24 November 2021

Submissions
Ministry for the Environment

By email: climateconsultation2021@mfe.govt.nz

Emissions Reduction Plan – Te hau mārohi ki anamata

We are strongly supportive of the introduction of a meaningful Emissions Reduction Plan (ERP) to support Aotearoa in making the shift to a net zero future – thank you for the important opportunity to provide feedback on the ERP discussion document.

A little about who we are

Meridian is Aotearoa's largest renewable energy company. Our purpose is clean energy for a fairer and healthier world.

We produce energy from 100 percent renewable sources (wind, water and sun). Our hydro stations and wind farms generate enough electricity to power around 1.7 million and 200,000 homes respectively each year.

We are committed to meeting future energy needs with renewable energy and taking action on climate change, with benefit for the people of New Zealand front of mind. Some of our current projects include construction of a new wind farm (Harapaki in the Hawke's Bay), investment in a nationwide network of electric vehicle chargers, supporting our customers to decarbonise process heat through electrification, and exploring the opportunity to build the world's first large-scale green hydrogen plant in Southland.

We have previously provided detailed feedback to the He Pou a Rangi - Climate Change Commission (CCC) consultation on their 2021 draft advice to the Government[1]. Below we have summarised our main messages on the ERP discussion document. Appendix A contains our thoughts on some of the questions in consultation.

[1] https://www.meridianenergy.co.nz/assets/Sustainability/Meridian-submission-CCC-2021-Draft-Advice.pdf

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The current challenge for the government is to set targets and policies that will deliver meaningful and urgent emission reductions

The success of any of the revised targets agreed at COP26 – particularly long-term net zero promises – will depend on whether they are translated into meaningful near-term commitments. Any actions Aotearoa can take to bend the emission curve downwards this decade helps our planet keep the 1.5 degree target alive. It's essential that the ERP provides the frame and guidance so Aotearoa can take the material action required to transition and thrive in a net zero future.

However, the ERP has been delayed, and there remains a gap between the proposed first emission budget and estimated emissions reduction. This is disappointing. The earlier we take concrete steps to abate emissions, the greater the gains.

We strongly support the recommendations of the CCC and agree that priority areas for action include increasing the number of electric vehicles on our roads and increasing our total renewable energy use, particularly in industrial heating and other areas where fossil fuels are still used. We see a fully developed and all-encompassing Emissions Trading Scheme (ETS) as the key policy tool, but we also acknowledge that additional policies will be necessary. For example, in transport and industrial heat, additional policies are needed to ensure that investments in vehicles and heating infrastructure today do not lock in emissions for the next 30 years. We also strongly support the requirement that Aotearoa goes through this transition in an equitable and inclusive way, to ensure we build a thriving future for all New Zealanders.

We acknowledge the range of ideas tabled in the discussion document to try to close the gap. However, we think that it is time for concrete and urgent action.

We encourage the government to find the right balance between landing meaningful, tangible abatement in the short-term, while also developing new ideas for implementation in the longer-term.

There are changes that government could make which would make the transition smoother and faster

We have some ideas to suggest:

- Set a clear time-bound renewable energy consumption target, with interim targets, that a nation can mobilise itself behind.

- Put climate change at the heart of the Natural and Built Environment Act, in the purpose provision. Consenting is a major complication in building more renewable energy. It is essential that the new Act enables electrification of sectors currently dominated by fossil fuels such as transport and industrial heat. To meet this increase in demand, new renewable generation will need to be built. We think that the new Act should recognise that there are times when the need for climate change mitigation and adaptation should prevail. We also think that good climate change outcomes can (and should) co-exist with good biodiversity outcomes.

