MINISTRY OF BUSINESS, INNOVATION & EMPLOYMENT
HĪKINA WHAKATUTUKI

BRIEFING

ERP2 – Submissions analysis and proposed approach to developing final ERP2 content

Date:	5 September 2024	**Priority:**	Medium
Security classification:	In Confidence	**Tracking number:**	2425-0611

Action sought		
	Action sought	**Deadline**
Hon Simeon Brown **Minister for Energy**	**Note** the attached summary of submissions **Agree** to our proposed approach to drafting the energy chapter for the final ERP2 **Forward** this briefing to the Minister of Climate Change	12 September 2024

Contact for telephone discussion (if required)			
Name	**Position**	**Telephone**	**1st contact**
Sharon Corbett	Policy Director, Energy Markets	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- ☐ Withdrawn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

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Purpose

This briefing provides a summary of key energy stakeholder submissions from consultation on the second Emissions Reduction Plan (ERP2) and seeks agreement to next steps.

Executive summary

Consultation on the ERP2 discussion document closed on 25 August 2024. This briefing provides you with an initial summary of energy stakeholder submissions and key themes within them. It also provides an assessment on two Climate Change Commission recommendations which relate to the energy portfolio.

This briefing seeks your agreement to our proposal to develop the final ERP2 energy chapter by updating the consultation chapter to reflect progress and recent developments, including recently announced Government actions on energy security and competitive prices.

We are awaiting updated modelling results on how New Zealand is tracking to meet EB2. If that modelling indicates further action is required to meet EB2, you may be asked to develop additional emissions reduction policies in the energy sector. 9(2)(g)(i) We can provide advice on options and their trade-offs with you if this eventuates.

Recommended action

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

a **Note** the summary of energy stakeholder submissions attached as Annex One

Noted

b **Note** our assessment of two Climate Change Commission recommendations

Noted

c **Agree** to our proposed approach to drafting the energy chapter by updating the discussion document content to reflect progress and recent developments

Agree / Disagree

d **Note** the Climate Priorities Ministerial Group meeting on 23 September will be a key opportunity to discuss ERP2 with your colleagues

Noted

e **Note** if there are concerns that ERP2 may not be sufficient for New Zealand to achieve EB2 you may be asked to develop additional emissions reduction policies

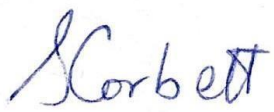
Noted

f **Note** we will provide you with a draft energy chapter on 26 September

Noted

g **Forward** this briefing to the Minister of Climate Change.

Agree / Disagree



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

5 / 9 / 2024

Hon Simeon Brown
Minister for Energy

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

Context

1. On 17 July 2024, the Ministry for the Environment (MfE) announced public consultation on proposals to inform ERP2. On 8 August 2024, we provided an update on emerging themes from consultation and options for energy content in the final ERP2 [2425-0257 refers].

2. Consultation closed on 25 August 2024. Agencies must send MfE sector content for compilation into the final ERP2 document by 1 October 2024.

3. Once we have received your feedback, we will refine the draft chapter and aim to provide you with the final version for approval on 26 September 2024.

Key findings from energy stakeholder submissions

Approach to analysis

4. MfE received an interim total of 1,824 submissions on the ERP2 Discussion Document. Given the short timeline, we focussed our analysis on key energy stakeholder responses to the energy-specific questions in the Discussion Document. This includes submissions from iwi/Māori. MFE is also separately conducting quantitative analysis of all ERP2 submissions.

5. **Annex One** provides a detailed summary of submissions. We provide a summary of the key themes below, including:

    a. Electrify NZ

    b. Demand side barriers to emissions reduction

    c. The role of gas and Carbon Capture Utilisation and Storage (CCUS)

    d. Decarbonising hard to abate sectors.

6. On 3 September 2024 you also received a briefing containing a summary of submissions on carbon capture and storage [2425-0953 refers].

Energy stakeholders wanted more detail on Electrify NZ and highlighted other barriers to renewable development

7. Submitters noted that there was little information about what was included in the Electrify NZ work programme and this limited their ability to provide feedback on the initiative and what it would achieve. Submitters were supportive of reducing the cost and time of consenting, but noted that other barriers also limit the uptake of renewable generation. These include:

    a. High costs for development, including in light of the lack of government subsidies or other financial incentives for renewable generation and the need for significant investment in transmission and distribution infrastructure.

    b. Lack of certainty around likely demand, including because of a projected long term Emissions Trading Scheme (ETS) price of approximately $50.

    c. The need to adequately incentivise (potentially by pricing) and enable firming generation, such as gas, to support uptake of intermittent generation types.

    d. The lack of coordinated planning to support alignment between sources of demand, transmission, distribution and generation.

    e. Workforce capability and capacity constraints.

