials to consider further opportunities for additional policies in ERP2. The CPMG meeting scheduled for 23 September 2024 will be an appropriate opportunity for you to respond to this request.

To support your discussions at CPMG, this briefing outlines work already underway in the nine areas where the Minister of Climate Change encouraged you to consider further opportunities. We also provide suggested talking points.

Recommended action

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

a **Note** development of the final ERP2 content is underway and sector chapters are due to the Ministry for the Environment (MFE) on 1 October 2024 under current timeframes

Noted

b **Note** the draft energy content largely updates content from the discussion document, to reflect progress across workstreams and recent developments, including work on energy security and affordability

Noted

c **Agree**, subject to your feedback being incorporated and further drafting refinements, that MBIE will submit the draft energy content (attached as Annex One) by 1 October 2024 for inclusion in ERP2

Agree / Disagree

d **Note** you will have an opportunity to provide further feedback on this content and the wider discussion document during Ministerial consultation in October 2024

Noted

e **Indicate** if you would like to discuss the draft energy content with officials

Yes / No

f **Note** the Minister of Climate Change has written to you requesting you consider additional policies for inclusion in ERP2

Noted

g **Note** the CPMG Meeting scheduled for 23 September 2024 will be an opportunity for you to respond to this request

Noted

h **Note** the attached talking points (Annex Three) to support your attendance at CPMG

Noted

Scott Russell
Manager, Energy Use Policy
Building, Resources, Markets, MBIE

19 / 09 / 2024

Hon Simeon Brown
Minister for Energy

..... / ..... / .....

We have prepared a draft of the energy chapter for ERP2

1. On 5 September 2024 we briefed you on submissions received from energy stakeholders during public consultation on ERP2. We also outlined our proposed approach to drafting the energy chapter by updating discussion document content to reflect progress across workstreams and recent developments [2425-0611 refers]. We have now developed an initial draft of the energy chapter for your review (**Annex One**).

2. As proposed, while this draft includes updated text throughout to reflect progress, the only significant new content relates to recently announced work on ensuring New Zealand's energy security and affordability. This new section notes the importance of energy security for emissions reductions and outlines work underway in this area.

3. MBIE must submit the draft chapter to MFE on 1 October 2024.

4. We understand that the Minister of Climate Change intends to publish ERP2 in early December 2024. We will continue to work with MFE to ensure that the energy chapter accurately reflects all workstreams at publication.

On 23 September CPMG Ministers will consider additional policies for inclusion in ERP2

5. CPMG will meet on 23 September 2024. This meeting will be the key opportunity for Ministers to consider the scope of ERP2 and whether any additional policies should be developed to increase the certainty that the plan will be sufficient to meet the second emissions budget (**EB2**).

9(2)(f)(iv), 9(2)(g)(i)

The Minister of Climate Change has specifically requested you consider further opportunities in the energy sector

9. The potential discussion about additional policies in your portfolio area at CPMG next week was initially raised with you earlier this month. On 6 September 2024, the Minister of Climate Change sent you a letter on delivering the second emissions reduction plan (**Annex Two**). In that letter the Minister noted that the plan must be sufficient to meet the second emissions budget, and that interim projections for the draft plan were finely balanced. The Minister then noted that "to manage the uncertainty of meeting the second emissions budget, [you] could

consider additional policies that could close any sufficiency." The letter then lists nine areas where the Minister of Climate Change encourages you and your officials to consider further opportunities.

10. The Government already has work underway in each of these areas. Consistent with the Government's climate change strategy, the focus of this work is removing barriers (e.g., removing consenting barriers), creating enabling regulatory regimes (e.g., for offshore renewable energy and for carbon sequestration), and ensuring market signals are working as well as possible (e.g., ensuring competitive markets, and considering approach to tariffs for rooftop solar). **Table 1** below provides you with an outline of work already underway in these nine areas.