- Promote a swift and sustained uptake in low emissions transport, with practical and real-world support. The transition is going to require investment and policy change as we adapt roads, charging facilities, airports and marine environments to support electrification. We think that the new hybrid restrictions (for 2037) are a bit out of step with the international commentary, which positions these as a transition tool over 2015-2025. These longer-term hybrid restrictions should be targeted to heavy commercial fleets. We think that investment in EV charging infrastructure would

benefit from a review of policy to ensure that this market is eventually self-sustaining. We would also like to see the government make data sets available to the market to improve EV infrastructure investment. We see a need for a review of policies and regulations to decarbonise aviation, as trailblazers like Sounds Air make commitments for electric aircraft by 2026. Finally, we would also like to see attention given to the changes needed in the marine environment where electrification can enable decarbonisation (for example, the costs of transformers being borne by early adopters will be a barrier to transition, when central and local government could instead be owning and planning for these costs).

- As far as possible, streamlining approval processes such as consenting for new renewable generation, and ETS forest registration. Faster and more flexible approval processes will help us to build renewable generation and play our part in managing biodiversity risks.

- An awareness of the role that demand response and other sources of system flexibility over various timeframes can play in enabling a highly-renewable electricity system in New Zealand. Some industrial consumers such as the green hydrogen production facility planned by Meridian and Contact can provide large scale demand response, which could effectively replace fossil fuel reserve plant. This could address New Zealand's dry year risk, deliver security of supply in a highly-renewable system, and lower electricity prices, while also reducing emissions.

- More support for initiatives such as the GIDI fund, that lower emissions by co-funding transition projects. We know this is having a material positive impact for large companies committed to transitioning to clean energy and closing the emissions gap now.

We accept the invitation made to business to demonstrate climate action commitment and we are focused on making a significant contribution for Aotearoa

It is clear, based on the latest available science, that urgent and decisive action to reduce emissions is essential to mitigate the impacts of climate change and preserve our way of life. In order to limit warming to 1.5 degrees, immediate, strong and sustained reductions in carbon emissions are required.

Meridian is embracing the opportunity to be at the forefront of emissions reduction activity. We have many examples of practical, positive steps we are taking to assist with climate action:

- We are building a pipeline of renewable generation to meet the increase in demand for clean energy. Current examples include a $395 million wind farm in Harapaki, [2] designing a 100MW battery (estimated size) in the North Island, [3] a proposal to build the world's first large-scale green hydrogen plant in Southland[4] And investing in grid scale solar. [5] Our vision is to increase investment in this pipeline, with our intention being to build a new wind farm every 2-3 years.

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- We have been committed to carbon neutral operations since 2019 through the use of Gold Standard Verified Emission Reductions, with plans to transition and achieve

[2] Harapaki wind project | Meridian Energy
[3] Meridian to Commission NZ's Biggest Battery to Avert More Black-Outs | Newsroom
[4] Southern Green Hydrogen

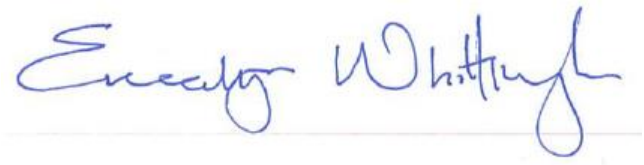
this via our Forever Forests, which are investments in predominantly native permanent forestry in Aotearoa. We are also committed to halving our gross emissions by 2030 (including scope 3 emissions).[6]

- We are very active in converting process heat to electricity. We recently assisted two major primary processors, A2 Milk Company and the Alliance Group to electrify coal-fired boilers as part of Meridian's programme to help decarbonise industrial process in the South Island.[7] This is in addition to announcements earlier this year about Meridian's support for the electrification of process heat at ANZCO and Meadow Mushrooms. We are continuing to support other industrial customers on a similar pathway.

- We have committed to delivering a nationwide network of 250 electric vehicle AC charging stations and are working with customers to advance our first deliveries now.

Meridian strongly supports decisive, collective action to achieve a cleaner, fairer and healthier world. Increasing renewable energy generation will play a key role in decarbonising our economy over multiple sectors. We are committed to playing our role to deliver an urgent reduction in emissions.