Energy stakeholders supported using the ETS but thought further complementary policies could address demand side barriers to emissions reductions

8. Some submitters supported using the ETS as the main mechanism for driving emissions reductions but others noted that current settings, and the low forecast carbon price, mean the ETS alone is unlikely to incentivise significant gross reductions. Some submitters supported further complementary policies that could address market failures and incentivise businesses and households to reduce their emissions, including through uptake of energy efficiency measures.

9. Submitters noted several barriers to electrification and energy efficiency, including high upfront costs; a lack of information to enable households and businesses to make informed decisions; and broader system barriers, such as connection and capacity issues, as well as high fees and time-consuming processes.

Gas sector stakeholders welcomed the acknowledgement of gas's transitional role but thought further measures would be needed for renewable gas and CCUS

10. Gas sector submitters supported the role of gas in firming renewable electricity. They welcomed a regulatory regime for CCUS, but indicated that at current ETS prices, CCUS may only be viable in sectors like geothermal and gas production, not cement and petrochemicals. They indicated that there are still barriers to use of renewable gas, such as high cost, lack of policy support, limited awareness and demand, difficulty demonstrating reduced ETS liability when blended with produced gas, and regulatory uncertainty.

11. Some stakeholders felt ERP2 relied too heavily on CCUS and other new technologies. They noted that once New Zealand runs out of storage space for captured carbon, we will still have a gross emissions problem from ongoing fossil fuel use.

Stakeholders from hard to abate sectors thought additional policies are needed to complement the ETS

12. Stakeholders generally felt the ETS was not sufficient to incentivise gross emission reductions in process heat, heavy transport, and heavy industry sectors. Stakeholders signalled markets for low-emissions fuels like hydrogen and sustainable aviation fuel are unlikely to develop at scale without policy supports offered in other jurisdictions, such as end-use mandates, tax credits, concessionary finance, government co-investment in process heat, and/or tariffs on imports with high embedded emissions. They also asked for regulatory barriers to be proactively addressed in areas such as zero-emissions aircraft, hydrogen production and use, and internationally aligned sustainability standards for low-emissions fuels.

13. Stakeholders highlighted the importance of planning for the significant renewable electricity generation and transmission that could be needed for low-emissions aviation and hydrogen, and to support connection of offshore wind to the grid. Aviation stakeholders noted that high annual grid connection fees will be tough to justify for the lumpy demand profiles of early battery electric planes. They also highlighted the importance of engaging in International Civil Aviation Organisation rule-setting in coming years to ensure New Zealand's unique feedstocks are considered 'sustainable' for the purposes of producing aviation fuels.

Energy stakeholders provided feedback across a range of other themes

14. Key areas of interest for stakeholders include:

    a. Support for an energy strategy that sets the long-term direction for the energy system, ensuring policy stability and investment confidence.

    b. Addressing financial barriers to enable proactive, coordinated and efficient investment in renewable energy through a range of potential funding mechanisms.

c. Reviewing regulatory and market settings to improve the system and enable renewable outcomes, including affordable electricity.

d. The need for further detail and more robust analysis of energy sector and industrial processes and product use proposals to ensure they are sufficient to achieve emissions reduction outcomes.

e. The need for additional evidence-based policies to complement the ETS, such as enabling investment in a range of energy, fuels and technologies, considering sustainable and indigenous impacts alongside economic outcomes, helping hard-to-abate industries to decarbonise, and considering what role gas should play in supporting the transition to renewables.

Consideration of the Climate Change Commission's advice

15. In December 2023, the Climate Change Commission (the Commission) published advice on the direction of policy for the Government's ERP2. The Minister of Climate Change must consider this advice when preparing ERP2. Two recommendations in the Commission's advice relate to your energy portfolio. Note you will receive advice on two other building policy related recommendations which touch on matters within the energy portfolio next week.[1]

