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Emissions reduction plan consultation
Ministry for the Environment
PO Box 10362
Wellington 6143

Via email: climateconsultation2021@mfe.govt.nz

ERANZ SUBMISSION ON EMISSIONS REDUCTION PLAN

The Electricity Retailers Association of New Zealand ('ERANZ') welcomes the opportunity to provide feedback on the Ministry for the Environment's Emissions Reduction Plan consultation document.

ERANZ is the industry association representing companies that sell electricity to kiwi households and businesses. Our members supply over 90 per cent of New Zealand's electricity. We work for a competitive, fair, and sustainable electricity market that benefits consumers.

Retailers are the gateway between the electricity sector and Kiwi consumers. ERANZ is focused on consumers and ensuring they benefit from a sustainable and well-performing electricity market.

We support the 2050 emissions reduction targets, and our focus is on how New Zealand can deliver the best transition for Kiwis. That means a transition that delivers on emissions reductions at the lowest possible cost and one that doesn't leave any households or businesses behind.

New Zealand has a highly performing electricity sector that is positioned to help other areas of New Zealand's economy to decarbonise, particularly transport and industrial process heat. There is the opportunity for significant carbon savings in these areas with the right signals and policy support.

Improving the energy efficiency of appliances and buildings would help manage electricity demand, which would increase the amount of electricity available to be used to substitute fossil fuels.

Any interventions need to be carefully considered to avoid unintended detrimental consequences. We want to work collaboratively with Government on agile and flexible regulatory frameworks and policy settings that accelerate the transition to a low carbon economy and deliver fair, equitable and inclusive outcomes.

Key areas of focus for the government we anticipate are the formation of a nation energy strategy, issues around peak demand and dry year risk, a renewable electricity target, regulatory settings to enable smart grids and distributed energy, and Resource Management Act reform to accelerate renewable energy projects

We place New Zealand electricity users at the heart of the transition. We want consumers to be able to choose how they engage with their electricity in a way that best suits their needs. We want to ensure that we're supporting all Kiwis through this transition and not entrenching existing inequalities or worsening hardship. Everyone needs access to secure and affordable electricity, especially as more activities become reliant on electricity.

Aotearoa New Zealand's starting position

The electricity sector has a key role to play to help New Zealand reach our net-zero carbon emissions goal – clean electricity will be needed to power our electric vehicles, provide clean fuel for manufacturing, and keep the lights on.

New Zealand is in an enviable position compared to other countries. Our electricity is already almost 85% renewable and we have the tools and technology needed to decarbonise and build a cleaner, more sustainable future for Aotearoa.

The affordability of New Zealand's electricity makes it easier to switch from carbon-intensive fuels to renewable electricity. We have the 10th cheapest electricity in the developed world, and this is flowing through to households' bills, with the real average annual residential power bill sitting around a ten-year low and down almost $200 since 2014.

Getting to net-zero emissions by 2050 will require an enormous, coordinated effort by all Kiwis. The scale of change needed makes it vital we make the right changes – driving the biggest emissions reductions at the lowest cost. Changes that don't deliver an efficient transition risk loading unnecessary extra cost on Kiwi families or giving future generations an even harder task because we haven't done enough.

Electricity can reduce New Zealand's energy emissions significantly which would drive substantial reductions in New Zealand's overall emissions at a relatively low cost. Our electricity is a highly sustainable energy source, which can and should be utilised in areas like transport, and industrial milk processing instead of other carbon-intensive energy sources.

The sector is well placed to meet growing electricity demand as families and businesses increase their reliance on renewable electricity. Our natural landscape and well performing competitive market have placed New Zealand as one of only 9 countries globally to achieve the top 'AAA' rating across the Energy Trilemma's three metrics of security of supply, affordability, and sustainability

Over the last 25 years the amount of electricity from renewable sources has increased from around 70% to 85% today. Major investment in new generation, means annual renewable electricity use has increased by 8,000 GWh in the last 15 years - enough to power more than 1 million homes.

The electricity sector is continuing to invest significantly to meet increases in demand – both in building new renewable infrastructure and maintaining existing assets. With new projects coming online the proportion of renewable electricity we use is expected to reach 95% in the next few years.

In order to meet our net zero goals by 2050 our electricity system will need to evolve and adapt quickly to manage and meet electricity demand in the most cost efficient way.