Table 1. Policy areas identified by the Minister of Climate Change and work underway

Proposed policy areas	Work Underway
Industrial process heat, specifically low and medium heat	Ongoing Regional Energy Transition Accelerator (RETA) programme - Regional electricity capacity and bioenergy supply and demand studies delivered by the Energy Efficiency and Conservation Authority (EECA). Biomass supply chains which could support industrial emissions reductions are also indicated as a possible investment area under the Regional Infrastructure Fund (RIF).
Energy efficiency measures in buildings and construction	On 18 September 2024 MBIE briefed the Minister of Building and Construction on developing a building chapter for inclusion in ERP2 [2425-0886 refers]. The briefing seeks the Minister of Building and Construction's agreement to forward the briefing to both you and the Minister of Climate Change.
Alternative energy sources, such as biofuels	The Government is focussed on supporting markets by providing information. EECA is publishing insights to support collaboration between demand-side and supply-side stakeholders. Through the RETA programme, this work will inform private sector fuel-switching investments in the regions. Biomass supply chains are also indicated as a possible investment area under the Regional Infrastructure Fund (RIF).
Green hydrogen for heavy transport	The draft Hydrogen Action Plan includes actions under four priorities: • Create an enabling regulatory environment (i.e. setting enabling health and safety rules) • Reduce barriers for consenting hydrogen projects • Set clear market settings to improve investment confidence • Support access to international investment and markets
Geothermal	Electrify NZ work programmes are designed to support a wide range of renewable generation sources, including geothermal generation. For instance, changes to make the National Policy Statement for Renewable Electricity

	Generation more enabling will support further use of geothermal resources in New Zealand. Kānoa, the Regional Economic Development and Investment Unit, is currently considering supporting exploratory drilling into New Zealand's supercritical geothermal (SCGT) energy resources. This would build on the work of the 'Geothermal: The Next Generation' project, which MBIE's Endeavour Fund supported with $10.6 million of funding between 2019 – 2025.
Sustainable aviation fuel (SAF)	Australian and New Zealand Finance and Climate Ministers committed through the 2+2 dialogue to: • Invite New Zealand aviation companies and representatives to join the Jet Zero Council • Investigate the conditions required to develop a regional sustainable aviation fuel industry. 9(2)(b)(ii)
Residential and commercial solar	The Electricity Authority is investigating requiring retailers to better reward consumers for supplying power to the grid as part of the Energy Competition Task Force. The Government is also reducing several regulatory barriers to solar installations including updating health and safety standards and voltage limits. NZ Green Investment Finance is also enabling investment in solar, through its solar finance programme.
Offshore wind	The Government is developing a regulatory regime for offshore renewable energy.
Opportunities to enable further electrification at community scale, i.e., Stewart and Chatham Islands	The Government funds community resilience sites (i.e., solar PV and battery systems) through the Community Renewable Energy Fund. The Government is supporting the delivery of the Chatham Islands' Renewable Energy Project, which will help reduce the cost-of-living and operating expenses for businesses on the island by reducing reliance on diesel generation. The Government is supporting Rakiura / Stewart Island by funding a $300,000 feasibility study into renewable energy project options for the island. The government has signalled that the RIF may invest in regional small-scale renewable distributed generation (including solar PV and battery systems).

…and CPMG is an opportunity for you to respond to this request

11. 9(2)(g)(i)

12. Tight timeframes for finalising ERP2 mean there is a limited opportunity to develop policies that are likely to significantly increase the certainty of meeting EB2. Rather than committing to specific pieces of work now, we support taking an adaptive approach to ERP2. Under this approach, the final ERP2 could note that the Government will continue to explore options to strengthen our approach to emissions reductions without committing to specific actions or policy areas.

13. There is already a significant amount of work underway and limited capacity to work on 'back pocket' climate policies.

14. We have provided talking points to this effect for CPMG at **Annex Three.** We can also support you to respond to the Minister of Climate Change's letter following CPMG.

Next steps

15. This table sets out key upcoming milestones in ERP2, noting dates are subject to change.

Milestone	Expected date (TBC)
CPMG meeting	23 September
Sector chapters due to MfE	1 October
Ministerial Consultation	Mid-October
Cabinet Committee	4 November
Cabinet	11 November
ERP2 launch	Week of 9 December

16. Subject to your agreement and any feedback you provide, we will submit the attached energy content to MFE on 1 October 2024.

17. We will continue to refine the draft energy content and you will have an opportunity to provide further feedback on this content and the wider ERP2 during Ministerial consultation in October 2024.

18. We will also ensure consistency between ERP2 and any further direction from you on the development of an energy strategy this year.

Annexes

Annex One: Draft energy content for ERP2

Annex Two: Letter from Minister of Climate Change – 6 September 2024.

