2 July 2021

Submissions
Infrastructure Commission

He Tūāpapa ki te ora
Infrastructure for a Better Future

Meridian welcomes the opportunity to submit on the Infrastructure Commission's consultation document *He Tūāpapa ki te Ora Infrastructure for a Better Future.* Nothing in this submission is confidential.

Meridian is the largest electricity generator in Aotearoa and is committed to only generating from renewable sources – wind, water, and sun. Therefore, Meridian's primarily interest is in energy infrastructure that will support the transition to New Zealand's 2050 net-zero emissions targets.

This submission is structured under the following headings:

- Background on renewable generation infrastructure
- A national energy strategy should include a renewable energy target rather than a renewable electricity target
- Resource management reforms will ease the transition to a low-emissions economy
- Network costs are one of the most significant barriers to decarbonisation
- Organisational arrangements and pricing for electricity network infrastructure.

Where relevant, responses to the Infrastructure Commission's specific consultation questions are included in text boxes.

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Background on renewable generation infrastructure

Aotearoa has one of the lowest emission electricity systems in the world. This low emissions electricity can be used to reduce emissions elsewhere in the economy through electrifying transport, process and space heating. To meet the anticipated increase in demand for electricity, companies like Meridian will need to build much more new renewable generation infrastructure. This is an enormous opportunity and responsibility for Meridian, and we are excited about playing our part in helping to reduce emissions across Aotearoa.

The New Zealand electricity industry has a strong track record of building the necessary renewable generation infrastructure to support increases in electricity demand. Since 1996, the market has seen the New Zealand electricity sector invest in over 20,000 GWh of new electricity generation at a cost of over $9 billion. This investment has been diversified and has not been dominated by any particular technology or fuel source or by any single company or companies. The risks of these infrastructure investments have been borne by private investors rather than by taxpayers.

We are confident that the market can continue to deliver new generation infrastructure as and when required to most efficiently meet the expected growth in electricity demand as we move towards the 2050 target in Aotearoa. Renewable generation options are already the most economic form of electricity generation and will progressively result in the retirement of existing baseload thermal generation as well as being built to increase supply to meet demand growth. Meridian has started construction of a new $395 million wind farm in Hawke's Bay. Meridian's competitors are also developing their own renewable generation pipelines, and some have recently announced or commenced construction of their own projects. Around $2 billion is currently committed to the construction of new renewables, equivalent to 8% of current total annual generation. We are confident that with this and further expected near-term investment, New Zealand will have around 95% renewable electricity generation in the next five years.

A national energy strategy should include a renewable energy target rather than a renewable electricity target

Meridian fully supports the Climate Change Commission's recommendation that Aotearoa develop an overarching energy strategy and that a renewable *energy* target be a key part of that strategy. The Infrastructure Commission could helpfully support this recommendation.

Meridian also agrees with the Infrastructure Commission that "targets should be consistent, stable and achievable". [1] The Infrastructure Commission should endorse the recommendation of the Climate Change Commission that the Government develop and implement "a national energy strategy to decarbonise the system" including "setting a target so that 50% of all energy consumed comes from renewable sources by 31 December 2035. Consideration should also be given to replacing the target for 100% renewable electricity with achieving 95% - 98% renewable electricity by 2030."[2]

Meridian considers a 100% renewable electricity grid to be achievable over time but that pushing too hard, too fast risks destabilising the electricity industry, crowding out private investment in innovative market-led solutions to dry-year risk, and may lead to an increase in emissions to the extent that the cost of electricity increases and disincentivises switching from fossil fuels to electricity.

The challenge in moving from 98% renewable electricity to 100% renewable electricity is managing dry-years. A small amount of gas generation could provide the necessary flexibility, however, in a 100% renewable electricity system the flexibility needs to come from somewhere else and existing options come with very high costs.

Meridian is investigating market-led solutions that will help to remove the last few percentage of non-renewable electricity generation from New Zealand at least cost to consumers and taxpayers. One potential scenario involves large-scale hydrogen production in Southland post-aluminium smelter. [3] Hydrogen production is highly flexible and contractual arrangements could commercialise demand response to be called on when lake levels are low. Flexible hydrogen production on this scale has the potential to solve a significant portion of the dry-year hydro risk that New Zealand faces and opportunities like this will only increase in future.

As the Infrastructure Commission notes, the renewable electricity target is unique. "No targets have been expressed for other parts of the energy sector that are vastly more carbon intensive and may offer relatively low marginal abatement costs."[4] Like the Infrastructure Commission, Meridian does not see any rationale for this approach.

[1] Infrastructure Commission *He Tūāpapa ki te ora Infrastructure for a Better Future* page 54.
[2] Climate Change Commission *Ināia tonu nei: a low emissions future for Aotearoa* page 286.
[3] Meridian's agreement with New Zealand's Aluminium Smelter (NZAS) expires at the end of 2024.
[4] Infrastructure Commission *He Tūāpapa ki te ora Infrastructure for a Better Future* page 55.

Q7. What infrastructure issues could be included in the scope of a national energy strategy?

A national energy strategy would provide greater clarity and coordination on priority initiatives to deliver emissions reduction across the entire economy. The strategy could help address key issues such as:

- how a national renewable energy target could complement existing policy objectives;
- the role of non-renewable energy resources in managing a just transition to a low-emissions economy;
- how policy and regulatory frameworks will adapt to enable and promote the low-emissions future;
- supportive frameworks for transmission and distribution investment to unlock areas of future renewable investment; and
- how the transition can support regional economic development, iwi/Māori, and ensure efficient prices for end consumers.

Meridian would value the opportunity to work collaboratively with the Government and all stakeholders in the sector on such an important document.

Resource management reforms will ease the transition to a low-emissions economy

Meridian agrees with the growing consensus identified by the Infrastructure Commission that "the planning system must be enabling of the infrastructure necessary for climate change mitigation and adaptation." Certainly, within the electricity sector there is a strong consensus. Appendix 1 of this submission includes further detail on the resource management reforms that would better enable Aotearoa to meet its emissions budgets and targets. This appendix includes papers prepared jointly by the electricity sector and delivered to the Minister for the Environment on 8 March 2021 and to government officials in June 2021.

A key challenge that needs to be overcome is the consenting pathway for new renewable generation options. Meridian encourages the Infrastructure Commission to provide advice to the Government regarding the need to develop a faster and more flexible approval process for new renewable generation infrastructure as well as greater recognition of the national importance of existing renewable generation infrastructure in the fight against climate change. The proposed reforms to the Resource Management Act 1991 (RMA) are

an opportunity to implement these changes sooner rather than later, to ensure transformation at the pace required occurs. Currently, renewable energy and climate change are not listed in the RMA as matters of national importance. Oddly, this is despite clear importance given to this matter elsewhere in the national policy mix. As such, any future policy framework must provide more certainty to encourage and provide for renewable generation infrastructure.

The Natural and Built Environments Bill was released for consultation on 29 June 2021 and is currently being reviewed by Meridian. Part II, Clause 8(o) of the Bill seeks the ongoing provision of infrastructure services including by an increase in the generation, storage, transmission and use of renewable energy. While this appears helpful, details are yet to be provided on how to address the complexity in obtaining resource consents for renewable energy developments. Renewable energy developments mitigate the adverse effects of climate change and we therefore consider efficient decision-making processes to be necessary alongside an appropriate activity status and pathway to resolve any competing priorities.

Q9. Of the recommendations and suggestions identified in the Ministry of Business, Innovation and Employment's "accelerating electrification" document, which do you favour for inclusion in the Infrastructure Strategy and why?

Enabling development of renewable electricity generation under the RMA [or its successor].

The Infrastructure Commission has also raised two specific resource management issues:

- renewable energy zones; and
- enabling offshore renewable generation.

Renewable energy zones

The Commission states at page 55 of the consultation paper that:

> "Alongside proposed reviews of various national policy statements and standards, there may be merit in developing renewable energy zones in New Zealand to reduce the cost of achieving the 2050 net-zero carbon emissions target. A renewable energy zone is a specific area with favourable renewable energy resources, a permissive/enabling consenting environment and transmission capacity readily available to connect low-cost, renewable electricity generation to the grid."

While this might seem attractive at first glance, Meridian, along with the rest of the sector has expressed caution about using spatial plans to map energy resources or zones where future generation may be located. Renewable generation developers are best placed to understand wind and other renewable resources and identify the most economic sites. Spatial plans are not likely to be flexible or timely enough for responding to new proposals and it is certain that there will be future projects that will not be identified in spatial plans. This could be very problematic in particular for future wind development where matching technology with wind resources is highly variable and an area of constant technological innovation – zoning risks freeze-framing a view about development that will likely be out of date by the time it comes to generation project implementation.

A zoning approach would likely become a process of picking winners. Businesses with vested interests may advocate for inclusion of their own generation options within more permissive zones and the exclusion of areas where their competitors' projects are located. Electricity generation is by deliberate design delivered via a competitive model (unlike some other forms of infrastructure); it is difficult to conceive of a zoning approach that would not also reintroduce trade competition issues to the environmental regulation framework. Pursuing trade competition through environmental regulation was a significant issue in the middle decade of the RMA's operation and was eventually legislated out of the RMA.

The exposure draft of the National Planning Framework describes how planning committees will be constituted. Given that formulation and approach, the question must be asked about whether a committee comprised of an appointee from the Department of Conservation, an iwi appointee, and a council appointee know best where billions of dollars of necessary infrastructure spend should be located and where it should be ruled out. Meridian considers the parties who are investing in renewable generation infrastructure to be best placed to make such locational decisions at the time of investment.