That means an electricity system of the future that will:

- First and foremost be consumer focused. Rather than forcing consumers to adapt to the way the sector works, the sector will adapt to consumer preferences which will be varied.
- Have sufficient infrastructure to meet all the increasing demand.
- Have ways to increase energy efficiency and manage demand to reduce the amount of electricity needed to meet demand.
- Have new ways of getting electricity - with more distributed energy resources as well as more new generation.
- Allow consumers to be more active participants in the market if they want to be - selling back power they create themselves.
- See technology shifts that mean demand can more readily flex to address any periods of constraint in the sector

Importance of an equitable transition

Kiwis should be at the heart of our climate transition. As retailers we want consumers to be able to choose how they engage with their electricity in a way that best suits their needs and benefits them.

We want to ensure that we're supporting all Kiwis through this transition and not entrenching existing inequalities or worsening hardship. Everyone needs access to secure and affordable electricity, especially as more activities become reliant on electricity.

Some families can struggle to pay their power bills or keep their home warm in winter. We want all families to live in warm, dry homes with affordable energy costs. The work we do to support New Zealand's transition to a low emission economy should be done alongside existing and upcoming projects to address energy hardship and not instead of.

New Zealand's climate transition will likely have varied impacts on energy hardship. On one hand overall energy bills are likely to fall particularly as cars become predominantly electric (and therefore much cheaper to refuel). That said, families in hardship are less likely to be able to take advantage of some of these changes – they have less ability to invest in an electric vehicle or energy efficient appliances such as heat pumps which help bring energy costs down.

We need to make sure we support all Kiwis through the transition, and that means different levels of support for different communities, households, and businesses.

Power companies are already working to support families facing energy hardship. One example is EnergyMate: a free energy coaching service all about helping whānau get the most out of their electricity. For some, that's a reduced power bill, for others, it's a warmer, drier, healthier home.

EnergyMate has been operating for three years and supports whānau to become more engaged energy consumers with the ability to actively manage their household's energy use and costs – 90 per cent of whānau said they had a better understanding of energy use and efficiency after an EnergyMate visit.

The role of retailers in a transition to a low carbon economy

While much of the electricity sector is focused on big infrastructure investment to meet growing demand, electricity retailers are dedicated to ensuring consumers have access to the technology that will enable an efficient transition for New Zealand and their own household.

Electricity retailers play a vital role in the transition in maintaining a well-performing competitive market that drives innovation and adaptation, to provide value and choice to consumers so they can have an electricity system that works for them.

Power companies are already helping Kiwis to reduce their emissions by supporting switches to electricity through a variety of initiatives - and we're only going to see that increase over the next decade.

An example of the initiatives electricity retailers are leading is the 'virtual power plant' being trialled by Genesis in the Wairarapa. The programme allows a local school, winery, and residents to generate, store, share, and sell energy - using solar panels and batteries to store energy and sell it back to the grid when the price is high, all from their smartphone.

More projects retailers are delivering include:

- Supporting EV uptake through building charging stations and offering convenient places to lock up and charge electric bikes.
- Offering "EV charging rates" to further lower the operating costs of electric vehicles. EV charging tariffs offer a cheaper off-peak rate for those owners happy for their car to charge overnight.
- Offering feed-in tariffs which allow residential customers to earn income from their solar panels. Retailers compete for feed-in tariffs in the same way they compete on the price for electricity supply; some feed-in tariffs match the wholesale market, while others just purchase at a fixed price. Retailers can also offer fixed-price contracts for feed-in, meaning customers have confidence in their return on investment from installing solar panels.
- Promoting electricity as a viable, cost-effective option for switching away from fossil fuels. Small to medium-sized businesses do not always have the capacity or capability to analyse the long-term payback of switching their fuel source. Retailers can use their existing relationships with these customers to present the financial case and encourage greater uptake of switching.
- Incentivising flexible demand by paying commercial customers to dial down their usage during periods of constrained demand or high prices.

- Facilitating the installation of solar panels on the rooves of large commercial customers. New solar installations are funded by retailers (or retailers support applications for government funding), with the customer providing no upfront capital and locking in their electricity price for up to 15 years. Long-term fixed price contracts give the customer the certainty and confidence to commit, and the retailer the reassurance they can recoup their initial investment.

Opportunities for future steps towards decarbonisation

Electricity should be utilised as a sustainable and renewable energy source to decarbonise areas of our economy like transport and industrial heat and processing. The electricity sector is ready to meet this growing electricity demand and already supporting engaged customers.