Annex Three: CPMG 23 September 2024 - Talking Points

Annex One: Draft energy content for ERP2

Energy

Chapter summary box	
Lead Minister	Minister for Energy, Simeon Brown
Relevant pillar(s) of New Zealand's climate strategy	☐ 1. Infrastructure is resilient and communities are well prepared. ☑ 2. Credible markets support the climate transition. ☑ 3. Clean energy is abundant and affordable. ☐ 4. World-leading climate innovation boosts the economy. ☐ 5. Nature-based solutions address climate change.
Why is your sector important within the context of ERP2 and New Zealand's climate change response?	New Zealand has abundant renewable energy potential. Harnessing this will help meet our emissions budgets, reduce our dependency on imported fuels and support the reliability and affordability of the energy system.
Key actions or policies covered in the chapter	• Carbon Capture Use and Storage • Electrify NZ
Contribution to net emissions in the second emissions budget • Projected net emissions • Estimated emissions reductions from actions in the chapter	[MfE to provide].

Introduction

Affordable, secure energy is a crucial part of the Government's plans to reduce emissions.

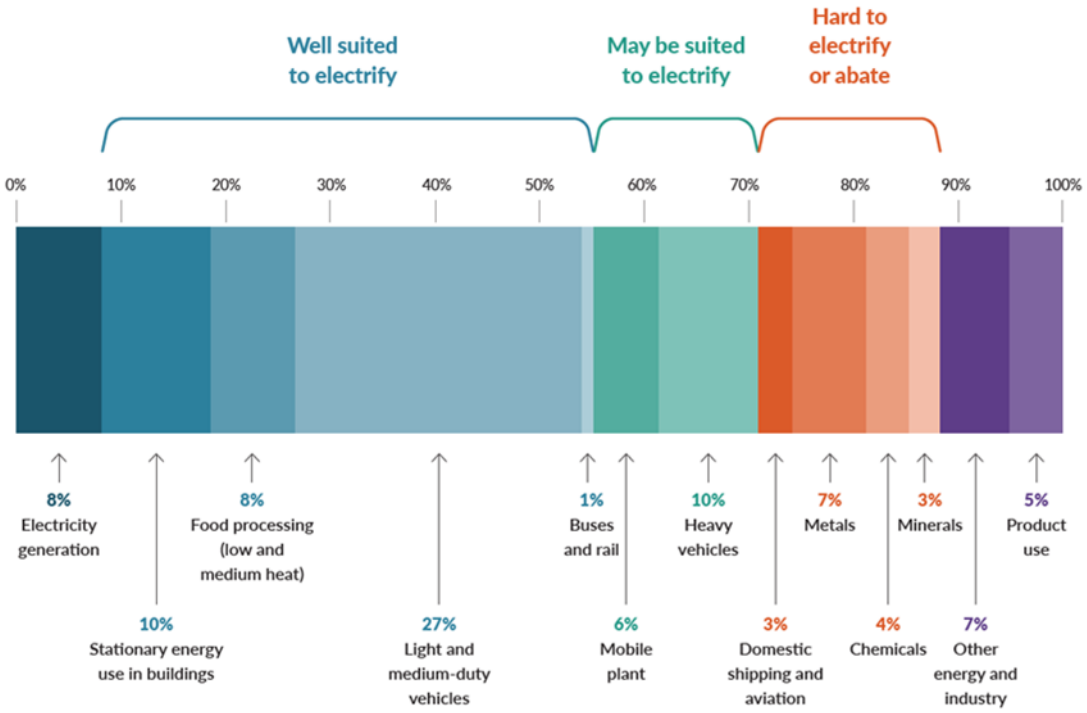
Our electricity is expected to become even more renewable over the coming decade, with renewable sources making up most of the investment pipeline. New Zealand's clean, green electricity means electrification is a major pathway for lower emissions across the economy.

New Zealand has faced recent challenges on energy security and affordability. The Government is committed to work to alleviate these problems. Tackling security and affordability concerns is a necessary precursor to giving businesses and households the confidence to electrify and reduce their emissions.

Energy Emissions

Emissions from energy use make up 37 per cent of New Zealand's gross emissions. This includes 17.5 per cent from energy used for transport. Figure x.x shows the makeup of energy, industrial process, and product-use emissions. Vehicles and energy use in buildings make up the largest individual proportions. We expect energy emissions reductions in the second emissions budget period to come mainly from increased electrification, and energy efficiency gains in light transport and process heat.