It is Meridian's firm preference that any process should allow for an appropriate level of public input, should be appropriately high level, and should be applicant initiated rather than driven by a planning committee. Meridian proposes an option like a designation process under the RMA but simpler and more high level. The challenge of the climate crisis and the undeniable need for increased renewable electricity generation to decarbonise Aotearoa means that approval process options like this must be considered to enable emissions targets to be met and economic costs of the transition to be minimised.

Q8. Is there a role for renewable energy zones in achieving New Zealand's 2050 net-zero carbon emissions target?

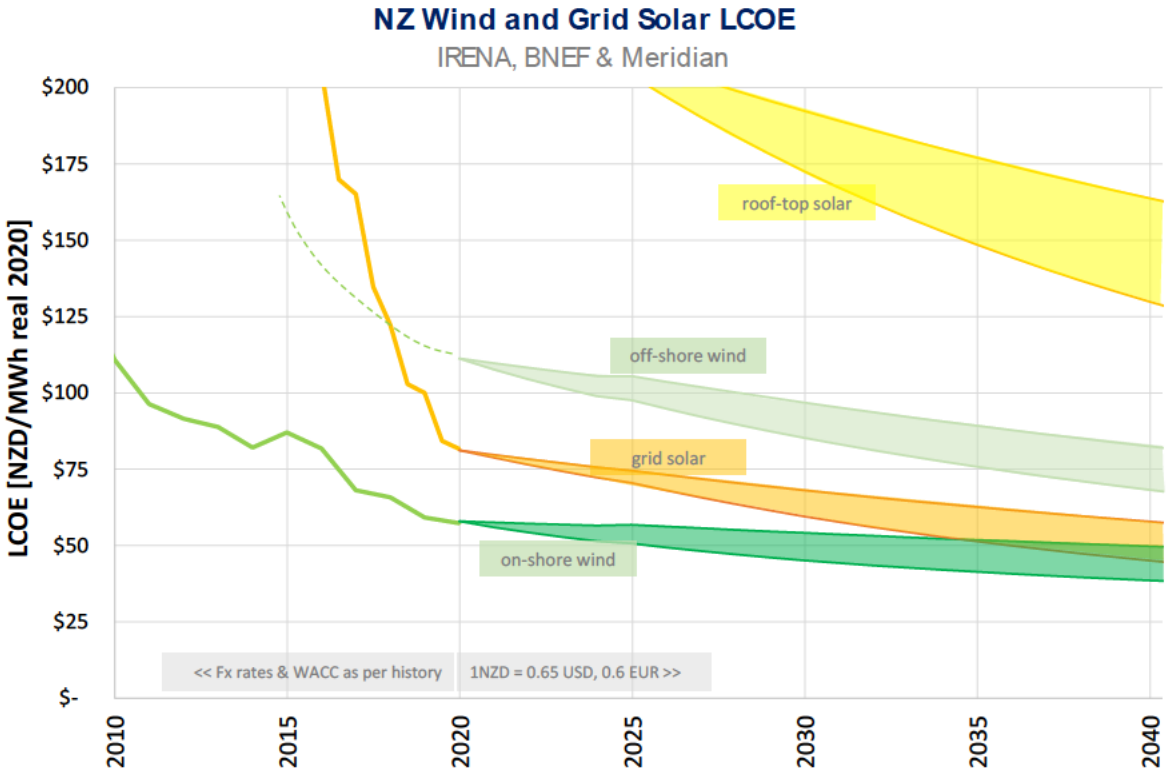
Meridian is very cautious of this approach and instead encourages the Infrastructure Commission to carefully consider the resource management reform suggestions made by the sector in the papers attached as Appendix 1.

Enabling offshore renewable generation

According to the Infrastructure Commission:

> "It may be prudent to investigate whether an offshore renewable-energy regulatory framework is needed to enable an environmentally responsible exploration, construction and operation of offshore wind and other clean energy technologies."

Meridian sees no immediate need for such investigation, to the extent offshore options become economic in future then commercial operators will invest in these activities. However, that does not look likely. As indicated below, offshore wind developments are at least double the cost of onshore wind in New Zealand and that is not likely to change any time soon. Other forms of offshore generation (wave generation) are even less economic.



Building and maintaining an offshore wind development would require a fleet of vessels and helicopters, offshore living quarters for maintenance personnel, and measures to counter the harshness of the marine environment, meaning far higher capital and operating costs. Unlike Europe, New Zealand has outstanding, undeveloped onshore wind resources, making offshore developments unnecessary and reducing any relative advantage offshore developments might have in terms of the quality of the wind resource. The scale required would also not be well suited to the New Zealand market. With wind farms of around a gigawatt necessary to minimise costs, the transmission requirements and effect on the wholesale market would be significant driving huge volatility in wholesale prices depending on whether the wind was blowing or not in that one location.

While we consider offshore wind developments to be improbable in New Zealand, if such developments did ever become economic, they would be accommodated within existing consenting frameworks under both:

- the Resource Management Act or its successor (for activities within 12 nautical miles); and
- the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act (for activities beyond 12 nautical miles).

Even though offshore generation would be a new activity, the above frameworks are effects based rather than activity based and will therefore provide for the consenting of offshore generation infrastructure in the same way as they currently provide for the consenting of a range of different structures in New Zealand waters with similar effects on the seabed and landscape.

The improvements to the resource management system recommended in Appendix 1 would equally apply to any offshore activity (in the event it ever becomes economic).

Network costs are one of the most significant barriers to decarbonisation

Electrifying boilers that are currently fired by fossil fuel is a viable, secure means of decarbonising process heat in many applications for businesses that want to switch away from fossil fuel. This is particularly the case where there may be constraints on the supply of biomass to a particular location.

Meridian's Process Heat Electrification Programme supports the reduction of emissions from New Zealand's fossil fuelled industrial boilers. The first few projects in the programme see

us working with companies targeting the removal of more than 15,000 tonnes of carbon emissions per annum from process heat production.

The major barriers for companies that want to electrify their process and space heating are long-term price certainty and the new capital investment required (especially where sunk investments have already been made in fossil fuel assets). Meridian's programme is intended to help overcome those barriers and make electrification stack up commercially as well as environmentally. Meridian offers highly competitive long-term electricity prices and can help with up front capital requirements.

While Meridian's programme helps to overcome some of the barriers, for large scale electrification network costs remain an issue. Our customers report that network costs are highly uncertain, hugely variable between projects, and often so significant that otherwise positive business cases do not proceed. Meridian considers this to be an area where the Government could play a more direct role as the owner of Transpower.

Meridian therefore agrees with the Infrastructure Commission that, in the current situation, where fast action is needed to meet New Zealand's climate goals and interest rates are very low, it may be more efficient to build spare transmission capacity early to cater for, and encourage, the growth of future renewable generation. Funding to bring forward this network investment would be relatively simple and could entail the Crown taking on some of the cost and risk associated. This is consistent with the option recently explored by the Ministry of Business, Innovation and Employment (see below).

Q9. Of the recommendations and suggestions identified in the Ministry of Business, Innovation and Employment's "accelerating electrification" document, which do you favour for inclusion in the Infrastructure Strategy and why?

Shift some of the cost and risk allocation for new and upgraded connections from the first mover through mechanisms within the Commerce Commission's regulatory scope, with the Crown accepting some of the financial risk.

Building network capacity ahead of demand should not be conflated with network pricing methods to address first mover disadvantage, which arises when new customers join the grid. As part of the development of a new transmission pricing methodology, Transpower is already developing pricing solutions to address first mover disadvantage and spread the

allocation of network improvement costs between first movers and users that connect to the grid later.[5]

Organisational arrangements and pricing for electricity network infrastructure

The Infrastructure Commission is right to note that there are 29 electricity distribution companies and Meridian considers the distribution sector a good example of a sector where, in the Infrastructure Commission's words:

> "There can … be benefits in centralisation or consolidation. It can:
> - Enable infrastructure planning, funding and delivery to be better integrated.
> - Bring economies of scale that, in some sectors, can reduce costs for taxpayers, ratepayers and users."

Given the varied ownership of electricity distribution companies, consolidation may be challenging. Instead, the Infrastructure Commission could encourage distribution companies to work together and explore partnerships to build efficiencies of scale and the capabilities that will enable distribution networks to meet the challenge of growth and changing network use as New Zealand transitions to a low-emissions economy.

Even if ownership and governance structures remain unchanged there is an opportunity for the Electricity Authority to regulate distribution pricing to increase standardisation across New Zealand and enable businesses connecting new load to distribution networks to understand the costs involved. Currently consumers must navigate different pricing methodologies in each of the 29 distribution networks and in many cases the pricing methodologies do not signal the economic costs of service provision. This is a significant barrier to the electrification of industrial heat and is also a challenge for the rollout of electric vehicle charging infrastructure. The Electricity Authority's current approach of distribution pricing principles and monitoring has seen slow progress (and in some cases reluctance) to reform distribution pricing[6] and there does not seem to be much hope of standardisation or efficiency improvements under the current approach.