Constructing the additional renewables required to fulfil New Zealand's increased consumer demand for electricity will be one of the country's largest-ever infrastructure initiatives – and it can be achieved by private sector investment. This frees up taxpayer funding for other emissions reduction projects where there is either market failure or no commercial driver.

There are significant opportunities for the government to support increased electrification and so reduce New Zealand's emissions. For example: removing coal boilers from schools and hospitals and replacing them with electric heating would drive significant carbon savings.

The electricity sector is well placed to manage the growth in demand that will come with the electrification of the transport sector, but clearer and more ambitious signals from the government are needed to achieve electrification. For example, electrifying the government's own transport fleet, supporting local councils to electrify public transport, and putting an end date on the import of internal combustion engines.

There is also a role for government in supporting businesses and individuals in rural areas that want to increase their reliance on electricity and away from fossil fuels. Currently first movers are disadvantaged as they must shoulder the costs of the upgrades needed to increase the electricity supply to rural areas. This is a disincentive for many, that if addressed would likely drive significant carbon savings.

One of the key drivers of residential energy use in New Zealand is our poor-quality housing stock, much of which is poorly insulated and has insufficient or inefficient heating sources and so requires more electricity to maintain a healthy and warm home.

Continued steps to improving housing quality is vital to an equitable transition. New rules around insulation and efficient heat sources for rentals are a good first step, but more could be done.

Equally, better regulation of energy efficient appliances could drive significant benefits both for individual households and for New Zealand's climate transition. Requiring all new lightbulbs to be LED rather than incandescent, for example, saves a household around $150 a year - and would reduce electricity demand by around 500MW at peak times.

Stable settings to support increased electricity demand

The electricity sector is committed to taking the action and making the investment decisions required to support Kiwis in the transition to a net-zero carbon economy.

That transition can be hastened – or slowed – by Government policy settings.

We want to work collaboratively with Government on agile and flexible regulatory frameworks and policy settings that accelerate the transition to a low carbon economy and deliver fair, equitable and inclusive outcomes – and on the appropriate role for Government versus sector participants.

In our view, key areas of focus for Government should include the following – which are expanded in more detail in the response to specific questions on this consultation:

1. Development of an energy strategy

   We strongly support the signal in the Government's draft Emissions Reductions Plan that Aotearoa New Zealand needs an overarching energy strategy. This would provide greater clarity and coordination on priority initiatives to deliver decarbonisation across the entire economy.

2. Moving to a renewable energy, rather than renewable electricity target

   The Government has set an aspirational goal of 100% renewable electricity by 2030 – and the sector's existing investment pipeline means we're already on the way to 95% in the next few years.

   A strict interpretation of the Government's timeline will place pressure on security of supply, or will mean a massive extra cost for electricity consumers for a relatively small amount of emissions reductions gained given the amount of renewables overbuild required.

   Moving to a renewable *energy* target will ensure we are making the greatest decarbonisation gains for the least cost right across the energy sector.

3. Considering issues around peak demand and dry year risk

   We agree with the Government on the need to explore ways these challenges can be managed as electricity use. The New Zealand Battery Project (NZBP) should continue to look at a range of options and technologies rather than solely being focused on the Lake Onslow proposal, which the sector is concerned could come at a high cost that will need to be meet by Kiwis in some way, with little emissions reductions gained. Such a large government investment would also add uncertainty to market players looking to invest in renewable energy generation.

4. Regulatory settings to enable smart grids and distributed energy

Significant opportunities are available in transmission and distribution investment settings, efficient pricing structures, data sharing arrangements and the use of smart technologies, demand response, and distributed energy.

5. Resource Management Act reform to accelerate renewable energy projects

   There is a real risk that without improvements to RMA settings, renewable energy projects of size will struggle to ever get off the ground if unworkable environmental limits are imposed.

   RMA decisions should account for the climate change benefits of renewable energy projects and enable offsets or compensation for other environmental effects as we chase the big decarbonisation goal. The RMA reforms could be an opportunity to practically address New Zealand's response to climate change. It should not be a barrier.

Conclusion

ERANZ strongly supports the Ministry for the Environment's draft Emissions Reduction Plan. We're passionate about supporting New Zealand's move to a net-zero economy.

Thank you for your consideration of this letter. We look forward to continuing to work with the government, community, and businesses to help drive New Zealand's sustainable future.