Figure x.x: New Zealand's energy, industrial process and product emissions 2022



In 2022, electricity generation accounted for about 10 per cent of New Zealand's total greenhouse gas emissions. New Zealand's electricity system has a high share of renewable generation (hydroelectric, geothermal, and wind), with only 12 per cent coming from non-renewable sources (natural gas, coal, and other) in 2023.[1]

Our approach to reducing energy emissions

Role of government

It will take significant investment to meet expected demand for energy and achieve our goals. New Zealand needs investment in generation, transmission and local lines.

New Zealand's energy sector is dominated by private players. This means it is critical that we maintain investment confidence. Government intervention in the market can have a chilling effect on investment. Therefore, the Government is focused on taking an appropriate role by delivering policy certainty, regulatory certainty, and a level playing field.

Globally, New Zealand is unusual in not subsidising renewables. Renewable energy competes with fossil fuels, in part due to its abundance and because emissions pricing improves its competitiveness. Most of the known investment pipeline is green (largely solar and onshore wind, with some geothermal).[1] Decarbonisation of New Zealand's energy system will be guided by prices and markets. The Governments role is therefore to enable those markets to operate effectively.

[1] Energy in New Zealand 2024

New Zealand Emissions Trading Scheme

Emissions from our energy system are covered by the New Zealand Emissions Trading Scheme (NZ ETS). The scheme encourages net emissions reductions in the energy sector. The emissions price flows through into the price of energy sources that create emissions when they are produced or used, such as electricity, gas, diesel, petrol and coal.

We are focused on complementary policies that support a least-cost approach by expanding the opportunities to reduce emissions in an affordable way. For example, reducing the time and cost of consents for wind farms is intended to increase the competitiveness of wind generation and to encourage investment.

The role of complementary policies under an emissions cap is to unlock low-cost abatement in areas where the NZ ETS has limited impact by:

- removing unnecessary barriers to investment in low-emissions technologies
- resolving market failures, for example by investing in innovation and research and development (R&D), while providing regulatory certainty for private investment.

Chapter 4 outlines the role of the NZ ETS in incentivising net reductions, including recent decisions on ETS unit and price supply settings.

Ensuring New Zealand's energy security and affordability

Security and affordability are key to enabling emissions reductions

It is critical that the Government acts to ensure New Zealand has abundant and secure energy at internationally competitive prices.

As we have seen in 2024 our energy security and affordability are under pressure. Our gas reserves are declining, which has contributed to tight conditions in the electricity market. Insecure or expensive energy increases living costs for New Zealanders, harms our productivity and in in extreme cases can lead to the threatened or actual closure of key industries. As outlined below, the government is working to remove barriers to investment in all forms of energy to reduce tight conditions in the market.

This work is necessary because energy insecurity can also undermine our progress towards our emissions targets – end users will not have the confidence to switch to electric technologies without reliable, affordable electricity.

Comprehensive action to respond to energy affordability and security

To address the current and longer-term risks to energy affordability and security, the government is committed to four key actions:

- Urgently reverse the ban on offshore oil and gas exploration to enable domestic production of gas and increase energy affordability and security
- Improve access to gas for electricity generation by removing barriers to the construction of critically needed facilities to import of LNG
- Enable access to additional generation by reducing unwarranted restrictions on hydro contingency and potentially removing restrictions on electricity lines companies owning generation, and
- Deliver effective electricity market regulation. Here the Government has established the Electricity Competition Taskforce to ensure the efficient operation of the electricity market.

[Placeholder] The Government has also issued an Electricity Government Policy Statement to the Electricity Authority to:

- ensure the Authority is giving sufficient priority to the changes needed to electricity market settings to promote competition and security of supply; and
- ensure the sector is clear on the role the Government will play. It sets clear expectations to the electricity sector that they must manage their own risk. Generators will not invest if they think the Government may intervene.

Investment in gas can help us lower emissions

In 2023 gas contributed around 9 per cent of New Zealand's electricity generation. It also provides energy for industry, commerce and public use, and is a raw material in the production of methanol and urea. Gas-fired generation keeps electricity affordable and secure, which in turn supports electrification. Gas can also reduce our reliance on coal, which has twice the emissions impact of gas.

We expect that as consumers switch to renewable energy, the demand for gas will reduce over time. Nonetheless, we expect gas will continue to play a role in generation out to 2050. The electricity system currently relies on gas and a limited amount of coal to meet peak demand in winter and to cover dry years. Gas and coal are substitutes for each other for electricity generation. Insufficient gas supply could therefore result in New Zealand burning more coal to keep the lights on, increasing emissions from electricity generation.