16. The table below outlines the two energy recommendations and our assessment of them.

Commission Recommendation	Assessment
Rec 19. Prioritise and accelerate renewable electricity generation build and ensure electricity networks can support growth and variability of demand and supply. These outcomes must be progressed in partnership with iwi and hapū, particularly considering potential implications for mana whenua and mana moana and their rights and interests.	We generally support this recommendation and consider it aligns with work underway. The Government's Climate Strategy includes a pillar of making sure 'clean energy is abundant and affordable'. Under this pillar the Government has committed to doubling renewable energy by 2050. Electrify NZ is the government's work programme to deliver on this goal and includes a number of initiatives, including changes to RMA to increase the speed and certainty of consents relating to renewables, improved and more enabling national direction for both renewable electricity generation and transmission. The government is also working on delivering a regulatory regime for offshore renewable energy, to enable investment and deliver clean energy at scale. The new Fast Track Approvals Bill will also provide an important pathway for efficient consenting of renewable generation and transmission projects of regional or national significance. Measures to enable consenting of renewables include provisions to engage with Māori to assess and manage impacts on Treaty settlements. This work is also complemented by other work underway, including the recently announced package of actions designed to bolster energy security and other initiatives designed at improving energy efficiency and achieving a smarter electricity system.
Rec 20. Accelerate the decarbonisation of process heat and pursue opportunities to	On balance, this recommendation is not well aligned with the Government's climate mitigation strategy which is focussed on using the ETS to drive net emissions across the economy. The strategy is also

[1] "Rec 14: Accelerate comprehensive retrofits to deliver healthy, resilient, low emissions buildings" and "Rec 15: Prevent the installation of fossil gas infrastructure and connections in buildings except where there are no technically viable low emissions alternatives".

reduce emissions across other industrial sectors.	agnostic as to whether emissions are net or gross, and from which sectors abatement comes from. This is in contrast from this recommendation's focus on specifically driving gross emissions reductions in the industrial sector. Current and projected ETS prices are unlikely to *accelerate* the decarbonisation of process heat within EB2. As noted by submitters and summarised above, further incentivising industrial emissions reductions within EB2 would likely require demand side policies to specifically remove barriers (e.g. financial and information) to encourage the uptake of lower emissions technologies in the near term.

Proposed approach to developing the final ERP2 energy chapter

We propose to develop the final ERP2 energy chapter by building off the discussion document content….

17. We propose leveraging the existing ERP2 discussion document content to develop the final energy chapter. This will involve focussing our content on the work the government is taking to support energy emissions reductions including:

    a. **Supporting the ETS** to work effectively.

    b. **Electrify NZ** and enabling end-users to electrify.

    c. **Other policies for meeting the second emissions budget**, including through enabling natural gas, geothermal energy and bioenergy.

    d. **Enabling future emissions budgets**, including through hydrogen, sustainable aviation and offshore wind.

…while updating it to reflect progress and recent developments, particularly in key areas such as energy security and competitive prices

18. We will also update content to reflect progress and recent developments. The most significant change will be developing additional content to reflect actions underway to address energy security and ensure competitive prices. 9(2)(g)(i)

19. We will also update the chapter to reflect progress in other parts of the energy work programme. This will include:

    a. Additional information on the Electrify NZ work programme, including progress on developing an offshore renewable energy regime

    b. Proposed updates to the Energy Efficiency and Conservation Act; and

    c. Development of a Hydrogen Action Plan.

We will keep you updated on developments in other areas of the ERP that relate to energy

20. We understand that work is underway to develop a separate chapter on building and construction. We will keep you informed of progress on this chapter where its content relates to the energy portfolio.

Climate Priorities Ministerial Group (CPMG) meeting

CPMG will provide you with an opportunity to discuss energy content and the wider ERP2 with your colleagues