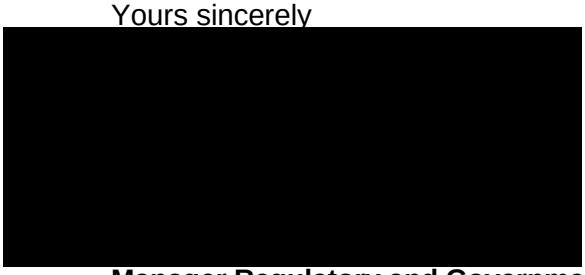
Improved network pricing could enable more efficient investment in network infrastructure as well as better utilisation of existing network infrastructure. Meridian encourages the

[5] https://www.transpower.co.nz/industry/transmission-pricing-methodology-tpm/tpm-development-project-first-mover-disadvantage
[6] https://www.ea.govt.nz/operations/distribution/pricing/

Infrastructure Commission to recommend that the Electricity Authority carefully consider the case for a nationally standardised toolkit of distribution pricing methods. This would help to increase consumers' understanding of, and ability to estimate, the network costs associated with industrial decarbonisation projects.

Please contact me if you have any queries regarding this submission.

Yours sincerely



Manager Regulatory and Government Relations

Appendix 1: Electricity sector papers on resource management reform

Electricity Sector Group Briefing Note - Ensuring the drafting of the Natural and Built Environments Act enables electrification and the achievement of climate change commitments

Climate change is the defining environmental issue of our time. Decarbonising Aotearoa's economy is the defining challenge of our time. Accelerated electrification through renewable generation represents our best opportunity to meet both that challenge, and international and statutory climate change commitments.[1] The scale of the electrification task is unprecedented however – building the equivalent of one new Turitea Wind Farm (222 MW) every year until 2035.

To succeed, we must have an environmental statutory framework that prioritises decarbonisation. The framework must provide clear, firm and coherent policy direction. The Natural and Built Environments Act (*NBA*) must resolve the inevitably competing national policy directions – decarbonisation to address climate change and biophysical limits to address environmental degradation.

Members of the Electricity Sector Environmental Group have a range of perspectives and interests. We rarely speak with one voice. However, on this issue we are all agreed: the current drafting of the NBA fails to provide the necessary policy coherence and direction required to achieve accelerated electrification and decarbonisation, across society and the economy. In fact, the current drafting represents a barrier to achieving the transformational blueprint proposed by the Climate Change Commission, in order to meet the Zero Carbon Act and New Zealand's international climate change commitments.

The issues at stake can be complex, but simply stated. What are decision-makers to do when a new transmission line must unavoidably traverse an Outstanding Natural Landscape? Do landscape values defeat the use of extensive areas with important wind resources? How are indigenous biodiversity values to be protected where geothermal development necessarily occurs in areas with such values? The NBA currently provides no direction on how decision makers are to traverse the inevitably value laden conflicts within these questions. Delivering on the accelerated electrification challenge will only exacerbate the tensions that already exist. To invest, the sector will need the certainty of how these conflicts and tensions are to be resolved.

The Group has prepared a paper addressing the most recent NBA drafting.[2] This is enclosed and represents a considered assessment of the risks and opportunities that the NBA poses to electrification and decarbonisation. Renewable generation and transmission projects are by their very nature highly likely to come into conflict with potential biophysical limits. In short, we cannot think of an electrification project of scale (past or proposed) that has not raised such conflict. If limits are to be strictly enforced without recourse to mitigation, compensation or offsetting, the overwhelming majority of such projects would be un-consentable. A dossier of case studies is also enclosed to demonstrate that the issues raised are real, and not overstated.

The paper also outlines the outcomes and options that would help manage the identified risks as we transition to a decarbonised economy. It confirms the view that the Spatial Planning Act cannot, and will not, provide a workable solution. Instead, it is essential that the NBA itself provides the approach for climate change mitigation through electrification.

Based on the paper, the key issues with the NBA drafting and the necessary responses that the Group considers appropriate, include:

- Providing a pathway for electrification projects to achieve the NBA's s5 purpose.
- Inclusion of the climate system and its biophysical limits in s7, in a manner that is consistent with the Climate Change Response Act 2002 and the plans and budgets under it.

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1 Climate Change Response Act 2002, s5Q.

2 Reforming the resource management system: Cabinet paper, February 2021.

- Setting decarbonisation of the economy, including through electrification, as an express outcome in s8 by:
    - increasing the directiveness of those outcomes relating to climate change and the transition to decarbonising the energy system so that they are at least equal to the 'protection' directives in other outcomes;[3] and
    - amending ss8(1)(r) to (t) to prioritise decarbonisation and to protect existing, and accelerate new, renewable energy development and transmission.[4]
- Ensuring mandatory direction to decision makers is provided in s9 as to how conflicts are to be resolved. The current drafting provides limited statutory direction with respect to the otherwise inevitably competing outcomes in section 8, and biophysical limits required by s7. Amendment is needed to s9 to ensure the national policy direction, to enable decarbonisation through renewable electricity generation and transmission, is coherent and achievable, alongside that aimed at protection of sensitive environments (such as the coast, freshwater, landscape and natural character, and indigenous biodiversity).

A specific 'red lined' version of the NBA is not provided but we would be happy to work with officials towards that outcome and any assistance we might give to the drafting process.

The Group recognises and accepts appropriate and detailed consideration of the effects of renewable generation and transmission activities should occur. Effects assessment, together with appropriate mitigation, offsetting and compensation, must be part of the future system. There must also be rights of participation for affected parties. Further, there may be projects where effects on the local natural environment, or a biophysical limit, should prevail over the benefits that project might otherwise provide. Experience shows us however that there will be cases where they should not. What the Group is seeking to ensure is that the NBA provides the cohesive policy toolkit necessary to resolve these inevitable difficulties, so that we can tackle climate change via the energy system and electrification.

This paper has been prepared following discussions, a workshop and deliberation among sector representatives and our highly experienced expert advisors. We thank Robert Schofield, an experienced senior resource management practitioner, and Catherine Somerville-Frost and Luke Hinchey at Chapman Tripp, Martin Williams at Shakespeare Chambers, David Allen at Buddle Findlay, and Andrew Beatson at Bell Gully for their legal input. The environmental expertise from within Transpower has also participated in our discussion, workshops and deliberation on the paper.

The current reform is a once in a generation opportunity. That includes the ability to design a system that will deliver on climate change targets, enable nationally essential electrification projects, and avoid locking in a narrow and automatic focus on local and short-term issues to the detriment of longer term climate impacts. We look forward to working with officials to realise these outcomes.

[3] We understand that one option under consideration may be the removal of all verbs in the section. This will require the resolution of conflicts instead in the context of the National Planning Framework and therefore provide less certainty.

[4] For example the outcome of "increased use" of renewable electricity in s8(1)(t) ignores the need to increase generation and transmission and (counterproductively from an energy efficiency perspective) purely looks to increase end usage.

THE CRITICAL ROLE OF A REFORMED RESOURCE MANAGEMENT SYSTEM IN RESPONDING TO THE CLIMATE CRISIS

A Paper by the Electricity Sector Environment Group

March 2021

Introduction

Among the objectives for the current reform of our resource management system are those to –

- better prepare for adapting to climate change and risks from natural hazards, and better mitigate emissions contributing to climate change
- improve system efficiency and effectiveness, and reduce complexity while retaining appropriate local democratic input
- protect and where necessary restore the natural environment (including its capacity to provide for the wellbeing of present and future generations).

The country's principal electricity generators (Meridian Energy, Mercury, Contact Energy, Trustpower, Genesis Energy, and Tilt Renewables), together with Transpower and the NZ Wind Energy Association (The Electricity Sector Environmental Group is collectively referred to in this paper as the Group), fully support the objectives of the resource management system reform.

The purpose of this paper is to underscore the criticality, urgency and scale of the task ahead in regard to the electrification of the New Zealand economy in response to climate change, and to red flag those aspects of the proposed reform which could frustrate the outcomes sought.

This paper outlines the risks that the current reform of New Zealand's resource management system presents for enabling the decarbonisation of the country's energy system to meet our climate change targets. The primary risks include:

- Absence of a clear outcome for the electrification of the economy to enable a reduction in greenhouse gas emissions.
- Inadequate recognition of the importance of renewable electricity generation and transmission in Part 2
- Inadequate protection of the capacity and output of our existing electricity infrastructure, which provides the baseline of electrification and on which our future modelling and targets are founded
- Outcomes for renewable energy and climate change that are too passive in the context of other more directive expressed outcomes
- Biophysical limits which are absolute in their application
- National direction will not resolve the existing and inevitable conflicts between biophysical limits and electricity infrastructure unless it is anchored to clear, definitive and unequivocal provisions in Part 2
- The limitations of spatial plans in providing for future renewable electricity generation and transmission

If we are to achieve the Climate Change Commission's blueprint for the country's decarbonisation, New Zealand will need to build the equivalent of one new Turitea Wind Farm – our largest wind farm at 222 MW – every year until 2035. The Group has grave concerns that it will not be able to deliver the required uplift in capacity if the resource management system reform progresses without a number of key changes.

To realise a renewable energy future, clear and decisive policy is needed to provide the electricity sector with certainty and confidence: this certainty includes an environmental regulatory framework that is better prepared for enabling electrification, providing a more efficient and effective consenting system, and reducing complexity while retaining appropriate local democratic input.

> *Ultimately, the sector is at the precipice of a major transition. It is essential that the settings are correct for the sector to transition in a desirable way and that the sector we are left with is well positioned to deliver future needs* [Sector State of Play: Energy, Discussion Document, NZ Infrastructure Commission | Te Waihanga, February 2021]

Part A

The Criticality of a Renewable Energy Future

The electrification of our economy and society is critical to decarbonising New Zealand and addressing the climate change crisis – as fundamental an issue as turning around our degrading environment or solving our housing problem. Indeed, electrification will also assist us in meeting those other challenges. Getting the reform of the resource management system correctly calibrated will be crucial to realising a renewable energy future for New Zealand.