Carbon Capture Use and Storage

The Government has agreed to create an enabling regime for Carbon Capture Utilisation and Storage (CCUS). The enabling regime will allow New Zealand's industries to access CCUS technology on a level playing field with other emissions reduction and removal tools to support a least cost transition towards net zero emissions. Consistent with other international jurisdictions, the regulatory regime will include the following features:

- A financial incentive for CCUS operators through the New Zealand Emissions Trading Scheme,
- A permission and monitoring function, and
- A clear long-term liability framework.

Changes to legislation to establish the regime will be progressed through 2025.

The most likely opportunity for CCUS is for sequestration facilities to be established at existing gas fields. The regime will enable a gas operator to sequester CO2 from their own production and from third parties. This will support the possible sequestration of CO2 in the future from our hard-to-abate industries and from activities like Direct Air Capture if and when they become economically viable.

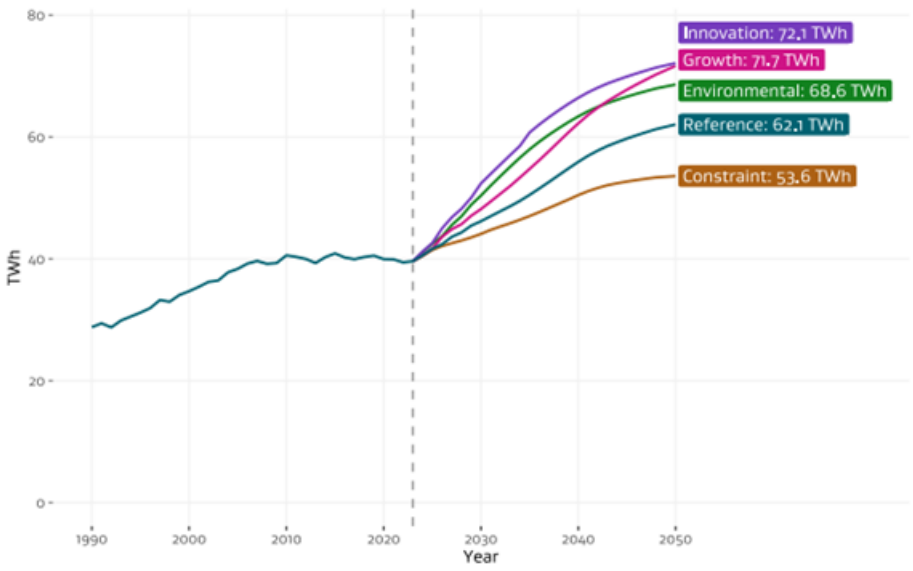
The estimated abatement from CCUS in the Emissions Budget Two and Three periods has been revised downwards since consultation. The change reflects what we have learnt through consultation, particularly about extent of likely deployment of CCUS technologies during these periods. We expect any deployment of CCUS within the Emission Budget Two and Three periods will most likely happen in the gas production sector.[2]

Electrify NZ is a key pillar of ERP2

We need significant investment in electricity generation and infrastructure

New Zealand's high share of renewables means that electricity is a low-emissions alternative to fossil fuels. As demonstrated in MBIE's July 2024 Electricity Demand and Generation Scenarios', demand for electricity is expected to rise significantly by 2050 as electric technologies become more widely adopted. This increase in demand will significantly outpace the demand growth seen in previous decades. Renewable generation capacity must be ready to meet this demand.

Figure x.x Total Forecast Electricity Demand – EDGS [will update to ERP2 publication style]



Using currently untapped renewable energy sources, such as offshore wind, could be necessary to increase generation capacity. However, this will depend on overall demand and

[2] This is in additional to use of CCUS for geothermal generation, which is already happening.

availability of onshore resources. New Zealand has world-leading offshore wind generation potential; taking advantage of this could contribute to reaching our emissions targets. However, the timeframe required for offshore wind to become economic in New Zealand is currently uncertain. The Government expects offshore renewable energy projects to compete on the same commercial basis as other forms of electricity generation.

We also need to enable significant and timely new investments in electricity transmission and distribution infrastructure. This will be critical for the reliability of our grid, particularly in a changing climate. An estimated $100 billion of investment is needed by 2050 just to build and maintain electricity transmission and distribution infrastructure.[3]

Electrify NZ

The Government has committed to doubling renewable energy by 2050. Electrify NZ is the government's work programme to support private investment in in electricity generation and networks that will enable us to achieve this goal.