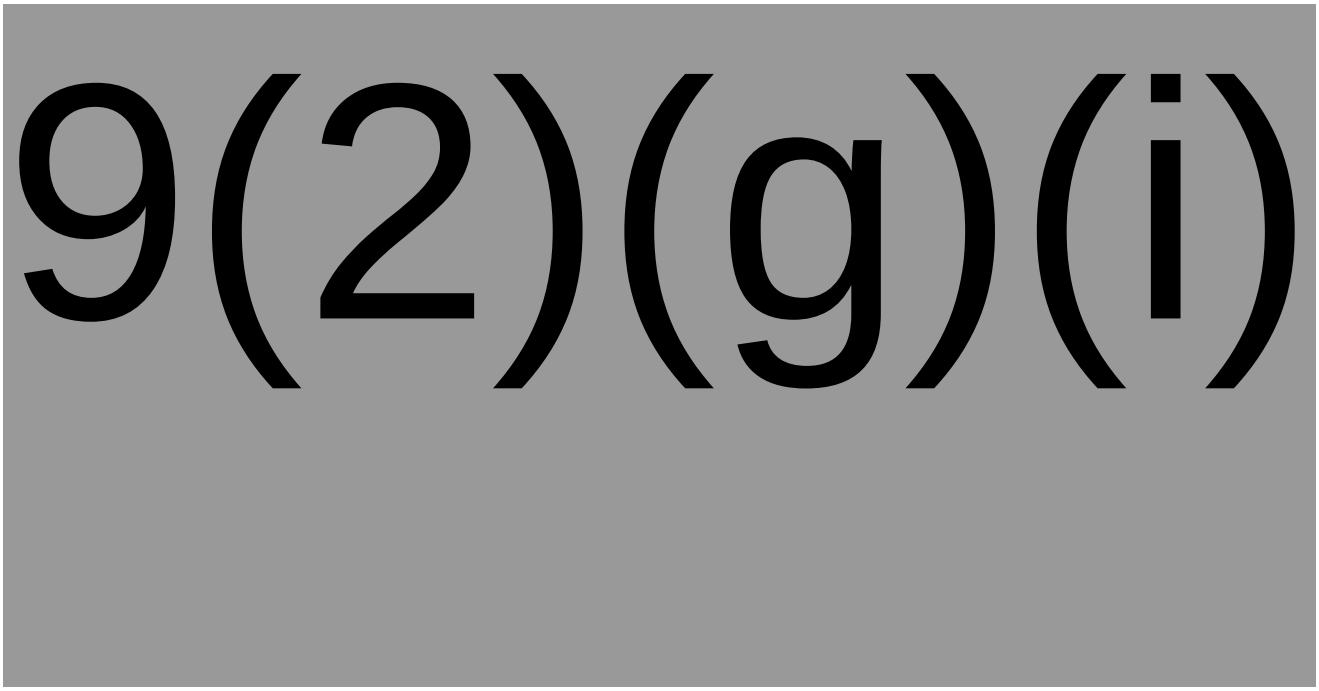
21. CPMG is scheduled for 7:30pm on 23 September 2024. We understand that this meeting will focus on ERP2 and will be a key opportunity for Ministers to discuss the proposed final plan and any additional work that will be required ahead of publication by the end of 2024.

Updated modelling could indicate further action will be required to meet EB2

22. Interim modelling in the ERP2 discussion document indicated that New Zealand was on track to achieve the EB1 and EB2, with greater uncertainty about achieving EB3. We are awaiting updated modelling results, which could indicate that New Zealand is no longer on track to meet EB2 and further action may be required to ensure the plan is sufficient.

23. MfE will have updated modelling available for Ministers to consider at CPMG. CPMG will therefore be the first opportunity for Ministers to consider the current package of actions and whether it is desirable to develop additional actions to mitigate the risk that ERP2 does not provide a sufficient plan to enable New Zealand to achieve EB2.

24. If further policies are required to enable New Zealand to meet EB2, you may be asked to consider developing additional policies to reduce energy sector emissions, given emissions from energy use make up 37% of New Zealand's gross emissions (including 17.5% from energy used for transport).



We can provide you with further advice on additional policies, if required

28. Will provide you with talking points to support you at CPMG. 9(2)(g)(i)

Next steps

29. Next week you will be forwarded a briefing relating to a potential building and construction chapter, which will include consideration of the Climate Change Commission recommendations relevant to energy.

30. As discussed above, CPMG will be a key opportunity to discuss ERP2. We will provide you with talking points ahead of the meeting.

31. Final energy chapter content is due to MfE by 1 October. Subject to your feedback on our proposed approach, we will provide you with a draft energy chapter on 26 September and seek your approval to submit it to MFE for collation.

32. You will have further opportunities to provide feedback on the energy chapter and wider Plan through Ministerial consultation in October.

33. The table below sets out key upcoming milestones, noting dates are subject to change.

Milestone	Expected date (TBC)
CPMG meeting	23 September
Briefing with final energy chapter	26 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

34. We will continue to work with the Ministry of Transport to ensure content alignment across the energy and transport chapters and provide you with updates as necessary through the Energy portfolio Weekly Report.

Annex

Annex One: Summary of energy stakeholder submissions

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Overview

This summary of submissions provides an initial qualitative analysis of a subset of submissions from energy stakeholder submissions identified during consultation. We have organised this analysis to reflect the discussion document questions to which submitters responded. It provides an analysis of submitters views on three main topic areas:

- Electrify NZ
- Demand side policies
- Low emissions fuels and carbon capture, use and storage.