Yours sincerely,

Cameron Burrows
Chief Executive

Consultation questions

ERANZ has answered below selected questions from the consultation paper that are most relevant to our members.

Consultation questions for feedback	
Transition pathway	
1	*Do you agree that the emissions reduction plan should be guided by a set of principles? If so, are the five principles set out above the correct ones? Please explain why or why not.*
	ERANZ supports all five principles identified in this plan. In particular, ERANZ endorses the point that the government "make predictable and stable policies, which are communicated early and clearly so that households, businesses, investors and industry can make investment choices".

	Electricity has a pivotal role to play in New Zealand's transition to a low-carbon economy, particularly in the early years as more carbon-intensive sectors like transport and commercial (light industry) convert to predominately renewable electricity. Supplying and managing this increased demand for electricity is a challenge requiring a suite of solutions, but it is a transition the electricity sector is already undertaking. These solutions range from increased capacity across our transmission grid and distribution lines, distributed energy resources within our communities, widespread uptake of innovative technologies allowing demand to flex when required, and new large-scale renewable generation plants. All of these are underway today. The electricity sector has developed its own five principles to guide our thinking as we address the challenges ahead. These principles are: 1. Customer-centric - We place New Zealand electricity users at the heart of the transition. As new ways of generating and supplying electricity are developed, we want customers to choose how they engage with their electricity and the products they access in a way that best suits their needs. 2. Innovation - Our electricity system will rapidly change and adapt to meet growing demand and our emission reductions goals. We're committed to encouraging innovation and fostering creativity to reduce our emissions in the most economically efficient and equitable way. 3. Affordability - We want to keep electricity affordable for Kiwi families and businesses. The scale of investment required over the coming decades is significant – market settings should ensure these are made in the most cost-effective way to avoid any unnecessary burden on customers. 4. Collaboration - Transitioning towards a more renewable energy system will impact Kiwi families, businesses, and communities. We want to make sure that everyone has a say, and we work effectively with businesses, government, community, and iwi to ensure our choices benefit the future of Aotearoa. 5. No Kiwis left behind - We want to ensure that we're supporting all Kiwis through this transition and not entrenching existing inequalities or worsening hardship. Everyone needs access to secure and affordable electricity, especially as more activities become reliant on electricity.
2	*How can we enable further private sector action to reduce emissions and help achieve a productive, sustainable and inclusive economy? In particular, what key barriers could we remove to support decarbonisation?*
	The New Zealand electricity sector is well served by the following fundamental features of our industry: • A wholesale market mechanism that sends clear price signals fosters an efficient allocation of resources and when to build a new generation. • Large base of renewable generation that already makes up 80 per cent of our electricity supply. • Relatively low prices that compare very favourably to other OECD countries. • A strong pipeline of new wind, solar and geothermal projects coming that is forecast to meet the Climate Change Commission's modelled increase in demand out to 2035. • Adopting innovations that will make the sector more responsive to customers while lowering emissions, including 'distributed energy resources' and 'multiple trader relationships'.

	The government needs to maintain the features listed above to ensure the billions of dollars of private sector capital required to build the renewable generation plants New Zealand needs in the coming decades.
3	*In addition to the actions already committed to and the proposed actions in this document, what further measures could be used to help close the gap?*
	The increase in renewables in recent years has been significant. Consumption of renewable electricity in 2020 was 7.7 GWh higher than 15 years ago – that's enough to power more than 1 million homes. We are already over 80 per cent renewable, with more sustainable wind, solar and geothermal generation coming on board all the time. ERANZ notes in the modelled emissions reduction estimates in table 3 on page 11 that "Energy and industry" are carrying the bulk of the load lowering New Zealand's emissions 2022-2025. The electricity sector is investing significantly to meet this challenge – building new renewable infrastructure and maintaining existing assets. Even with demand increasing, the proportion of renewable electricity is expected to increase significantly. Investments already green-lit or under construction will, once complete, bring the market share of renewable generation to around 90 per cent, and industry models are consistent with the Climate Change Commission's forecast for between 96 and 98 per cent renewable generation by 2035 and more than 98 per cent after that date. Pushing out the last few per cent could mean a massive extra cost for a small amount of emission reductions gained. ERANZ welcomes the acknowledgment in this discussion document that the 100% renewable electricity target is "ambitious" and "aspirational". A strict interpretation of the 100% target would jeopardise security of supply or affordability for a relatively small gain. The sector's existing investment pipeline means we are already well on the way to 95 per cent in the next few years anyway. Within the 2022-2025 period, the capability of electricity to implement further measures to reduce emissions is limited. Constructing even more renewable generation capacity requires lead-in times, including resource consents, construction sector availability, and upgraded grid transmission capacity.
	Funding and financing
24	*What are the main barriers or gaps that affect the flow of private capital into low-emissions investment in Aotearoa?*
	For the electricity sector, our upcoming investment to cater for a low-carbon economy will be many billions of dollars in just the next ten years. The required investment is primarily in new renewable generation capacity and distribution networks to supply the electricity. This scale of investment is only possible because the regulatory settings are stable enough to give confidence to investors that new the new infrastructure can generate a fair rate of return. The most significant barrier to further private capital in the electricity sector is investor confidence that regulatory settings will remain consistent enough to justify multi-billion-dollar investments in new renewable electricity generation. Of course, the transition to a more renewable system could be bumpy, so we must evolve our market settings over time to ensure they remain fit for purpose and deliver