Tina Frew
Head of Sustainability



Evealyn Whittington
Senior Regulatory Specialist

[6] https://www.meridianenergy.co.nz/who-we-are/sustainability
[7] Electricity to replace 1,000 coal trucks in Southland (meridianenergy.co.nz)

Appendix A: Responses to consultation questions

	Question	Response
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	We agree that the ERP should be supported with principles. The principles outlined cover important elements but some additional framing or detail would aid with clarity of intent. For example: • A fair, equitable and inclusive transition. The description of '*minimise and avoid the negative impacts….of the transition….*' does not read as 'fair'. For example, 'fair' is arguably not 'leaving too much of a burden for future generations' - what is too much? Also, it is not clear what 'exacerbating environmental issues' is referencing. • Environmental and social benefits beyond emissions reductions. This feels like the collapsing of several distinct and important pieces. A clear, ambitious and affordable pathway. A sense of urgency and bias to delivering abatement at pace and scale is absent in the description of this principle. We call for the pathway to ensure a 1.5-degree future is kept alive. We also support the Climate Change Commission's focus on reducing gross emissions and believe this could be articulated within this principle (or added as one).
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	Ambition, capital and capability exists in the market to deliver significant emissions abatement. Meridian is committed to bringing to market significant new renewable energy generation, scaling existing transport and process heat decarbonisation offers. We are also actively advancing a possible future hydrogen economy. Key barriers that if removed would help increase the pace of delivery and/or confidence to invest include:

	could we remove to support decarbonisation?	• We strongly support the Climate Change Commission's 50% renewable energy by 2035 target. This target could be broken down into a stepping-stone target for the first ERP. A target across all energy sources is far preferable to a narrow electricity target. We believe the Government's continued commitment to a 100% renewable electricity target by 2030 creates uncertainty for investors in renewable energy and could limit the efficient deployment of resources to deliver least-cost emissions reductions. It is positive that the discussion document acknowledges the electricity target is "aspirational" and that it will be reviewed in future. However, to the extent that there is uncertainty regarding the electricity target, the Government should review it now and instead consider a stronger target for all energy sources. Delays will only create further investment uncertainty. • The strong focus on Onslow for the MBIE Battery Project creates significant and material uncertainty for potential investors in new renewable generation and flexibility projects. The recent Concept Consulting study Meridian co-funded with Contact energy highlighted the significant costs of pumped hydro generation relative to other options to solve New Zealand's dry year risk and achieve a 100% renewable electricity grid. We believe that the focus and weight being placed on an Onslow solution puts more beneficial options at risk – options that market participants could deliver without any taxpayer expense. • A faster and more flexible approval process for new renewable generation. The Natural and Built Environment Act (part of the resource management reforms) needs to ensure that private investments in climate response (such as renewable energy generation) can achieve timely consenting in appropriate circumstances and with effective environmental mitigation. Please also see our answer in response to question 33. • Ensuring that government approval processes work to enable private sector investment, rather than slow it down. Please also see our answer in response to question 30.

		• In terms of EV charging, we would also like better access to data (such as road network utilisation) and more transparency in success criteria for co-funding initiatives. Although co-funding is an essential part of the transition and up-scale in infrastructure, we encourage entities such as EECA to develop an exit strategy so that the market for these services becomes self-sustaining.
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?	At a high level, there is a long list of possible ideas, with a number orientated towards strategy/roadmap development or investigation. We strongly support a bias towards the ERP being focused on enabling material and rapid carbon abatement. There is a risk that an extensive list of options will not have enough focus to stay on track towards a net zero future. We would advocate for less focus on listing existing actions and considerations and a much sharper and simplified list of new (or scaled) actions, prioritised based on the materiality of abatement and those that would not be counter to the ERP principles.
4.	How can the emissions reduction plan promote nature-based solutions that are good for both climate and biodiversity?	Ultimately, monetary value is not consistently placed on biodiversity. Carbon is one element of 'the environment' which is beginning to have a more meaningful attributed carbon price (with some way to go). A voluntary market could be created for other environmental goods like biodiversity. Organisations with the value set, resources or stakeholder pressure to meaningfully value biodiversity, would contribute to beneficial projects. This could be integrated with a domestic voluntary carbon market for businesses that want to go above and beyond ETS liabilities. Projects that are good for both emissions and biodiversity outcomes could be more highly valued by participants in a voluntary domestic market. We also think that good climate change outcomes can (and should) co-exist with good biodiversity outcomes.
13.	Do you agree with the objectives for an Equitable Transitions Strategy as set out by the Climate Change Commission? What additional objectives should be included?	We agree with the CCC recommended Equitable Transitions Strategy objectives.