This summary also collates key themes from submitters suggestions of other ideas/initiatives for emissions reductions in the energy and IPPU sectors.

The Ministry for the Environment is concurrently preparing a quantitative analysis of all submissions.

Electrify NZ

Questions in discussion document

- *What three main barriers/challenges that are not addressed in this chapter do businesses face relating to investing in renewable electricity supply (generation and network infrastructure)*
- *If you are an electricity generator, please explain and/or provide evidence of how Electrify NZ could affect projects already planned or underway.*
- *If you are an electricity generator, please explain and/or provide evidence of how Electrify NZ could increase the likelihood that new projects will be investigated.*

Submitters

A range of organisations submitted on the Electrify NZ questions, including generators, large energy users, industry groups, transmission and distribution providers, oil and gas, Iwi and Māori organisations, central and local government groups.

Feedback on high level approach

Several submitters noted that the discussion document did not provide adequate detail on Electrify NZ and this limited their ability to provide more specific comment on Electrify NZ and its likely impact.

While some submitters noted general support for improvements designed to reduce time and cost of consenting renewable energy projects, they noted that there are other barriers which should also be addressed.

Some submitters suggested Electrify NZ would lead to increased development, including one generator who suggested the effect of Electrify NZ in speeding up development may be underestimated. However, others suggested Electrify NZ would make little or no difference.

Barriers to investing in renewable electricity supply

<u>Competition</u>

Several submitters noted that electricity supply in New Zealand is dominated by a few key players and this creates a challenging environment for new entrants to the market.

Some submitters also pointed to recent high electricity prices as a demonstration of misaligned incentives with incumbent organisations being less incentivised to invest in new generation assets.

Cost

Several submitters, including some Māori organisations, noted that availability of capital and the costs of investing in renewables is a barrier to development. Some noted that New Zealand is unusual in that there are no subsidies to incentivise investment in renewables and this is a barrier to development. This point was noted both by an offshore wind developer as well as domestic submitters.

Some submitters also noted in particular that the cost of connecting generation to the grid was a particularly costly barrier to potential developments.

Lack of demand / Insufficient price signal from ETS

Several submitters noted that increased supply of renewable electricity will only be built in line with increased demand. These submitters noted that potentially ETS prices of approximately $50 (in line with the marginal cost of exotic afforestation) are unlikely to create significant demand for electrification because offsetting would be cheaper than gross emissions reductions. One noted the expected carbon price trajectory is in line with recent market prices over the last few years and this experience suggests it will not significantly impact thermal generation costs.

One submitter noted that there is a lack of large energy users who can underwrite developments with long term offtake agreements. It suggested this would also limit the ability of demand to spur investment in renewable technologies.

Access to firming

Some submitters noted the importance for firming (through thermal generation such as gas) to support the transition to a higher proportion of renewables.

One submitter suggested there needs to be a way to competitively price firming given its importance to the wider electricity system.

Calls for spatial planning and increased government direction on role of renewables

Several submitters advocated for a greater central planning approach to renewables development. This included calls from transmission and distribution providers who supported improved planning to ensure alignment between generation and network infrastructure.

Other submitters also supported taking a more proactive planning approach to collocate demand sources with new generation as this may be necessary for energy intensive activities (such as the production of green hydrogen).

More generally, several submitters noted the importance of clear government direction and policy certainty on the role of renewables, potentially through a mechanism such as an energy strategy.

Limitations of transmission and distribution networks

Several submitters noted that existing transmission and distribution networks will need significant investment in the future to enable them to support widespread electrification and deliver the benefits of increased generation.

Some distribution companies note existing regulatory settings such as their price pathways limit their ability to proactively invest in their network and respond in a timely manner to new sources of demand.

Workforce constraints

Several submitters noted that one of the key constraints on the development of renewables and wider network is workforce capability and capacity.

Submitters' other suggestions relating to the Electrify NZ programme included:

- The need for reform of wider environmental and property legislation permits to enable transmission infrastructure (including Public Works Act, Wildlife Act, Conservation Act, Electricity Act).
- The need to better enable bioenergy to play a bigger role in the energy transition.
- Local Government calling for greater clarification on the implementation of Electrify NZ and the need to remove barriers to cost recovery for local authorities.
- Need for greater government role in research/early investment in technologies that will support uptake of renewables.
- Need for government digital strategy for the energy sector to support more complex systems and adoption of distributed energy resources.