	the best outcomes for consumers. However, ERANZ submits care must be taken when considering significant policy interventions such as the 100% renewable electricity target, the NZ Battery Project, and potential changes to the wholesale market.
	Planning
33	*In addition to resource management reform, what changes should we prioritise to ensure our planning system enables emissions reductions across sectors? This could include partnerships, emissions impact quantification for planning decisions, improving data and evidence, expectations for crown entities, enabling local government to make decisions to reduce emissions.*
	Making New Zealand's climate transition as affordable as possible relies on resource management reform. The recent experience of our members constructing large new renewable projects indicates the current RMA adds years to their timelines and, therefore, additional costs to their budgets. These concerns are reflected in the Productivity Commission's 'Low Emissions Economy' report from 2018 and the ICCC's 'Accelerated Electrification' report from 2019. MBIE has summarised the barriers with the RMA in section 7 of its 2019 'Accelerating renewable energy and energy efficiency' discussion document and subsequent summary of submissions. By the nature of the technology, renewable power projects, particularly generation, have large physical footprints. Wind farms cover large areas of land, and because they are designed to catch the wind, they tend to be built on hilltops visible to the surrounding community. Utility solar installations, while smaller than wind farms, still cover the land area equivalent to a large industrial site. Solar tends to be constructed closer to centres of demand, so it competes with other urban and urban fringe land uses, while wind farms often remain as working sheep and beef farms. ERANZ urges the government to implement a faster and more flexible approval process for the new generation, distribution, grid, and battery projects and greater recognition of the national importance of existing renewable generation in the fight against climate change. ERANZ submits that RMA decisions should account for the climate change benefits of renewable energy projects and, preferably, permit by default renewable electricity generation plants and supporting projects unless there are compelling reasons not to.
	Energy and industry
	Energy Strategy
58	*In your view, what are the key priorities, challenges and opportunities that an energy strategy must address to enable a successful and equitable transition of the energy system?*
	ERANZ agrees with the opening statements in this chapter that, "Aotearoa is well positioned to tackle emissions in the energy and industry sectors due to our high level of renewable electricity – but we must do more. Speeding up the rollout of renewable electricity generation will be a key factor in replacing fossil fuels in other sectors." ERANZ strongly supports the development of an overarching energy strategy for New Zealand. Such a strategy should draw together the various work programmes underway across government agencies covering emissions reduction, increasing renewables, distributed generation, smart networks, and other innovations. Currently, government