Electrify NZ includes the following initiatives.

- Progressing the Fast Track Approvals Bill. This will create a the one-stop-shop regime will provide a pathway for major renewable energy and transmission projects to be consented sooner and more efficiently.
- Amending the Resource Management Act (RMA) to reduce consent and re-consenting processing time for most renewable energy consents to be within 1 year, as well as extending the default lapse periods for renewable energy, transmission and local electricity lines consents from 5 years to 10 years. The government will also increase the default consent duration to 35 years for most renewable energy consents.
- RMA national direction for renewable energy and transmission – the Government will advance amendments to the National Policy Statements for Renewable Electricity Generation and Electricity Transmission so they are more directive and enabling.
- Offshore renewable energy – developing a regime for offshore renewable energy to be in place by mid-2025 to unleash investment in offshore renewable energy.
- Further RMA national direction to help enable a range of energy and infrastructure projects – including a new NPS-Infrastructure, and subsequent standards for different types of energy generation and infrastructure.
- A range of work is underway by the Commerce Commission and the Electricity Authority to update a variety of regulatory settings so that New Zealand's electricity system can cope with the economy-wide shift to electrification – including supporting the Government's goal to supercharge EV infrastructure.

Enabling end-users to electrify

We want to enable energy consumers to switch to low-emissions fuels or find energy efficiencies where it makes sense to do so. This could include switching to electric technologies, including electric boilers, vehicles and heat pumps. More efficient use of

[3] Boston Consulting Group. 2022. The Future is Electric. Auckland: Boston Consulting Group.

electricity and greater deployment of smart devices over time will maximise use of existing renewable generation and reduce the need for future upgrades of electricity generation and networks. This can also help reduce the need for coal and gas to meet peak demand.

This can only happen if markets and regulations are working as intended and we have a functioning competitive electricity market. To ensure this is the case and end users are in a position to make effective choices surrounding their energy use, the Government has work underway in a number of areas, as outlined below.

Enabling energy efficiency and a smarter electricity system

Improved energy efficiency and a smarter electricity system will provide real benefits to New Zealand. They further enable electrification by helping maximise the use of existing renewable energy and reducing the overall need for generation and network upgrades across the electricity system. Alongside emissions reduction benefits, they also increase productivity and reduce costs on households and businesses. [placeholder – link to possible Building and Construction chapter]

We expect the ETS will continue to play an important role in incentivising businesses to improve energy efficiency. The Government is also carrying out work to support energy efficiency, including:

- Progressing amendments to the Energy Efficiency and Conservation Act 2000 (EEC Act) to future-proof New Zealand's energy efficiency regulatory regime. The changes will also enable New Zealand consumers and businesses to access products that meet the latest international energy efficiency standards, delivering further energy and cost savings as a result.
- The Energy Efficiency and Conservation Authority (EECA)'s work to provide information to businesses and households.

Work is also underway to better make our electricity system smarter so we can use the energy we have more effectively. This includes:

- Amending the EEC Act to enable standards to be set for devices with capability for demand flexibility, including EV smart chargers. This will support the uptake of EV smart charging in New Zealand and improve consumers' capability to shift demand for home EV charging away from network peaks.
- Work to create a level playing field and remove regulatory barriers to the adoption of rooftop solar. This includes exploring innovation in tariff design (such as feed-in-tariffs for rooftop solar and battery systems) that could enhance uptake of household battery systems and encourage businesses and households to change how and when they use electricity. This will include work led by the Electricity Authority.

Promoting the affordability of New Zealand's electricity supply

As mentioned above, the Government has initiated an Energy Competition Task Force, bringing together regulatory experts from the Commerce Commission and Electricity Authority with

observers from MBIE. It will assess how well the market is operating to deliver efficient investment and affordable electricity. Its work programme includes two packages:

- Enabling new generators and independent retailers to enter, and better compete in the market
- Providing more options for end-users of electricity

The government is also working to minimise the impacts on those least able to pay. This includes through continued support for

- The Warmer Kiwi Homes Programme
- the Support for energy Education in Communities (SEEC) Programme

Ensuring the security of New Zealand's electricity supply

The Government also has work underway to further improve the security of New Zealand's electricity supply. This work includes:

- Mitigating the impact of severe weather on energy infrastructure, including through amended rules about how close trees can grow to power lines.
- Enabling the development of new fuels and technologies, including through work to improve market access for grid-scale batteries and demand-response.
- Continued support for the Community Renewable Energy Fund to build energy resilience in communities and trial innovative ways to store and distribute locally generated electricity.