Demand side

Discussion document questions

- *How much will the Government's approach to driving investment in renewable energy support businesses to switch their energy use during 2026-30 (the second emissions budget period)?*
- *What three main barriers/challenges do businesses and households face related to electrifying or improving energy efficiency, in addition to those already covered in the discussion document?*

Submitters

A range of organisations relating to large energy users, engineering and consulting, bioenergy, steel, oil, gas, electricity generation and retail, sustainability, advocacy/interest groups, Iwi and Māori, central and local government, and academia.

Feedback on high level approach

A range of submitters commented on the use of the ETS as the main mechanism for driving emissions reduction, with some large energy users and industry associations supporting this approach.

Most consider that the ETS is not solely sufficient to drive demand side emissions reduction largely because current settings (e.g. low carbon price, stockpile of NZUs and impacts of afforestation) do not incentivise change. Those submitters think there is a need for complementary policies to address market failures and ensure settings incentivise households and businesses to reduce their emissions.

Some submitters consider that supporting households and businesses to improve their energy efficiency is a key opportunity to reduce demand-side emissions at less cost than building new renewable generation. Some think that the final ERP2 should include actions to support energy efficiency measures such as incentivising rooftop solar and insulation in houses.

Some submitters consider that the affordability and availability of energy across multiple fuel types (including geothermal, biomass, biofuel, bioenergy, natural gas, and hydrogen) will be critical to achieve New Zealand's climate goals.

Barriers to electrifying or improving energy efficiency

<u>Financial</u>

A range of submitters (gas and oil sector, energy retailers, sustainability, central and local government) identified financial barriers to electrifying and improving energy efficiency.

This includes the upfront cost to change, especially for households and small businesses, and concerns about affordability and security of electricity supply.

Some consider there is a lack of financial or commercial incentive without government subsidies or co-funding because the transition cost outweighs any efficiency gains.

Addressing financial barriers

Most submitters think that there is a need for funding to support households and businesses to improve their energy efficiency to address financial barriers.

Some (oil and gas, energy retailers, central and local govt, iwi Māori) think that government should provide this funding. Others think that energy retailers should be required to invest and promote energy efficiency and fund initiatives for low-and-middle income households.

Submitters suggested a range of funding mechanisms, including subsidies, co-investment, tax incentives, public private partnerships and green finance models.

Some large energy users and sustainability organisations support incentivising demand-side response such as by innovation in tariff design or using net-metering for solar.

One submitter said that continuing to rely on fossil fuel gas locks consumers into high costs and recommended removing natural gas demand by converting homes and buildings to electricity.

Information/capability

Some submitters (energy retailers, Iwi and Māori organisations, and local/central government) consider that many small businesses and households do not have the knowledge to make informed decisions about electrification or energy efficiency. For example, distribution companies do not use a consistent pricing methodology.

An oil and gas stakeholder thought that consumer resistance to change could undermine electrification.

Several submitters thought small businesses need better information support and a clear path to transition.

Some consider consumers need access to better information so they can compare upfront costs with whole-life benefits and make appropriate investments.

Addressing information barriers

Some submitters think that government should provide information to support better decision-making.

One energy retailer saw a role for artificial intelligence to analyse data to compare costs and support consumer decision-making.

Broader system barriers

Some stakeholders from the energy retail, sustainability, and oil and gas sectors identified barriers to electrification in the energy system. This includes issues around EDBs, such as high fees and time-consuming processes, and constrained network capacity which limits investment.

Some think that policies encouraging fossil fuel types such as natural gas will disincentivise the transition to electricity, while others think that multiple fuel types need to be available and affordable to support the transition.

Addressing system barriers

Some large energy users think EDBs have a role to play in helping consumers to electrify. This could include optimising network use, smoothing the demand curve, more time of use tariffs and non-network solutions.

Several submitters supported BusinessNZ energy council's recommendation that the government develop a long-term energy strategy to decarbonise sectors. They see this as helping to create a stable policy environment and set out a clear pathway for businesses to transition.

Some submitters think that government needs to ensure that regulatory settings are fit for purpose, address market failures, and remove barriers to electrification. This could include prioritising work on market competition and affordability, improving regulation of electricity distribution, and standardising processes and timeframes for connection inquiries among electricity distributors.

Several submitters noted support for existing work such as the rollout of EV chargers and amendment of the EEC Act.

Partnership opportunities

Some submitters think government should partner with industry to decarbonise hard to abate industries such as aviation and resolve supply and demand coordination challenges.

Others think that government should partner with industry and international researchers on research and development to address technical and engineering challenges.