New Zealand has two principal climate change commitments:

- Our Paris commitment: A 30 per cent reduction of gross greenhouse gas emissions below 2005 levels for the period 2021-2030; and
- Our domestic 'net zero' commitment: Net zero emissions of all greenhouse gases other than biogenic methane by 2050.

We currently are not on track to meet either commitment.

New Zealand will be unable to meet its statutory climate change commitments[1] without electrifying our economy with low-emission renewable electricity. Among the actions needed is for New Zealand to accelerate its investment in and approvals for the development of renewable electricity generation capacity to ensure lowest cost electricity and security of supply. In its recent draft advice to the Government, the Climate Change Commission (CCC) has identified that nearly 60% of New Zealand's total energy requirements will need to be from electricity in 2050, up from 25% in 2016. The Commission estimated that there will be a 68% increase in the demand for electricity[2].

Transpower's most recent modelling estimates that achieving an accelerated electrification future will require 40 new grid connected generation projects by 2035 – to put this in perspective, as much generation will need to be built in the next 15 years as was built in the past 40 years.

Over the same period, approximately, 70 new grid-scale connections will be required: 40 to connect the new power stations and 30 connections to accommodate increased electricity demand on the grid due to electrification. This represents an average of close to five new connections per year, a significant increase above the connection workload that Transpower has delivered over the last 30 years.

With approximately 80% of electricity already generated from renewable sources, and with a wealth of future renewable electricity options, New Zealand is well-positioned to lead the world in decarbonisation through electrification and renewable generation investment.

It is important to stress that the road map to a decarbonised future based on renewable electricity will require large-scale renewable electricity generation and transmission projects. While enabling domestic and community scale renewable electricity generation should be an element of our strategy, for New Zealand to meet its targets will require a step change in the generation of renewable electricity, increases that can only be achieved through major new energy projects and the repowering and upgrading of generation assets, as well as upgraded and new transmission infrastructure.

Accelerating investment in renewable electricity, transmission and associated infrastructure will necessarily entail a transition. During the transition there is a role for thermal energy to support the build of more renewables, and ensure security of supply to customers and underpin consumer price affordability during times of renewable fuel shortage. The CCC has identified that following transition, thermal energy would be significantly reduced or phased out and the broader objective of increased decarbonisation of energy would be enabled.

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1 Section 5Q Climate Change Response Act 2002.

2 Whakamana I Te Mauri Hiko – Empowering our Energy Future, Transpower, March 2020.

Part B

Key Messages from the Electricity Sector for the Reform

As the Government progresses with the replacement legislation, there are several key messages the Group wishes to convey, focusing on the proposed Natural and Built Environments Act (NBA) Part 2 as contained in the February 2021 Cabinet paper. The Group is happy to engage with officials on an ongoing basis, to test ideas and provide feedback.

➢ Section 5 - Purpose

The purpose of the new Act will establish the overarching outcome of the new legislation. Specific points are provided below:

- The Group supports the recognition of the built environment's contribution to our wellbeing in the purpose of the NBA.
- The Group support the definition of the 'built environment' clearly encapsulating the facilities or infrastructure needed for the generation and transmission of renewable electricity, with 'wellbeing' having a wide meaning.
- The requirement to ensure the use, development and protection of resources is within biophysical limits is problematic, being very dependent on the form and scope of the limits.
- A requirement to otherwise "avoid, remedy or mitigate adverse effects" is a barrier if this opens the door for plans and the consenting process to seek to avoid or otherwise minimise every possible adverse effect (for example, on every neighbour's amenity values) – there should be some form of qualifying matter to this otherwise general catch-all part of the purpose.

As an essential part of our built environment, renewable electricity infrastructure is fundamentally important to the wellbeing of New Zealand, as well as contributing to reducing our greenhouse gas emissions. This importance should be an inherent element of the purpose of the NBA[3].

Suggested Changes to Proposed NBA:

In order to achieve an enabling framework for electrification of the economy, including transport, industrial process heat, renewable electricity generation and transmission, the Sector Group suggests that the proposed NBA Part 2 be amended to:

- Ensure the purpose of the NBA embeds renewable electricity and transmission as part of the built environment's contribution to the wellbeing of the country.
- Recognise our energy system, in its entirety, as part of the built environment, critical to the wellbeing of New Zealand.
- Recognise the criticality of the reliance on renewable energy resources to achieve the electrification of the economy.
- Ensure the development and operation of renewable electricity generation and transmission to decarbonise the energy system is recognised as a critical outcome.

[3] This paper focuses on renewable 'electricity', acknowledging the wider need for New Zealand to move to renewable 'energy' on a wider basis, including biofuels and solar water heating. This paper focused on the particular issues facing the renewable electricity sector.

➢ Section 7 - Biophysical limits

Setting biophysical limits is a cornerstone of the new legislation and is strongly supported in principle by the Group as one way to provide certainty. This support is qualified, however.

The Review Panel recommended making it impossible to grant consent to any proposal breaching such limits, effectively making such activities prohibited. The Panel also recommended that such limits may be expressed quantitively or qualitatively. A past failure to apply environmental limits to broad categories of activities that were permitted by the RMA with corresponding cumulative effects, does not now warrant uniform prohibition of effects from activities that have always been authorised by consent and with corresponding mitigation. The Group urge caution that biophysical limits are not introduced that are indiscriminately applied and result in capturing a wide range of situations in which renewable electricity generation and transmission will inevitably be involved. Without the NBA actively and purposively addressing renewable energy development, biophysical limits may prevent new electricity generation and curtail existing renewable electricity generation.

For the electricity sector, the following elements of the proposed biophysical limits are of concern and need to be considered:

- A singular focus on avoiding any breach of biophysical limits without regard to countervailing environmental benefits through achievement of positive climate outcomes and overall environmental enhancements provided through offsetting and compensation would render many, if not most, renewable electricity generation projects unconsentable. The relationship between limits and outcomes will be critical and the Group is concerned that the NBA framework will not allow for achieving of the overarching and preeminent outcome of responding to climate change and decarbonising if limits outright prevail. As noted in the Randerson Report, *Outcomes and targets are needed to orient the management approach towards continuous environmental improvement*.
- Biophysical limits are but one tool to protect the natural environment and its life supporting capacity: the focus on biophysical limits risks it being used to manage other effects better addressed by other tools – for example, wetlands and habitats of significant indigenous biodiversity.
- The provision of rigid biophysical limits has no regard to the nature and scale of the activity or the degree of effect and does not allow for recognition or consideration of those circumstances in which absolute avoidance cannot be achieved. The National Grid (being linear infrastructure) is constrained by the location of existing lines, new generation, and new demand, with which it must connect. Similarly, renewable electricity generation activities are constrained by the location of natural resources, such as wind, geothermal or water. These constraints and scale of the activity often mean it will not always be possible to locate, design and manage renewable electricity generation activities such that adverse effects are all avoided, and limits met, particularly in natural environments.
- Biophysical limits will be able to be expressed quantitatively or qualitatively: given the sector's experience with the very broad definition of wetlands under the NPSFM and NESF (which is under appeal to the High Court), as well as the all-encompassing nature of the draft National Policy Statement for Indigenous Biodiversity, there is real potential for biophysical limits to pose a significant risk that new or reconsenting renewable electricity generation proposals will be unconsentable (i.e. consent cannot be granted).
- If biophysical limits must not be breached, with no allowance for mitigation, offsetting or compensation, then the existing problems under the RMA will not have been remedied, and the renewable electricity sector will continue to the face the time, cost and risk difficulties in bringing new renewable electricity generation and transmission projects and even having the projects considered within the consenting framework.

- If biophysical limits are already exceeded as part of the existing environment, would existing and new renewable electricity generation activities and proposals be able to meet the s5 purpose of the NBA (that is, be within biophysical limits) notwithstanding the activity itself would not exceed the limits?
- If local authorities are allowed under s7(3) to prescribe more stringent standards than that prescribed in the National Planning Framework (NPF), this creates potential uncertainty within plan development and inconsistences across regions and gives rise to potential consent ability issues. The Group would prefer as much certainty as possible within the NPF.

Given biophysical limits will be a cornerstone of the new legislation, the relationship between limits, targets and outcomes will be critical. The Group is concerned that the NBA framework will not allow for achieving of the overarching and preeminent outcome of responding to climate change and decarbonising if limits outright prevail.

Suggested Changes to Proposed NBA

In order to achieve a workable framework for renewable electricity generation and transmission in the context of biophysical limits, the Sector Group suggests that the proposed NBA Section 5 and Section 7 relating to limits be amended to:

- Establish clear targets for climate change and renewable electricity that are consistent with New Zealand's international and national commitments and targets.
- Provide a consenting pathway for renewable electricity generation and transmission that enables some form of consideration of the overall outcomes to be achieved for proposals, including when proposals may affect identified biophysical limits.
- Enable practical means for offsetting and compensation to be considered as part of the broader outcome-based approach to consenting renewable electricity projects.
- Provide as much certainty as possible within the framework including limiting the ability to use qualitative biophysical limits and the ability of plans to prescribe more stringent standards.

➢ Section 8 - Outcomes

The Group fully supports embedding positively expressed outcomes in Part 2 of the new Act, including for climate change and renewable energy, which should be given clear and coherent national direction in the National Planning Framework which is then consistently translated down at regional levels of planning and decision-making.