Enabling a range of options for supplying energy

The Government aims to bring down the cost of abatement across the economy by enabling markets to select from a wide set of affordable low emissions options. Businesses are already scaling up use of options like bioenergy. In future, we may see more widespread adoption of technologies like hydrogen, sustainable aviation fuel, and offshore renewable energy. Getting the enabling settings right now can support future emissions budgets.

Renewable gases

Enabling the use of biomethane and hydrogen to replace natural gas provides an opportunity to improve the security of our energy supply through diversifying fuels. Using lower emissions alternatives will also reduce emissions.

There is an opportunity to utilise existing organic waste streams to capture biogas and upgrade it to biomethane. Biomethane is chemically identical to natural gas and can be injected into gas transmission and distribution networks, and used in existing appliances.

Around 4.9PJ of biogas, equivalent to approximately half of residential and commercial gas demand, is estimated to be produced by landfills, wastewater treatment plants and industrial facilities around the country every year. Much of this is currently flared to reduce its global

warming potential. Some of this gas is used on-site to generate electricity and process heat. There is considerable further biogas potential from agricultural waste sources.

[Placeholder: discussions/confirmation with sector and potentially ERP modelling required] Some biomethane supply is expected to come online for injection into gas distribution networks during the second emissions budget period. The extent to which this supply will reduce New Zealand's emissions depends on the wider energy system. In the currently constrained supply environment, any additional supply of gas will likely result in higher overall energy consumption and would therefore be unlikely to reduce emissions. However, in times where there are not supply constraints, use of renewable gases would be likely to displace emissions-intensive sources of energy like natural gas and coal.

The Government has taken steps to create an enabling environment and remove barriers to uptake of renewable gases in New Zealand's energy system. This includes:

- [Placeholder: Should be gazetted at the end of September / will ensure alignment with waste chapter] Updating the Climate Change (Unique Emissions Factors) Regulations 2009 to allow for offsite destruction of landfill gas produced by Class 1 landfills and including a new destruction factor for upgrading biogas to biomethane. These changes will remove the disincentive under the ETS for landfill operators to provide biogas for offsite uses, including for biomethane upgrading.
- Revising the NZS 5442:2008 Specification for reticulated natural gas to be fit for purpose with blends of biomethane and natural gas. Further revisions to the standard are currently underway to consider blending of hydrogen with reticulated natural gas and biomethane.

The Government is continuing to explore what additional measures are needed to increase the uptake of renewable gases in New Zealand's energy system. We will also take an enabling approach to review existing gas and other related regulations to ensure they are fit for purpose and compatible with renewable gases in the reticulated system.

Bioenergy

New Zealand has abundant bioenergy resource potential stemming from its strong plantation forestry base. Enabling greater use of bioenergy increases our low emissions fuel diversity, which in turn improves the security of our energy supply.

Bioenergy includes various products such as woody biomass (chips, pellets) for use in boilers in industry and power generation, and liquid and gaseous forms such as renewable gases and sustainable aviation fuels (SAF), which are further outlined elsewhere in this chapter. Bioenergy has advantages over electric technologies in generating higher temperature heat more cost-effectively. Bioenergy can also be used in industrial applications for combined heat-and-power (co-generation), or in a hybrid fuel system where it is powered up flexibly when electricity costs are high or when there are constraints on the grid. [cross-ref to forestry and wood chapter].

Price volatility, concerns about the security of supply over the life of an industrial plant (that is 20 plus years), poor information on regional feedstock availability, and a lack of secondary processing at scale of bioenergy products (e.g. into pellets) are key constraints to further uptake.

The Government is supporting markets by providing information. EECA is publishing insights to support collaboration between demand-side and supply-side stakeholders. Through the Regional Energy Transition Accelerator programme, this work will inform private sector fuel-switching investments in the regions.

Hydrogen

Hydrogen is being trialled and demonstrated as a low-emissions alternative in heavy industry, heavy and specialty transport, production of green fuels (see below) and power generation.

It is not expected to play a significant role in meeting the second emissions budget, but near-term action in this area could help to reduce emissions in later budgets.