Other low-emissions fuels and carbon capture

Discussion Document questions

- *How much will existing policies support private investment in low-emissions fuels and carbon-capture technologies?*
- *What three main additional actions could the Government do to enable businesses to take up low-emissions fuels and carbon-capture technology*

Submitters

Submissions relating to the 'other policies for meeting EB2' and 'low-emissions fuels and carbon capture' sections of the Energy chapter largely came from organisations relating to gas, fuel, geothermal, hydrogen, bioenergy, aviation, and heavy freight sectors.

Feedback on high-level approach

Submitters from the gas sector generally supported a net-based least cost approach.

Submitters from hard-to-abate industries such as aviation and suppliers of low-emissions fuels indicated that gross emissions reductions are highly unlikely under current policy and commercial settings, and the ETS is not an impactful tool in these areas. They signalled that decarbonising sectors like aviation and freight is strategically important for reasons beyond least-cost emissions reductions, such as for maintaining access to export markets and future-proofing our tourism sector. They indicated that ERP2 does not contain sufficient action in the 2026-2030 period to enable a least-cost transition from 2030 and beyond.

Other policies for meeting EB2

Natural gas, renewable gas, and CCUS

Gas companies emphasised the role of gas in firming low-cost renewables. They opposed the Climate Change Commission's recommendation to ban new gas connections.

Stakeholders advocated for bipartisan agreement on the role for gas through a national energy strategy to reduce sovereign risk. Gas stakeholders advocated for Government to recognise the strategic option value of maintaining a gas network that could later be converted to support renewable gas or hydrogen.

CCUS

Some stakeholders (including Lawyers for Climate Action New Zealand) felt ERP2 relied too heavily on 'unproven' technologies such as CCUS. They noted that once New Zealand runs out of storage space for captured carbon, we will still have a gross emissions problem from ongoing fossil fuel use.

Gas companies supported establishing a regulatory regime for CCUS. The BusinessNZ Energy Council noted that while they support CCUS regulations, they think a National Policy Statement on CCS could provide a quicker route for fit-for-purpose regulations than bespoke legislation. Fast implementation would be important if CCUS is to capture emissions within the 2026-2030 time period.

Some stakeholders noted that under current ETS prices, it is likely that only geothermal and gas use of CCUS would likely be viable, and use in petrochemicals and cement would not likely be viable. One stakeholder recommended the Government play a coordination role in linking firms that offer CO2 capture with firms requiring CO2 supply.

Renewable gas

Some gas companies asked Government to support renewable gas certificates in order to clarify calculation of ETS liabilities when biomethane and gas are blended in grid, and as means of demonstrating decarbonisation through the Government's Building for Climate Change and Carbon Neutral Government Programmes. Some asked for the Government to support early-stage demand while costs are higher than non-renewable gas by setting voluntary or mandatory renewable gas targets and providing funding or R&D support. One stakeholder indicated that there are barriers to using renewable gas arising from requirements around gas-fired devices in the National Policy Statement for GHG Emissions in Process Heat, and recommended that these are repealed.

Bioenergy

Bioenergy organisations asked Government to improve information on feedstock availability. Some stakeholders also indicated that current ETS prices do not incentivise gross emissions reduction in process heat and called for the introduction of a GIDI-style co-investment programme for process heat.

Geothermal energy

Geothermal stakeholders called for government signalling on the importance of geothermal energy and geo-heat. They advocated for supports for geo-heat including grants, streamlined consents, and a centralised database of availability. They supported use of CCUS in the geothermal sector.

Enabling future emissions budgets

Hydrogen

Hydrogen producers and users advocated for Government to create an enabling regulatory environment, including through safety regulations and vehicle dimension and mass rules. They also advocated for government or industry-funded subsidies through a levy on diesel, use-mandates, concessionary finance, and/or production tax credits.

Aviation stakeholders asked Government to plan for the significant renewable electricity and hydrogen infrastructure that would be needed at airports, and to proactively develop regulatory settings for zero-emissions hydrogen aircraft ahead of them being needed.

One stakeholder asked Government to monitor and control for potential hydrogen leakage into the atmosphere, which could be an indirect greenhouse gas.

Sustainable aviation

Aviation stakeholders indicated that current policies would not be sufficient to decarbonise aviation. They called for development of a policy framework for aviation decarbonisation. The Parliamentary Commissioner for the Environment advocated for a levy on flights to fund aviation decarbonisation work similar to the agriculture sector.