15.	What models and approaches should be used in developing an Equitable Transitions Strategy to ensure that it incorporates and effectively responds to the perspectives and priorities of different groups?	It could be challenging to strike the right balance between staying on track to reduce emissions, while acknowledging the unique perspectives and needs of different stakeholder groups. There are possibly valuable practical insights to be gained from the Government's leadership in the COVID response, such as the engagement approach adopted. This involved orientating a diverse group of people and organisations, towards a common objective, in a relatively short space of time. There are likely to be recent and live practices that could be transferred over.
19.	How could the uptake of low-emissions business models and production methods be best encouraged?	By setting clear, achievable targets (i.e. 50% renewable energy consumption by 2035 with interim targets), by reducing ETS units allocated via auction in line with emissions budgets and allowing the market to set the price of units (i.e. continual review and raising of the cost containment reserve) and introduce enabling policies where there are clear market failures or sectors that are not sufficiently exposed to emissions prices to incentivise change (i.e. sectors not included in the ETS or industries that receive free unit allocation). Emissions pricing provides strong incentives to reduce emissions at least cost by decentralising decisions to invest, innovate and consume across the economy to individuals and businesses who have the best information about opportunities to lower emissions given their circumstances. Emissions pricing empowers and incentivises businesses and people to adapt quickly and reduce emissions at least cost. In the electricity generation sector, the combination of emissions pricing for fossil fuel based generation and the falling cost of renewable generation technologies means that investment in new renewable generation is already more profitable than fossil fuelled generation. Renewables are therefore replacing fossil fuelled generation and market participants are investing in flexible demand response, batteries and other solutions to deliver the flexibility needed in a highly renewable electricity grid with a high percentage of intermittent renewable generation. The settings are in place to achieve the necessary emissions reductions.[8]

[8] Although, more streamlined consenting processes for new renewable generation would further reduce the costs to consumers.

		Where sectors are not fully exposed to emissions prices and emissions prices are not yet sufficient to make decarbonisation investments economic, additional policies will be critical if short-term progress is to be made. The Government has announced strong transport policies to reduce transport emissions and overcome the barrier of upfront capital costs for low emissions vehicles. For industrial process heat, the GIDI fund has enabled significant emissions reductions and the fund should be continued and expanded to ensure further reductions in process heat emissions. Co-funding through GIDI or similar delivers rapid and material emissions reductions at very reasonable abatement costs. Increasing this funding and considering some larger process heat investments would be one clear way to close the gap with emissions budgets in the short-term. Something that has a real impact on the business model for EV charging plans is the complexity and variability of pricing structures across the 29 distribution networks in New Zealand. The complexity and variability are a challenge for offering attractive plans on a nation-wide basis. We would like to note that we are very supportive of the Electricity Authority's work to support the distribution networks to move towards more efficient pricing structures. For more information, please see our submission on the Electricity Authority's consultation on distribution pricing.[9]
30.	Do you agree the treatment of forestry in the NZ ETS should not result in a delay, or reduction of effort, in reducing gross emissions in other sectors of the economy?	We support a focus on gross emissions reduction, with urgency. Based on the Climate Change Commission's analysis, the incentives created by the NZ ETS could also be adjusted to prioritise investments in permanent native forestry. We also support a faster registration process for ETS forest registration and Tree Weed Exemptions for the removal of wilding pines. The Ministry for Primary Industries runs these processes. Our experiences have been that this can be very time consuming.