The Government aims to support private investment in hydrogen. It has/will publish a Hydrogen Action Plan focused on:

- Creating an enabling regulatory environment
- Reducing consenting barriers for hydrogen projects
- Creating the incentives for efficient private investment in hydrogen
- Supporting access to international investment and markets

Sustainable aviation fuels

Sustainable fuels will be needed to decarbonise the planes that carry passengers and goods to, from and around New Zealand.

The Government has funded feasibility studies with the private sector to explore domestic supply chains of alternative jet fuel options. Air New Zealand and MBIE have funded two studies investigating the feasibility of establishing SAF plants domestically, using woody biomass (forestry slash) and municipal solid waste.

9(2)(b)(ii)

EECA has also contributed funding for a feasibility study in producing SAF from green hydrogen at Marsden Point, undertaken by Fortescue Future Industries and Channel Infrastructure.

Annex Two: Letter from Minister of Climate Change – 6 September 2024

Hon Simon Watts

Minister of Climate Change
Minister of Revenue

6th September 2024

Hon Simeon Brown
Minister for Energy, Minister of Transport
By email: S.Brown@ministers.govt.nz

Dear Simeon,

Delivering the second emissions reduction plan

I formally seek your agreement to confirm the Energy and Transport chapters and related policies for the second emissions reduction plan.

As a key Minister in this area, I want to acknowledge the work you and your officials have already done in producing the draft plan, which shows we can meet our first and second emissions budgets with our proposed policy mix. Continuing this work is critical to finalising these plans and delivering on our commitments.

As you are aware, the Government is required under the Climate Change Response Act 2002 to publish an emissions reduction plan by the end of this year. Work has progressed well to date. Cabinet has approved our draft plan to reduce emissions, and public consultation on this draft plan closed in August.

Confirming final policies for your portfolio

Ministers must agree on finalised sector policies by the end of September. The policies will then be incorporated into the plan, which I plan to take to the Cabinet in November.

I expect that in the time available, the focus will be on considering public consultation and refining and quantifying existing ministerially endorsed policies. We must provide the public with as much specificity as possible so that our core policies drive confidence in our approach. For your portfolios, these core policies include:

- Electrify NZ;
- Investigating carbon capture, utilisation and storage;
- 10,000 electric vehicle (EV) chargers by 2030; and
- Improving public transport.

Proposing policies to give us choices in meeting emissions budgets

A key statutory requirement is that policies and strategies in the second emissions reduction plan are sufficient to meet the second emissions budget. As interim projections for the draft plan were finely balanced, sufficiency will be an important risk to manage when finalising the plan.

To manage the uncertainty of meeting the second emissions budget, we should consider additional policies that could close any sufficiency gap in the final plan or create greater certainty about achieving it.

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Hon Simon Watts

Minister of Climate Change
Minister of Revenue

The Energy and Transport portfolios are critical to achieving the second emissions budget and supporting New Zealand's transition to a low-carbon economy, so I encourage you and your officials to consider whether there are additional promising opportunities in the energy and transport sectors that could be explored, such as:

- Industrial process heat, specifically low and medium heat;
- Energy efficiency measures in buildings and construction;
- Alternative energy sources, such as biofuels;
- Green hydrogen for heavy transport;
- Geothermal;
- Sustainable Aviation Fuel (SAF);
- Residential and commercial solar;
- Offshore wind; and
- Opportunities to enable further electrification at community scale, i.e. Stewart and Chatham Islands.

I look forward to continuing to engage with you on this work. My office and officials are available to assist with any queries.

Hon Simon Watts
Minister of Climate Change

CC: Carolyn Tremain, Chief Executive of the Ministry for Business, Innovation and Employment

Audrey Sonerson, Secretary for Transport

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Annex Three: CPMG 23 September 2024 – Talking Points

Sufficiency and developing additional policies

- I note that the updated projections currently show that New Zealand is on track for EB2, although this is subject to some uncertainty.
- We should only commission work on possible additional policies to achieve further emissions reductions if we consider that this is appropriate to manage this uncertainty.
- 9(2)(g)(i)
- My officials have advised me that there is already a significant amount of work underway and limited capacity to work on 'back pocket' climate policies.
- I support taking an adaptive approach to ERP2. This would mean monitoring progress on and only commissioning work to develop additional policies where they are needed. In the short timeframes to landing the final ERP2, we are unlikely to be able to develop significant new policies that will materially increase the certainty of meeting EB2.
- Under this approach, the ERP2 document could note that as part of an adaptive management approach, the Government will continue to explore options to strengthen our long-term approach to emissions reductions, without committing to specific actions or policy areas.