	work is quite siloed and disjointed. Developing an energy strategy will provide greater visibility and coordination on priority initiatives to deliver decarbonisation across the entire economy. The key issues the energy strategy should address are: • The role of non-renewable energy resources in managing the transition to a low carbon economy. • How a national renewable energy target could complement existing policy objectives. • Reducing barriers to entry so new market entrants can introduce disruptive innovations that reduce emissions. • Policy and regulatory frameworks adapting to enable and promote the low carbon future. • Supportive frameworks for transmission and distribution investment to unlock areas of future renewable investment. • How the low carbon transition can support regional economic development, iwi/Māori and ensure vulnerable consumers are best protected. An energy strategy could usefully signal the government's policy intentions for: • Phasing out fossil-fuelled electricity generation. • Investigating and potentially phasing in biogas electricity generation. • Setting a deadline for the use of coal in industrial heat applications. • The cost, role, and operating guidelines of a potential "NZ battery" such as Lake Onslow. • The future regulatory settings for the wholesale electricity market. • Investigating price discovery in a future wholesale electricity market under a 100 per cent renewable electricity supply. • The role and regulatory settings for residential rooftop solar. • The incorporation of future innovations into the regulatory framework such as distributed energy resources, multiple trading relationships, and smart grids. Developing a strategy gives the government, industry and consumers a forum to discuss the trade-offs inherent in the "energy trilemma" of security of supply, environmental sustainability, and price. Once developed, an overarching energy strategy can guide industry investment and provide greater regulatory certainty as we tackle climate change together. ERANZ looks forward to working with officials and contributing to the development of the energy strategy.
59	*What areas require clear signalling to set a pathway for transition?* **Managing peak demand and dry year risk** The electricity market currently delivers on security of supply. We want to ensure that energy supply remains secure as consumers move away from fossil-fuel intensive technologies such as petrol cars to clean, renewable electricity. We agree there is merit in the government considering managing these challenges through the New Zealand Battery Project (NZBP). The NZBP should continue to look at a range of options and technologies rather than solely focusing on the Lake Onslow proposal, about which the sector has expressed concerns. Today, many prospective technologies appear niche and expensive but have the potential longer-term to deliver cost-effective abatement and support the just

	transition to a low carbon future. These include grid-scale and decentralised generation and storage technologies, demand response, alternative fuels and innovative methods to remove carbon emissions from existing fuels. **The role of thermal in managing peak demand and dry year risk** A conversation is needed about government policy that is more sympathetic to the acceptance of some gas generation to help manage peak demand and dry year risk. We welcome the government's altered description of its target of 100% renewable electricity by 2030 as "aspirational" – the sector's existing investment pipeline means we are already well on the way to 95 per cent in the next few years anyway. A strict interpretation of the 100% target will place pressure on security of supply or will mean a massive extra cost for electricity consumers for a relatively small amount of emissions reductions gained given the amount of renewables overbuild required. The key to ensuring New Zealand's successful transition to a zero-carbon economy is giving consumers the confidence to increase their electricity demand - the confidence, for example, that when they switch from a petrol car to an EV, they won't be faced with problems in charging their car or unnecessarily high prices. **Regulatory settings to enable smart grids and distributed energy** Significant opportunities are available in transmission and distribution investment settings, efficient pricing structures, data sharing arrangements and the use of smart technologies, demand response, and distributed energy. For example, enabling smart charging of electric vehicles (EVs) will be necessary to integrate EVs into electricity networks in an equitable way. The CCC analysis estimates that a household with an electric vehicle will, on average, realise cost savings of around $1000 per year. This work should address structural and economic issues regarding grid/distribution connection barriers that prevent renewables conversion (e.g. first movers are disadvantaged as they pay for a connection). Various government agencies are working on these issues, and we believe there are material opportunities for government and industry to coordinate to support rapid decarbonisation. **Creating certainty for consumers and industry** One of the best things the government can do to promote more investment in new renewable energy projects is to improve certainty in regulatory settings and upcoming demand. The government should consider providing a clear direction of travel and timeframe for the phase-out of some carbon-intensive technologies, for example: • Introducing a ban on new coal-fired boilers for low and medium temperature process heat requirements. • Setting a time limit on light vehicles with internal combustion engines entering, being manufactured in or imported to New Zealand.
Setting targets for the energy system	