While the provision of outcomes is supported, for the Group the outcomes expressed in the Act need to include some key elements:

- The NBA needs to be clearer in the outcomes sought. There needs to be clearer and stronger direction to provide for infrastructure and renewable electricity as an outcome under the built environment: the outcomes should include specific ones regarding providing for renewable electricity generation and transmission and for protecting the capacity of generation and transmission. The Outcomes (h) and (t) are both vague in their application and intent and are non-directive.
- A renewable energy system should be an essential outcome of managing our built environment and the benefits it brings to our well-being. It is directly related to improving our environment and New Zealand's contribution to reducing greenhouse gas emissions.
- It is noted that it will not be sufficient to address climate change and the need for decarbonisation in the Climate Change Response Act (CCRA). The CCRA, and similarly the

NBA, are or will be stand-alone statutes which do not require decision-makers to have recourse to, or indeed to consider, other legislation. The considerations that decision-makers should apply to resource consenting will need to be contained within the NBA itself. The Group is concerned that while the CCRA may have clear outcomes, the structure and framework of the NBA (and the associated NPF) will not be sufficiently directive so as to ensure the outcomes are achieved, particularly in context of other more directive outcomes.

- While the outcomes were not intended to have any hierarchy, with any conflict between outcomes to be resolved through national direction and plans[4], the verbs used for the different recommended outcomes range from passive 'enabling' types through to proactive protect and enhance types: the wording indicates that any national direction or combined plans will eventually have some prioritisation for some outcomes over others, reflecting recent case law. This has been the challenge to date in the existing RMA framework for renewable electricity generation and transmission in that such activities typically affect natural landscapes and features, lakes and rivers, and indigenous vegetation and wetlands. The specific nature of the outcome wording will therefore be crucial. For renewable electricity generation and transmission it should be suitability directive and proactive.
- Where the consenting for a renewable electricity project involves potential conflict with other outcomes (for example, (d) maintenance of indigenous biological diversity and restoration of viable populations of indigenous species), some form of policy consideration and consenting pathway is likely to be needed to enable the benefits of the proposal to be brought into the process of decision-making. There needs to be a means to reconcile tensions between outcomes and biophysical limits. It needs to be recognised that if we do not decarbonise the economy by electrification biodiversity will decline and many "natural values" will be adversely affected on a wide scale.
- Rewording of (t) to include not just the increased use of renewable energy, but increased renewable electricity generation, transmission and associated infrastructure.

Given the outcomes focus of Part 2 will be translated down at regional levels of planning and decision making, the Group fully supports embedding positively expressed and clear outcomes. However, the Group is concerned that the drafted outcomes for climate change and renewable energy are vague and non-directive.

Suggested Changes to Proposed NBA

In order to ensure climate change and renewable energy are given clear and coherent national direction in Part 2 of the new Act, the Sector Group suggests Section 8 Outcomes be amended to:

- Provide clear and strong positively expressed **outcomes** to provide for infrastructure and renewable electricity as outcomes under the built environment of Section 8.
- Incorporate a specific outcome for the **electrification** of the economy to enable a reduction in greenhouse gas emissions and address climate change.
- Provide express and proactive provisions for renewable electricity generation, transmission, and associated infrastructure as a specific **outcome** sought by the NBA.
- Provide express provision for **protecting** the capacity of existing electricity generation and transmission.
- Enable practical means for offsetting and compensation to be considered as part of the broader **outcome-based approach** to consenting renewable electricity projects.

[4] Page 76

- Provide policy consideration and an appropriate mechanism for nationally important development in **addressing conflicts between outcomes** – this could be in the form of enabling the benefits of the proposal to be brought into the process of decision-making.

➢ Section 9 - Implementation Resolving Competing Outcomes and the NPF

The Group emphasises that, in any system in which development is managed to meet environmental objectives, there will always be tensions in resolving competing outcomes, particularly when development and land use occurs within the natural environment. In particular, further development of our renewable electricity generation and transmission infrastructure will always interact with the natural environment, due to the functional requirements of electricity infrastructure having to locate on mountains and hills, traverse our countryside, and use our hydro and geothermal resources.

There will therefore be a need to have clear policy direction for renewable electricity generation and transmission within sensitive environments (such as the coast, freshwater, landscape and natural character, indigenous biodiversity, and urban areas). Decision-making should focus on whether there will be a net overall positive outcome of renewable electricity projects, where you can weigh a negative natural environmental impact against positive social and economic factors, together with the ability to use offsetting and compensation as critical means to achieve net overall benefits. Such an approach would align with the broader outcome-based approach envisaged by the Review Panel.

The Group strongly supports mandatory direction on the achievement of climate change outcomes and targets as per the Government's Emissions Reduction Plan. The Group also recommends that targets for renewable electricity generation and transmission comprise part of the broader National Planning Framework.

The planning mechanism in which to address the current form of national direction is the proposed NPF. Its purpose will be to address matters of national significance or matters where national consistency would be desirable. The Group supports the NPF as the guiding document for national direction. Some key comments from the Group are as follows:

- One current issue within the current RMA framework is the inherent tensions at a national directions level. While Section 9 of the Randerson Report provides that conflicts are to be first reconciled and clarified in the national direction (NPF), and by the provisions in Regional Combined Plans, the Group has concerns that conflicts between competing outcomes will not able be resolved without resort to a consenting pathway that reconciles conflicting outcomes using an evidence-based approach, open to a full suite of mitigation options. The experiences to date are that, whilst in some instances the conflict may be resolved to a point through plan development, in many instances, renewable electricity infrastructure is afforded no specific policy recognition within plans when faced with more directive policies from other National Policy Statements (such as the NPSFM and NZCPS) or more specific Part 2 matters that are not specifically addressed in the NPSREG. The situation is worse for other infrastructure providers (who do not have the benefit of an NPS). Given the urgency of providing greater generation and its transmission, clear resolution of the tensions at a national level though the NPF would be supported and would address the time, costs, and uncertainties with resolving tensions at the plan development and subsequent resource consent stages. If national direction is not an output from clear, definitive, and unequivocal Part 2 provisions, national direction will not address the existing and inevitable conflicts.
- Related to the tension issue between various national policy instruments is the age and 'fit for purpose' nature of some of the older national policy instruments (such as the NPSET, NPSREG, NESETA, NESTF, NES Air Quality), particularly in light of significant case law which gives greater weight to those instruments that have more directive wording (and removes the broad judgement approach), as well as the lack of integration and recognition between the instruments themselves. The Productivity Commission's Low-emissions Economy

report finds that the NPS-REG has made no difference to the time, complexity and cost of obtaining consents for renewable electricity generation, and that resource consenting processes are likely to hinder expansion of renewables[5]. Also of relevance is the nature of wording in the NPSs themselves. 'Protect' and 'avoid' policies simply do have a much stronger weight than 'enabling' and 'provide' policies.

- The issue of layering NESs is evident in the lack of recognition and clarity between the NESF and NESETA. While the NESETA was intended to provide a near comprehensive management regime for the existing electricity transmission lines, the NESF provides an additional regulatory layer.
- The Group would be concerned with an NPF based on existing national direction with no modification and no resolution of the potential competing policy tensions. A review of the content of the current national instruments (with clear and explicit directive wording provided), their application and relevance to emerging renewable electricity generation technology, and their respective relationships to each other could well address the tensions, reflecting the clear outcomes from s5.

The Group supports the NPF as the guiding document for national direction. The Group strongly supports mandatory direction on the achievement of climate change outcomes and targets as per the Government's Emissions Reduction Plan, and clear direction in resolving tensions.

Suggested Changes to Proposed NBA:

In order to ensure an effective national direction framework, the Sector Group suggests the section 9 Implementation approach and NPF be framed so as to:

- Establish a mandatory framework of **national direction** which provides for renewable electricity generation and transmission and recognises its importance, and ensure it is then consistently translated down at regional and local levels of planning.
- Consider including a **strategic** overarching part of the NPF to provide clear direction on conflicting priorities and resolving competing tensions.
- Ensure that the **national policy** framework providing for renewable electricity and addressing climate change is coherent and achievable, alongside national direction aimed at protection of sensitive environments (such as the coast, freshwater, landscape and natural character, indigenous biodiversity, and urban areas).
- Introduce a nationally consistent enabling **regulatory framework** for renewable electricity generation and transmission across New Zealand such as through national regulation and/or standards, including reconsenting proposals.
- To provide a **consenting pathway** for renewable electricity generation and transmission that enables some form of consideration of the pre-eminent outcomes to be achieved for proposals, including when proposals may affect identified biophysical limits.
- To enable practical means for offsetting and compensation to be considered as part of the broader **outcome-based approach** to consenting renewable electricity projects .
- To provide **efficient consenting** processes for new proposals that reflects the scale and impact of the proposed development.

5 New Zealand Productivity Commission. (2018). Low-emissions economy: Final report. Available from www.productivity.govt.nz/low-emissions. Page 401-402

- To provide a more standardised and enabling regime for existing generation, including **reconsenting**, to protect and grow our existing base of renewable electricity generation
- To protect the **existing capacity and output of electricity** infrastructure, including consented unbuilt electricity infrastructure
- The protection of existing renewable electricity generation and transmission from the **adverse effects of other activities**

➢ The Limits to Strategic Planning

The Group supports the use of strategic planning as a mechanism for recognising and protecting existing and consented renewable electricity generation and transmission assets, and in enabling their ongoing operation, maintenance and upgrading.