Aviation stakeholders called for Government to reduce regulatory barriers to grid infrastructure buildout, including high annual grid connection fees that will be tough to justify for the lumpy demand profiles of early battery electric planes. They also called for ring-fencing energy/feedstocks for use in aviation fuel production. They asked Government to participate in ICAO decision-making to ensure New Zealand's unique feedstocks and energy is recognised in sustainability standards for SAF.

They indicated that development of alternative fuels was unlikely under current settings, and advocated for measures used in the majority of like-minded countries such as SAF use-mandates and concessional finance on SAF production facilities. They indicated scale-up of a green hydrogen industry would be a necessary precursor to low and zero-emissions fuel production.

Offshore wind

Offshore developers argued for regulatory change to allow anticipatory investment in transmission. They indicated Government should create a long-term plan to coordinate investments in the electricity system and identify the least-cost upgrades. They indicated that Government could enable uptake of low-emissions fuels by imposing use-mandates, providing rebates, and/or imposing tariffs on imported goods with high embedded emissions.

Other feedback from submitters

Discussion document question:

- *Please provide any additional feedback on the Government's proposals to reduce emissions in the energy sector and the industrial processes and product use sector*

Submitters

Large energy users, iwi and Māori, sustainable, interest/advocacy groups, energy retailers, building, transport, engineering and consulting, oil and gas sectors, local and central government, industry associations, academic.

High level themes

Regulation

Some submitters consider the government needs to review regulatory and market settings. A range of desirable outcomes were suggested, including:

- Promoting competition and innovation (such as by reviewing the Commerce Act)
- Creating an enabling consenting environment for renewables
- Removing regulatory barriers such as constraints on EDBs and transmission networks
- Proactively planning for and managing issues around dry year risk, peak capacity, distribution settings

Some submitters noted their support for the review of the Electricity (Hazards from Trees) Regulations 2003.

Funding

Many consider government has a role to play to enable proactive, efficient, and coordinated investment and address barriers to renewable energy, including capital costs and access to low-cost finance. Some submitters consider government can do more to incentivise private investment. This could include providing co-funding, access to infrastructure financing tools, removing barriers to investment, and supporting energy pilot programmes.

One transport submitter supports the creation of renewable energy zones to enable investment in generation and transmission around hard to abate sectors that will have high energy use requirements (such as aviation).

Policy approach

Draft ERP2

Some submitters support the pillars of the climate strategy and overall direction of ERP2, however some energy retailers, large energy users, iwi and Māori orgs and advocacy groups noted that the discussion document is light on detail and robust analysis. Others consider it relies too heavily on unproven technology, such as CCUS.

One iwi and Māori stakeholder considers ERP2 should have minimal reliance on CCUS, hydroelectricity and exotic forestry given the impacts on Māori interests and the environment.

Some interest and advocacy groups and energy retailers think ERP2 is risky and inconsistent with a least cost approach. These submitters prefer a focus on reducing gross emissions rather than net emissions.

Several submitters consider there is a need for policy stability and certainty, such as via cross-party agreement on long-term policy direction. This is considered critical to enable investment.

One submitter considers that the discontinued ERP1 energy actions risk achieving emissions budgets. Another submitter thinks ERP2 should look ahead to EB3.

ETS

Some submitters support the ETS-led approach. Others consider there is a risk ETS won't drive emissions reductions without complementary measures.

One wants ETS to change to cap and trade mechanism.

Complementary policies

Some submitters suggested policies should aim to:

- Support investing in renewables, low emissions fuels and technologies e.g. by investigating public-private partnerships.
- Take a whole-system approach and consider indigenous, environmental, biodiversity and climate adaptiveness impacts alongside economic outcomes.
- Include a climate mitigation and adaptation objective to support investment.
- Investigate options to support hard-to-abate industries to decarbonise.
- Enable investment in diverse energy technologies.

Some oil and gas stakeholders consider gas has an important role to play in supporting the transition to renewables and policies should ensure gas networks remain viable. However other stakeholders think that there is a need to shift away from fossil fuels as quickly as possible.

Some submitters consider there is an opportunity to reduce emissions cost effectively through the use of biofuels, bioenergy and biomaterials.

Energy strategy

Many submitters across a range of organisations support the development of a long-term energy strategy. These submitters consider that any strategy needs cross-party agreement on a clear pathway over the long-term. They see this as critical to improve certainty, encourage investment, and enable a coordinated whole-sector approach to decarbonisation.

Electricity pricing

Some submitters consider that electricity affordability will have a significant impact on the rate of electrification. Ensuring that market settings support competition and innovation is critical to affordability. However, one energy retailer considers that over the long-term, wholesale prices will support electrification.