60	*What level of ambition would you like to see government adopt, as we consider the Commission's proposal for a renewable energy target?*
	Setting a target for renewable energy use is preferable to setting a target for renewable electricity use. Earlier this year, the Climate Change Commission's report highlighted the potential extra costs of a strict 2030 100% renewable electricity target for the emission reductions gained. Even with demand increasing, the proportion of renewable electricity is expected to increase significantly. Pushing for that last few per cent could mean a massive extra cost for a small amount of emission reductions gained. These extra costs would need to be met somewhere – either by higher power bills or higher taxes. Or they'll mean we're not supporting other cheaper and more efficient ways to reduce our emissions – like boosting the numbers of electric vehicles. ERANZ agrees with the aim of 100% renewable electricity – but the cost to consumers of trying to achieve this in too short a timeframe by 2030 is high. ERANZ welcomes the acknowledgment in this discussion document that the 100% target is "ambitious" and "aspirational", and we recommend the government adopt this language and policy approach. Rather than focus solely on a renewable electricity target, ERANZ agrees with the Commission that an overall 'New Zealand Energy Strategy' would be a better approach. This would give the government, industry and consumers a forum to discuss the trade-offs inherent in the "energy trilemma" of security of supply, environmental sustainability, and price. Once developed, an overarching energy strategy would guide industry investment and provide greater regulatory certainty as we tackle climate change together.
Phasing out fossil gas while maintaining consumer wellbeing and security of supply	
61	*What are your views on the outcomes, scope, measures to manage distributional impacts, timeframes and approach that should be considered to develop a plan for managing the phase-out of fossil gas?*
	ERANZ supports the government's commitment to ban "the building of new thermal baseload electricity generation". New Zealand's electricity sector is already on track to be over 95 per cent renewable by 2035. Fossil gas plays an essential role in maintaining New Zealand's electricity security of supply by providing "peaking" capacity to meet periods of high demand, particularly in winter. Maintaining our reputation for reliable electricity supply at a reasonable price is vital to ensuring consumers are confident to switch from other fossil fuels, such as internal combustion vehicles or industrial heat, to electricity. Fossil gas will exit New Zealand's electricity generation mix at some point. But there are greater gains to be made in the next few years by targeting emissions reductions in other sectors, rather than trying to squeeze the last few per cent of fossil fuel generation out of our electricity sector. There is a role for the government in exploring the possibilities of biogas as a substitute for fossil gas. Commercial players may hesitate at taking on such a financial risk for unknown payback or simply avoid the regulatory risk of uncertain government policy

	towards biogas. The government should include the exploration of biogas in its Energy Strategy, as discussed in answer to question 58.
Decarbonising the industry sector	
62	*How can work underway to decarbonise the industrial sector be brought together, and how would this make it easier to meet emissions budgets and ensure an equitable transition?*
	Electricity retailers already play a crucial role as educators and enablers of industry customers transitioning to electricity. Enabling initiatives include long-term supply contracts to provide price certainty, giving financial incentives to industrial users to flex demand when required, and coordinating the use of solar electricity generated from a collection of customers. Industrial customers also provide the electricity sector with the ability to flex their demand if required. This is a valuable feature whereby some industrial users will lower their electricity demand for a set period in return for financial compensation. Reducing demand, whether in response to price signals or congestion on the network, lowers peaks and means less infrastructure must be constructed straight away, saving costs. More can be done, and retailers are working with customers to install the technology that makes this possible and write the commercial contracts that lay out the rules.
Supporting the development and use of low-emissions fuels	
68	*What level of support could or should the government provide for development of low-emissions fuels, including bioenergy and hydrogen resources, to support decarbonisation of industrial heat, electricity and transport?*
	Policymakers should be guided by the principle of maintaining a level playing field between fuels. The ETS can then influence the price of renewable versus non-renewable fuels, and consumers make their choices accordingly. The government's current level of support for exploring bioenergy and hydrogen use in the future is appropriate. Both technologies are promising enough to deserve attention. Still, the government should be careful not to favour a fuel type that could drive its adoption because of policy rather than economic reasons.
69	*Are there any other views you wish to share in relation to energy?*
	ERANZ has no further issues.
Building and construction	
70	*The Commission recommended the government improve the energy efficiency of buildings by introducing mandatory participation in energy performance programmes for existing commercial and public buildings. What are your views on this?*
	ERANZ supports the government testing the way with energy performance programmes for public buildings. This way, the government pays for the establishment and trialling of the schemes and, once proven, they can be rolled out to other commercial and private sectors.