[9] Consultations — Electricity Authority (ea.govt.nz)

32.	Are there any other views you wish to share in relation to emissions pricing?	We strongly support the Climate Change Commissions ETS recommendations, which are that the ETS be the central policy tool for driving carbon abatement, complemented by other policies where clear market failures exist.
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.	It is essential that RMA reform results in a workable regulatory framework for planning and consenting new renewable energy supply. The RMA is complex and results in a lot of uncertainty for investment. Given the need for electricity supply to meet the increasing demand as sectors such as transport and process heat electrify, it is essential that the planning laws are an enabler rather than a barrier. The Electricity Sector Environmental Group has provided a dossier of case studies to MFE and MBIE officials, demonstrating the inevitable conflicts that development of new renewable generation results in. As currently drafted, the Natural and Built Environment Bill (NBA) will worsen this investment uncertainty and place higher barriers on decarbonisation initiatives by prioritising the protection and enhancement of the natural environment above all else; including above climate change mitigation and the need to develop socially essential infrastructure and built environment features. We suggest the following changes to the NBA: - That climate change be recognised in the purpose of the bill, which would have the effect of putting efforts to mitigate the impacts of climate change at the core of the new legislation. - That operation and development of renewable energy be recognised explicitly in the bill, as an environmental outcome. - A requirement for statements of strategic goals to provide clear direction and priorities to resolve trade-offs of values. We believe that this will assist with the implementation of the bill. - Uniformity via a national planning framework that directs regional spatial strategies.

		- Reducing the number of existing statutory plans into one natural and built environment plan for each region. - Removal of amenity values. It is also very important that the bill works as an integrated approach with the other parts of resource management reform, and that complexity is minimised. We would also like to see more collaboration and planning in the context of moving to low emissions transport. Our upcoming submission on EECA's consultation on public EV charging[10] will have more detail, but here are our key messages: - We think it's worth noting that government efforts to lower transport emissions also fit within a wider regulatory framework for electricity networks and roading networks. It is critical that government departments and agencies like MBIE, the Ministry of Transport, Waka Kotahi NZ Transport Agency, the Commerce Commission, and the Electricity Authority work together to facilitate the development of an efficient, reliable and competitive market for electric vehicle charging. - We also see a role for local and central government in owning and planning for infrastructure costs as some sectors such as marine move towards electrification. Shore based charging infrastructure will be an essential part of this.
52.	Do you support the target to reduce VKT by cars and light vehicles by 20 per cent by 2035 through providing better travel options, particularly in our	Support a VKT reduction target. Regarding the underpinning actions, we would like to emphasise the importance of bringing focus to the list of actions. We think that it would be more effective to focus on a shorter list with the most material reduction opportunities, given that budget period 1 has a limited window and demonstrating tangible progress requires sharp focus.

[10] New Zealand Public EV Charging | EECA

	largest cities, and associated actions?	
56	The Climate Change Commission has recommended setting a time limit on light vehicles with internal combustion engines entering, being manufactured, or assembled in Aotearoa as early as 2030. Do you support this change, and if so, when and how do you think it should take effect?	Yes, Meridian supports an eventual ban on the importation of light internal combustion engine vehicles, to clearly signal the required transition and provide confidence for large scale investments (i.e. to scale up electric vehicle imports, extend charging networks, and build the electricity generation, transmission and distribution networks to support electric vehicle demand). We note that many large vehicle manufacturers have made public commitments to cease making fossil fuel powered vehicles providing confidence that electric vehicle supply will substantially grow. Looking at the transport emissions reductions required to meet emissions budgets and the time limits on ICE vehicles already in place in right hand drive markets from which New Zealand imports vehicles, our time limit should be no later than 2035 an earlier if possible.[11]
58 and 59	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? What areas require clear signalling to set a pathway for transition?	Key priorities include: 1. Formalising a priority target and NZ Inc commitment – we support the CCC 50% renewable energy consumption target by 2035, with interim targets per emissions budget period to be set. Alongside this, we believe the Government's continued commitment to a 100% renewable electricity target by 2030 creates uncertainty for investors in renewable energy, could limit the efficient deployment of resources to deliver least-cost emissions reductions and take attention away from delivering against multi-sector renewable energy consumption target. Please refer to our comments in Q2 above for further detail. Key challenges include: 1. The RMA reform process resulting in a workable regulatory framework for planning and consenting new renewable energy supply (please refer to our comments in question 33 above).