However, the Group emphasises that strategic plans have limitations in terms of recognising and providing for future electricity assets: In particular, spatial plans are not flexible nor timely enough for responding to new proposals. This will be even more problematic if there is a lack of clear direction within the NBA itself (specifically the purpose, outcomes and the National Planning Framework) for electricity generation and transmission and to achieve the Government's Emissions Reduction Plan, and if biophysical limits are not met. The planning and investment in renewable energy occurs within a commercial environment, with business and financial imperatives, along with ever changing technology.

The Group expresses caution about using spatial plans to map energy resources or zones where future generation may be located. It is almost certain that there will be future projects that will not be identified in spatial plans but which require resource consent. This could be very problematic in particular for future wind development where matching technology with wind resources is highly variable and an area of constant technological innovation. The RMA prevents trade competition and that is widely recognised as an important feature of the current legislative regime: poor spatial planning could reintroduce trade competition into New Zealand's environmental regulation.

The use of GIS mapping to identify no-go areas should be used sparingly and with caution, for natural values and features that are truly exceptional and iconic at a national level (such as nationally rare geothermal features and ecosystems within Protected Geothermal System). This is to avoid unforeseen circumstances where biophysical limits and values of lesser importance (such as at a regional or local level) may prevent or curtail generation or restrict the ability to initiate a consenting process. Notwithstanding the use of no-go areas, provision must be made for the operation, maintenance and upgrading of existing renewable electricity generation and transmission assets, some of which occurs in or has an influence on nationally important values and features, such as National Parks.

Suggestions for the Proposed Strategic Planning Act (SPA)

In order to ensure strategic planning is an effective tool in addressing climate change and renewable energy the Sector Group suggests that spatial plans:

- Provide clear and strong direction to inform spatial planning in relation to new infrastructure and renewable electricity generation and transmission activities.
- Identify no-go areas sparingly and with caution to ensure only those areas/values that are truly significant, exceptional and iconic at a national level are identified.
- Cleary recognise and provide for the operation, maintenance and upgrading of existing renewable electricity generation and transmission assets.

Note: The information in this paper on our climate change targets and future energy requirements is drawn from the following sources:

- 2021 Draft Advice for Consultation, He Pou a Rangi – Climate Change Commission, February 2021
- Sector State of Play: Energy, Discussion Document, NZ Infrastructure Commission | Te Waihanga, February 2021
- Whakamana i te Mauri Hiko: Empowering our Energy Future, Transpower, March 2020
- A Roadmap for Electrification, Transpower, February 2021

PROVISION FOR RENEWABLE ELECTRICITY IN THE REFORMED RESOURCE MANAGEMENT SYSTEM

Discussion Paper #2 by the Electricity Sector Environment Group

June 2021

Executive Summary

To meet our climate change obligations, New Zealand is facing a huge challenge to decarbonise our economy and society. Electrification will be the engine to decarbonise the energy and transport sectors, which in turn will impose significant pressure to increase our renewable electricity capacity.

In alignment with the Government's 'systems approach', the major electricity generators, together with the NZ Wind Energy Association, have been working together collaboratively to identify opportunities for improving a critical element to a decarbonised future – our resource management system. The intent of this cooperation is to provide Government with a single voice on how a renewable electricity future can be best delivered to provide joined-up thinking that draws on our collective experience, and our understanding of the special issues and requirements relating to electricity generation and transmission.

The purpose of this paper is to provide a critique of the policy and consenting framework required in the reformed resource management system to enable the meeting of New Zealand's climate change goals while retaining public input and robust environmental management.

This paper follows on from our discussion paper dated March 2021, in which the Electricity Sector Environmental Group (ESEG) underscored the criticality of ensuring the resource management system supports the electrification of New Zealand as the engine to our decarbonisation.

In this paper, we provide a more detailed evaluation of the reform proposals, identifying some of the potential risks, as well as some of the opportunities for transformation, including –

- *The need to provide a clear policy line-of-sight through all instruments in the new resource management system, from the outcomes of the NBA to national direction, and through to plans and the consenting framework, to deliver the certainty and responsiveness needed to deliver electrification of the economy.*
- *Giving priority to preparing a primary set of national direction policies early, providing a policy pathway for addressing the inevitable tensions in competing outcomes that will arise between electricity infrastructure and environmental limits for the natural environment*
- *Giving priority to developing a national regulatory framework for enabling renewable electricity generation and transmission consistently through New Zealand*
- *Maximising the opportunities provided by regional spatial strategies and NBA plans to support the consenting framework,*
- *Ensuring spatial strategies are flexible in terms of siting new electricity infrastructure, and*
- *Delivering a more efficient consenting toolbox focused on robust decision-making that will enable the rapid transition to a decarbonised future.*

We would like to work with the Ministry for the Environment and Ministry for Business, Innovation and Employment on exploring the significant opportunities for delivering a transformed policy and consenting framework that will fully meet the objectives of the reform, and enable the decarbonisation of New Zealand.

1 Introduction

Background

Among the objectives for the current reform of our resource management system are to –

- better prepare for adapting to climate change and risks from natural hazards, and better mitigate emissions contributing to climate change
- improve system efficiency and effectiveness, and reduce complexity while retaining appropriate local democratic input
- protect and where necessary restore the natural environment (including its capacity to provide for the wellbeing of present and future generations).

The country's principal electricity generators (Meridian Energy, Mercury, Contact Energy, Trustpower, Genesis Energy, and Tilt Renewables), together with the NZ Wind Energy Association (collectively referred to in this paper as the Electricity Sector Environment Group or ESEG) fully support the objectives of the resource management system reform. However, we are very much aware of the significant and urgent challenges ahead of New Zealand, and the opportunities that may be missed if the resource management system reform process does not deliver some critical changes. To that end, the ESEG have collaborated over the last few months to distil our collective experience, analysis, and ideas to support the reform process.

First discussion paper

In March 2021, the ESEG released a discussion paper that addressed the key risks and opportunities that the current reform presents to achieving the decarbonisation of the country's energy system in order to meet our climate change targets. That paper explored some of the downstream implications of these risks, to underscore the criticality, urgency and scale of the task ahead in regard to the electrification of the New Zealand economy in response to climate change, and to red flag those aspects of the proposed reform which could frustrate the outcomes sought. In particular, that paper highlighted that New Zealand will be unable to meet its statutory climate change commitments without electrifying our economy with low-emission renewable electricity.

In its recent draft advice to the Government, the Climate Change Commission has identified that nearly 60% of New Zealand's total energy requirements will need to be from electricity in 2050, up from 25% in 2016. The Commission also estimated that there will be a 68% increase in the demand for electricity. To achieve such accelerated electrification, Transpower has estimated that New Zealand will require 20 new grid connected generation projects by 2035, and 30 by 2050. Over the same period, many more grid-scale connections will be required: to connect the new power stations to the National Grid and to accommodate increased electricity demand on the grid due to electrification.

In its current consultation on the development of a 30-year national infrastructure strategy, Te Waihanga New Zealand Infrastructure Commission has identified a range of priority areas to meet the challenges the country is facing, which includes supporting the transition to a zero-carbon economy and preparing for climate change through, among other actions, making the planning system more enabling of the infrastructure necessary for climate change mitigation and adaptation.

The first paper prepared by the ESEG raised some of the key risks and suggested changes to the reform proposals, including –

- Decarbonisation of the economy through electrification is the major climate change response opportunity that needs to be recognised and enabled in the NBA and SPA outcomes (Part 2 RMA equivalent)

- Specific recognition of the role electricity infrastructure will play in supporting electrification and decarbonisation is also critical. This includes the need to maintain the capacity of existing renewable generation to underpin the future generation growth needed
- The need for a clear target for climate change consistent with New Zealand's international and national commitments
- The need for adequate recognition of the importance of renewable electricity generation and transmission in Part 2 (Purpose and Principles) of the NBA
- Biophysical limits which are absolute in their application will prevent achievement of the preeminent outcome of responding to climate change and decarbonisation of New Zealand
- National direction will not resolve the existing and inevitable conflicts between biophysical limits and electricity infrastructure unless it is anchored to clear, definitive and unequivocal provisions in Part 2 (Purpose and Principles) of the NBA, and
- The limitations of spatial plans in providing for future renewable electricity generation and transmission.

Current discussion paper

The purpose of this second paper is to build on the key points made in our first paper by exploring the key functional components of the proposed Natural and Built Environments Act (NBA) and identify some possibilities to introduce real transformation to our consenting framework. In particular –

- The need to urgently prioritise the establishment of a primary set of national policy directions within the National Policy Framework (NPF) to provide the basis of a fully integrated planning system, with a line-of-sight between the outcomes sought by the NBA and the policies under NBA plans
- The need for NBA Plans to provide greater certainty for investment into renewable electricity generation and transmission, giving effect to national direction and with support from regional spatial strategies
- Pursuing opportunities to standardise the regulatory framework for renewable electricity generation, transmission and distribution to provide the certainty required to secure the capacity and output of our existing renewable electricity production, and to enable efficient consenting processes for new and existing electricity infrastructure to meet the Government's decarbonisation and renewable electricity targets, and
- The requirement for a more efficient and effective consenting and designation regime, one better attuned to facilitating new electricity generation and transmission infrastructure in a timely manner, and reducing unnecessary regulatory hurdles for upgrading, minor consents and renewing existing consents.

As the Government progresses with the replacement legislation, the ESEG will be happy to engage with officials on an ongoing basis, to test ideas and provide feedback.