71	*What could the government do to help the building and construction sector reduce emissions from other sectors, such as energy, industry, transport and waste?*
	ERANZ members have a strong focus on improving the thermal efficiency of residential dwellings, this can deliver significant electricity efficiency savings. In addition, better thermal efficiency has the most impact at the crucial evening peak when consumers arrive home after work and want to heat their home. Overall, the quality of New Zealand's housing stock is incredibly poor, leading to detrimental outcomes. New Zealand can achieve energy conservation and public health wellbeing goals by significantly upgrading the thermal insulation standards required for commercial buildings and residential dwellings. ERANZ members find that many of their residential customers' issues stem from poor quality housing. In addition, ERANZ's in-home energy coaching service Energy Mate has first-hand experience of inadequate insulation and moisture control, leading to higher electricity bills and households having trouble paying their bills. The government can deliver improvements in two ways: significantly increasing the Building Code's energy efficiency requirements even more and supporting the retrofit of existing buildings to make them warmer and easier to live in. ERANZ supports the initiative to expand "eligibility criteria for Warmer Kiwi Homes programme and reviewing it to ensure it is fit-for-purpose to achieve emissions-reduction goals." Better regulation of energy-efficient appliances could drive significant benefits both for individual households and for New Zealand's climate transition. Requiring all new lightbulbs to be LED rather than incandescent, for example, saves a household around $150 a year - and would reduce electricity demand by around 500MW at peak times.
72	*The Building for Climate Change programme proposes capping the total emissions from buildings. The caps are anticipated to reduce demand for fossil fuels over time while allowing flexibility and time for the possibility of low-emissions alternatives. Subsequently, the Commission recommended the government set a date to end the expansion of fossil gas pipeline infrastructure (recommendation 20.8a). What are your views on setting a date to end new fossil gas connections in all buildings (for example, by 2025) and for eliminating fossil gas in all buildings (for example, by 2050)? How could government best support people, communities and businesses to reduce demand for fossil fuels in buildings?*
	ERANZ supports the phase-out of fossil gas over time but urges caution that considers the investigation and potential commercial development of biogas as a replacement fuel. It would be detrimental to New Zealand's overall emissions reduction ambitions for fossil gas connections to buildings and dwellings to be prematurely phased out if a commercial biogas system was viable.
73	*The government is developing options for reducing fossil fuel use in industry, as outlined in the Energy and industry section. What are your views on the best way to address the use of fossil fuels (for example, coal, fossil gas and LPG) in boilers used for space and water heating in commercial buildings?*

	ERANZ members are already acting to support customers looking to reduce fossil fuel use for space and water heating. Retailers are facilitating the installation of solar panels on the rooves of their large footprint commercial customers such as shopping malls, universities, and rest homes. These facilities are good candidates for rooftop solar because most of their power demand is during sunshine hours. New solar installations are funded by retailers (or retailers can support applications for government funding), with the customers providing no upfront capital and locking in their electricity price for up to 15 years. Long-term fixed price contracts like this give the customer the certainty and confidence to commit, and the retailer the reassurance they can recoup their initial investment over the life of the contract. Decarbonisation efforts include assisting a wide range of smaller customers with auditing their energy use, advising on conservation ideas and switching space heating from fossil fuels to electricity. These initiatives are underpinned with simple interventions like temperature thermostats to optimise electricity use, combined with conservation efforts like installing insulation or double glazing. Some aspirational customers will aim for higher standards like Green Star standards for their buildings with an overhaul of their air conditioning, ventilation or water circulation. The government should consider policy options and incentives to speed up this transition. Given that industrial heat applications are harder to switch, for example, milk dryers, New Zealand should make the most of the opportunities we have in space and water heating.
74	*Do you believe that the government's policies and proposed actions to reduce building-related emissions will adversely affect any particular people or groups? If so, what actions or policies could help reduce any adverse impacts?*
	The discussion document acknowledges the risk of making housing less affordable for low-income families if builders and landlords are required to spend more on insulation and clean heating sources. There are several mitigations available to help meet these costs, so families do not have to spend more: • Additional insulation subsidies for homeowners and landlords. • Support for community-based programmes advising families on energy-efficient behaviours and products. • Constantly lifting performance standards for home space and water heating. • Kainga Ora ensuring all its properties perform to the highest standards. ERANZ runs the EnergyMate in-home coaching services for low-income families. During these home visits, we notice many vulnerable households are reluctant to raise issues with their landlords not achieving regulated standards for rental properties. The government should provide further support and protection to low-income families dealing with recalcitrant landlords. However, we also see many low-income families benefiting from higher standards, such as better insulation or newly installed heat pumps. Efficiency efforts contribute to lower power bills, with the real average annual residential power bill sitting around a ten-year low and down almost $200 since 2014. More families would benefit if these efficiency provisions were rolled out more widely to their homes, particularly Kainga Ora tenants.

81	*Our future vision for Aotearoa includes a place where all New Zealanders have a warm, dry, safe and durable home to live in. How can we ensure that all New Zealanders benefit from improved thermal performance standards for our buildings?*
	Lifting building standards, as discussed in answer to question 71, is the best way to improve the wellbeing of all New Zealanders. Improving the performance of Kainga Ora's housing stock is also essential; their efforts could be accelerated.