[11] See Concept Consulting *Shifting gear* at section 4.2: https://www.concept.co.nz/uploads/1/2/8/3/128396759/ev_study_rept_1_v1.0__1_.pdf

		2. Ensuring efficient and least cost pathways to addressing dry year risk in an increasingly renewable electricity grid are at the forefront of decision making. The strong focus on Onslow for the MBIE Battery Project creates significant and material uncertainty for potential investors in new renewable generation and flexibility projects. The recent Concept Consulting study[12] Meridian co-funded with Contact energy highlighted the significant costs of pumped hydro generation relative to other options to solve New Zealand's dry year risk and achieve a 100% renewable electricity grid. We believe that the focus and weight being placed on an Onslow solution puts more beneficial options at risk – options that market participants could deliver without any taxpayer expense.
60	What level of ambition would you like to see Government adopt, as we consider the Commission's proposal for a renewable energy target?	We support the CCC's 50% renewable energy consumption target by 2035, with interim targets per emissions budget period to be set. These interim targets must align with a 1.5 degree pathway.
62 and 63	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? Are there any issues, challenges and opportunities for decarbonising the industrial sector that the Government	Where sectors are not fully exposed to emissions prices and emissions prices are not yet sufficient to make decarbonisation investments economic, additional policies will be critical if short-term progress is to be made. For industrial process heat, the GIDI fund has enabled significant emissions reductions and the fund should be continued and expanded to ensure further reductions in process heat emissions. Co-funding through GIDI or a similar scheme delivers rapid and material emissions reductions at very reasonable abatement costs. Increasing this funding and considering some larger process heat investments would be one clear way to close the gap with emissions budgets in the short-term. Without ongoing GIDI funding in future, the price of carbon alone is not likely to make fuel switching at boiler scale economic until carbon prices lift significantly. Current progress will stall.

[12] https://www.concept.co.nz/uploads/1/2/8/3/128396759/h2_flex_analysis_v3.0.pdf

	should consider, that are not covered by existing work or the Commission's recommendations?	The price of electricity network upgrades to support electrification at scale is the major remaining barrier. Electrode boilers have a critical role to play in the transition. In Meridian's experience, up to 70% of the costs of an electrode boiler project are attributable to network upgrades outside the customer's property. We cannot see the path between the lines infrastructure we have today and what is needed to support Aotearoa's emissions aspirations if the financial burden for network upgrades remains with the first mover. The Electricity Authority and Transpower are taking steps through transmission pricing reform to address the first mover disadvantage. The same needs to occur for distribution network pricing. Meridian also supports the implementation of regional strategies where all parties collaborate to best utilize the network resources in the region for a timely and efficient reduction in Process Heat Emissions. A key part of being able to decarbonize the industrial sector is being able to increase the supply of electricity to meet the increase in demand. This means being able to build and develop new renewable generation. It is essential that the consenting process enables and supports new generation.
68 and 69	What level of support could or should Government provide for development of low emissions fuels, including bioenergy and hydrogen resources, to support decarbonisation of industrial heat, electricity and transport? Are there any other views you wish to share in relation to energy?	The Southern Green Hydrogen project that Meridian is working on with Contact Energy is proceeding on the assumption that it will be a commercial process. However, the Government could support projects of this kind and facilitate a hydrogen economy in the following ways: • The initial focus of the project is likely to be export oriented for customers in Southeast Asia. In those jurisdictions government to government engagement can help to get a final deal done and provide assurance. • A streamlined consenting process could assist timely project delivery. • The demand response potential of a large-scale hydrogen production facility should be carefully considered as part of the Government's assessment of whether the Crown should invest in a dry year solution like pumped hydro generation at significant cost to taxpayers and/or consumers.