2 National Direction

Overview

The provisions of NBA Plans under the proposed NBA are intended to be directed by the provisions of the NPF, which itself is intended to provide national direction on how the outcomes of the NBA are to be achieved. A coherent, consistent policy framework will be vital if New Zealand is to deliver on accelerated renewable electricity generation and transmission to decarbonise the economy and meet climate change commitments. **The relationship between 'Part 2' of the NBA, the NPF and the resultant policy and outcomes expressed in NBA Plans is therefore highly relevant to the ability of the Electricity Sector to develop and operate infrastructure efficiently and effectively to deliver on our Climate Change target**s.

Accordingly, we consider it essential to have **a 'clear line-of-sight' between the outcomes sought by the NBA, the national policies in the NPF, and the regulatory and policy framework of regional combined Plans.** If greenhouse gas reduction targets are to be met, we consider that there must be clear supportive enabling national direction on decarbonisation, renewable electricity, climate change and infrastructure, stemming from clearly stated outcomes within 'Part 2' of the NBA. To this end, we fully support the concept of a single set of integrated coherent national directives through the proposed NPF, flowing through to NBA Plans.

However, the ESEG is concerned that the breadth of the NPF is potentially very wide: even accommodating the present set of national direction would, collectively, form a very large tome. More importantly, if a siloed approach is undertaken to deliver national direction, decision-makers under the new legislation will remain uncertain how to determine priorities, one of the key problems under the RMA. Issues with the current national direction, particularly national policy statements, will not be resolved if they are simply 'rolled over' into the NPF. For example, our current national direction is highly variable in style, approach and detail, having been prepared at different times. Consequently, the existing instruments do not 'talk' to each other, giving rise to uncertainty in application, weight, interpretation and most importantly prominence when tensions occur. For example, the uncertain relationship between the National Policy Statement for Renewable Electricity Generation (NPSREG), the New Zealand Coastal Policy Statement (NZCPS) and the National Policy Statement for Freshwater Management (NPSFM) has led to constant debate and litigation across New Zealand.

The ESEG considers the NPF needs to take a consistent approach across <u>all</u> nationally sought outcomes, and provide a policy framework that acts as the primary means for resolving the inevitable tensions in achieving the NBA's outcomes: for example, how will the conflicts involved between urban growth and protecting highly productive soils be resolved, or the conflicts that constructing a new transmission line or renewable electricity generation will create when the corridor or site traverses nationally or regionally significant landscapes or areas of significant indigenous biodiversity?[1]

For these reasons, we consider it critical that priority be given to ensuring the NPF provides **policy pathways for addressing the inevitable tensions that will occur between the outcomes sought by the NBA,** to assist decision-makers in resolving the trade-offs between other environmental values and the need for renewable electricity generation and transmission. While such pathways should be within the NPF itself to provide national consistency, but they will likely also be needed within NBA Plans to resolve regional tensions.

Given the core role of the NPF in the NBA framework, such pathways must be developed early in the process to provide immediate direction to, and prioritisation for, the preparation of NBA Plans (it could be started even before the NBA is enacted).

[1] Examples of such tensions can be found in the dossier of case law provided with the first paper.

Critical Priorities for National Direction

To establish the basis for an effective consenting framework, there are two critical actions at the national level that should be provided as priorities:

- **Placing priority on preparing a single cohesive overarching national policy framework** that will provide core national direction and prioritisation for (inter alia) decarbonisation, renewable electricity, climate change and infrastructure at an early stage for the development of NBA Plans and to assist decision-making in resolving the tensions between outcomes, at least until NBA Plans come into effect.
- **Developing a national regulatory framework for renewable electricity**, based on strengthening existing national environmental standards, expanded to provide the basis for a future regulatory framework that can be developed following the national policy direction.

These priorities are expanded below.

Priorities for the National Planning Framework V.1

The ESEG considers that **priority should be placed on developing consistent integrated policy direction in the first edition of the NPF, addressing all outcomes being sought by the NBA, and based on a standardised template, format and internal structure** (we refer to this as the 'primary policy direction'). As the founding planning instrument under the new legislation, the NPF should demonstrate how a more streamlined system will work by being clearly and succinctly written. The policies should not comprise a large compendium, but be a series of short sections, based on creating a strong line-of-sight between the outcomes sought by the NBA and the policies contained in regional combined NBA plans. Examples of State and National Planning Frameworks (or equivalents) from the UK and Australia provide a good basis for modelling the New Zealand NPF[2].

We suggest **the NPF should be prefaced by a strategic overview of the outcomes being sought, recognising the interconnections and identifying how the potential tensions are to be resolved**. **The remainder of the primary policy framework in the first version NPF should focus on providing national policies for all the key outcomes sought by the NBA**. For example, there should be clear supportive national policy direction for renewable electricity generation and transmission in the NPF, drawing on the current review by MBIE. The ESEG contemplates that any replacement national direction for the NPSREG and NPSET will be integrated into the primary and wider national direction alongside other national direction focused on the outcome sought for the natural and built environments in the NPF.

The policies in the NPF could be supported by an initial set of targets that underpin the policy direction. Such targets should not necessarily be confined to the natural environment, but across all outcomes. This would include targets for rapidly enabling the decarbonisation of our economy by electrification and increasing the supply, capacity and use of renewable electricity (for example, in phasing out the use of fossil fuels in process heat).

The ESEG recommends that **the machinery of the NPF be a secondary priority, to follow from the establishment of the overarching set of national policy direction**. Such machinery could include:

- implementation policy (as found in recent national policy statements)
- national environmental standards (where a national regulatory framework would be efficacious), and
- other provisions necessary for supporting, monitoring and reviewing national policies.

[2] For example, the Scottish Planning Policy, the National Planning Policy Framework for England, the Queensland State Planning Policy, and the Victoria State Planning Policy Framework all are forms of an integrated approach to national policy direction

That said, the ESEG would stress that the ability, cost and practicality of implementing national policy directions be a critical consideration in the formulation of primary policy.

This prioritisation process would allow time to review how best to implement the primary policy direction, and focus on where major advances are urgently required.

The ESEG recommends the NBA itself requires **the contents of the NPF to include direction on how conflicts between outcomes are to be resolved, given the criticality of this issue**[3]. The ESEG envisages resolution could be provided through the specification of considerations that decision-makers must take into account when, for example, a renewable electricity generation and/or transmission proposal affects other broad outcomes and environmental constraints – for example:

- Whether the proposal will contribute to increase New Zealand's renewable electricity production and capacity
- Whether the proposal assists in the transition to a decarbonised economy
- Whether the proposal will provide mitigation, offset or compensation measures of residual effects that collectively maintain or enhance the overall natural environment, and
- Whether there is a functional[4], or operational[5] requirement to locate in that site or corridor.

A National Regulatory Framework

The ESEG recommends that **the existing National Environmental Standards for Electricity Transmission Activities 2009 should be rolled over**, at least on a transitional basis. These standards have been an invaluable tool for Transpower since its inception providing a nationally consistent basis for managing the maintenance and upgrade of Transpower's transmission line assets throughout the country, and which the ESEG acknowledge that they require updating and revision.

In the longer term, new or amended national environmental standards should focus on the priorities and targets outlined in the NPF. The ESEG considers there is considerable scope for further national regulation to enable renewable electricity generation and transmission to meet the urgency of addressing our greenhouse gas emissions and renewable electricity generation targets. **The ESEG stresses, however, that such broader regulation for renewable electricity generation and transmission would need to be tailored to the nature and type of renewable electricity generation and transmission**.

A more standardised regulatory framework should also look to provide a nationally consistent approach to protecting the renewable electricity generation and transmission network from the adverse effects of third parties. For example, despite policies for plans to contain provision for transmission corridors in the National Policy Statement on Electricity Transmission, which has been in effect since 2008, only about 70% of Plans have such provisions. Furthermore, currently, of those plans that do contain such provisions, there are inconsistent approaches to management of third party activities near transmission assets.

One concept would be for **national regulation to provide for global consents for common activities subject to standardised consent conditions**, to provide a more efficient mechanism for addressing some renewable electricity generation and transmission activities that are of a minor nature, the effects of which could be best managed under a Management Plan and/or best practice requirements. This approach has been used for electricity metering technology, and for local government stormwater networks, but could apply to renewable electricity generation activities such as access roads, stormwater management, vegetation control, and asset maintenance.

[3] An example is provided by the draft National Policy Statement for Highly Productive Land which contains a policy pathway for the consideration of urban expansion proposals on highly productive land (refer to proposed policies 6 and 7).

[4] As defined in the National Planning Standards

[5] ibid

Alternatively, or in conjunction, **many common activities associated with renewable electricity generation and transmission, including the operation, maintenance and upgrading of existing infrastructure, could be made permitted** (or deemed permitted), with local authorities able to use the proposed monitoring and fees provisions for permitted activities under the NBA.

Another concept considered by the ESEG is to have **a more flexible responsive framework of national environmental standards which can be amended or updated as technology changes**. Such standards could, for example, specify the consent status for some renewable electricity generation and transmission activities and regulate activities with predictable effects on the environment. The process for setting national regulation should be responsive and efficient, for example, by adopting industry best practice or responding to innovative technology and international trends to help deliver renewable projects.

The National Planning Standards, introduced in 2019, has already started to achieve its goal of standardising RMA plans. For example, the direction on the application of various standards on noise, including those for wind farms, has removed the recurrent debate about the appropriate standards that should be applied to noise from wind turbines. The ESEG considers there to be **additional scope for the National Planning Standards to increase the standardisation of plan provisions** across New Zealand, alongside other regulatory framework tools discussed above.

Pathways for delivering reform objectives

In terms of national direction, the key priorities for delivering on the reform objectives should include –

- *ensuring line-of-sight between the outcomes sought by the NBA, the policies of the NPF, and the provisions of NBA Plans*
- *prioritising the formulation of a single comprehensive national policy framework within the NPF for achieving all outcomes sought by the NBA, with policy pathways for resolving conflicts between outcomes*
- *identifying scope for national environmental standards and/or national planning standards to provide a consistent regulatory framework for renewable electricity generation and transmission across New Zealand, including a more enabling framework for maximising the benefits from existing renewable electricity generation and transmission infrastructure and corridors, and*
- *recognising the distinctions that need to be made between one type of electricity infrastructure and others in formulating national policies and regulations.*

3 Regional NBA Plans and Spatial Strategies

Overview

The authorisation of many activities undertaken as part of New Zealand's electricity generation and transmission network currently relies on the consenting requirements established by the regulatory framework under the RMA through regional and district plans, and the decision-making considerations informed by the policy framework of these plans. This is expected to be largely unchanged under the proposed NBA, at least in the absence of National Environmental Standards for the renewable electricity sector, with the Review Panel recommending the NBA Plans contain "directive policies that help the regulatory framework in achieving the outcomes" in addition to "rules to implement the policies and achieve outcomes".

The proposed NBA Plans are intended to be informed by the proposed suite of regional spatial strategies which are intended to identify the key priorities for each region in the provision for development and growth in their natural and built environments.

Priorities for Regional Plans and Strategies

The ESEG considers there will be a number of critical priorities to ensuring regional combined plans are fully effective as envisaged in the Review Panel Report in regard to enabling the decarbonisation of our economy, including:

- **Establishing policy pathways within NBA Plans** that enable the benefits of renewable electricity generation and transmission proposals to be considered at the same time as their environmental impacts (irrespective of the wording of 'protective' policies) when proposals are consented; and
- **Regional spatial strategies** that can support existing and consented renewable electricity generation and transmission infrastructure, and provide support for future proposals, the location of which will be unknown.

Policy Pathways

The ESEG supports having fewer plans (so long as they are not simply compendiums of existing plans other than on a short-term transitional basis), based on a regional combined (or unitary) approach, with fewer levels of policy, and clearer drafting. This goal relies on the NPF establishing as a priority a supporting policy framework that underpins these Plans. This framework will also assist the stability and consistency of consenting approaches.

Compliance costs could be reduced and electricity supply reliability improved if **Plan provisions for renewable electricity generation and transmission were made more enduring**, or at least make the core policy tenets more enduring and not subject to review unless national direction changes.

As outlined in respect of national policy direction, the ESEG supports the introduction of **policy pathways to address situations where renewable electricity generation and transmission proposals potentially conflict with achieving other outcome**s. While we consider that such pathways should be a key tenet of the NPF, there will be a need for NBA Plans to address specific regional tensions between competing outcomes. A potential model for such resolution is the infrastructure policies of the Auckland Unitary Plan. The recent East-West Link High Court decision[6] carefully examined the policies of that Plan in considering the environmental impacts of a proposed new transport corridor that impact on the coastal

[6] Royal Forest and Bird Protection Society of New Zealand Inc & Ngāti Whātua Ōrākei Whai Maia Ltd V New Zealand Transport Agency & Ors [2021] NZHC 390 [5 March 2021]

ecology of Mangere Inlet. The High Court determined that the Auckland Unitary Plan provided an appropriate framework for assessing the environmental impact of the East-West Link Project against the need for the road and its benefits for the region.

> *Given the specified importance of infrastructure within the AUP, it is clear that both the objectives and policies in chapter E26 envisage a careful and balanced look at the merits of a particular infrastructure proposal in order to determine whether it should proceed, whether or not such a proposal may be contrary to or inconsistent with any particular provision in the AUP.*
>
> *…when the relevant objectives and policies of the AUP are properly reconciled it is apparent that the AUP provides a specific, albeit narrow, framework for the consideration of infrastructure proposals rather than automatically excluding them at the s 104D stage.*[7]

While this decision largely focused on the s104D gateway tests for non-complying activities under the RMA[8], the ESEG considers the approach of the Auckland Unitary Plan outlined in the High Court decision would be useful whereby the benefits of new or upgraded infrastructure (that includes transmission corridors and assets) can be considered at the same time as the potential environmental effects to provide a considered and integrated outcome. This would be an effective way to provide a policy pathway for addressing the inevitable tensions between outcomes that will occur.

The ESEG stresses that there will be no 'policy computer' that spits out the right answer – consent decision-making will always rely on judgement and trade-offs; the solution is to arm competent decision-makers with the right mix of considerations.

This approach could also be taken in the NBA Plans, with the NBA requiring policy pathways for resolving tensions as mandatory content of any plan (if not already addressed in national direction). This would introduce greater certainty into the decision-making process for renewable electricity generation and transmission infrastructure projects, particularly where proposals may impact on areas of significant values.

As an alternative (and preferably, to provide national consistency), the ESEG considers there is potential for the NPF to have policy pathways for conflict resolution that are mandatory provisions for NBA Plans.

Regional Spatial Strategies

Under the Review Panel's recommendations, in managing land use and development, NBA Plans are intended to implement the direction provided by regional spatial strategies, prepared under the proposed Strategic Planning Act. Such strategies are intended to spatially identify, inter alia, all important infrastructural assets within each region, presumably including electricity generation and transmission infrastructure. The Review Panel considered that many of the tensions and competing outcomes under the NBA will be resolved through the delivery of regional spatial strategies.

In principle, the ESEG supports the use of regional spatial strategies to help guide the management of the use and development of resources through combined plans. In particular, the ESEG supports the proposed role of Regional Spatial Strategies in identifying existing and consented renewable electricity generation and transmission assets within each region. This role should provide a basis for NBA Plans to provide a regulatory framework to protect such identified infrastructure and corridors from third party activities and to enable the maintenance and upgrade of such important assets. Regional spatial strategies could also have a valuable role in enabling new renewable electricity generation and transmission, as outlined in the following section in relation to resource consents and designations.

The ESEG, however, would highlight a number of aspects of regional spatial strategies that need to be carefully worked through, in regard to both their relationship with NBA plans, and with their ability to

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7 Ibid, paragraphs 66 and 68

8 As per the Review Panel's recommendation, the ESEG recommends not including the non-complying gateway test in the NBA with a few provisos that were outlined in the first paper.

adequately recognise and respond to the uncertainties and changes in renewable electricity generation and transmission investment planning.

➢ The role of regional spatial strategies in resource management

First, we urge careful consideration be given to the relationship between regional spatial strategies and NBA Plans. In particular, the ESEG highlight that these two critical planning processes are intended to work together to provide for integrated planning: the inter-relationship should not be a hierarchical one – in either direction.

In particular, while NBA Plans are intended to be consistent with regional spatial strategies, NBA Plans will have a wider 'environmental licence' than spatial plans. The primary purpose of regional spatial strategies is to coordinate investment in growth and infrastructure and direct urban growth, taking into account key environmental constraints. Clearly this output should inform NBA Plans, which are primarily focused on managing land use and development activities to achieve a range of outcomes, using zoning and other spatially-based management tools.

However, regional spatial strategies will only deal with some of the issues that NBA Plans will be tasked to address and, while some of the competing tensions in outcomes will be able to be resolved through spatial plans (for example, avoiding urban growth in high natural hazards areas), the ESEG considers that NBA Plans will have the lion's share of the weight in terms of resolving conflicts in environmental management at regional and local level, within the framework of national direction under the NBA. Given the property rights involved in resource management, the regulatory framework within NPF and/or NBA Plans is the most appropriate means of resolving competing outcomes, rather than relying on directions from spatial plans.

➢ Resolving competing outcomes

A second and related concern is that regional spatial strategies will have their limitations in resolving competing outcomes. By mapping all of the areas of high value, there is a real risk of unintended consequences that regional spatial strategies could actually embed – not resolve – many of the tensions that will arise out of the implementation of the NBA. In particular, mapping areas of significant indigenous biodiversity, habitats of indigenous fauna, areas of high natural character, or landscapes of national or regional significance, could frustrate the provision for renewable electricity generation and transmission, in that much of the renewable electricity generation and transmission infrastructure is located in or traverses such areas, or potentially could in the future. This risk could be exacerbated significantly if areas of high value are regarded as immutable "environmental limits". For example, the long-tailed bat is to be found in much of the Waikato basin, including the highly developed environs of Hamilton and other towns.

➢ Responding to future proposals

As outlined in our first Paper, we highlight there will be some difficulties in having regional spatial strategies identifying and providing for future renewable electricity generation and transmission proposals. While regional spatial strategies may have a role to play where there is greater locational certainty such as providing for renewable geothermal electricity generation opportunities as development geothermal systems are few in number and spatially defined, there is less locational certainty for other forms of renewable electricity generation.

A factor in this uncertainty is that the electricity sector operates in a competitive commercial environment where investment decisions continually evolve with changing market, economic, technology and other factors. The planning timeframes can therefore be much shorter than the 30 years envisioned for regional spatial strategies.

The ESEG also considers that regulators are not best placed to advise where the best places for this type of infrastructure should go, given their lack of knowledge on the renewable energy resource potential, access to transmission, site constraints and the many other factors that determine the suitability of sites for renewable electricity generation. Geographical diversity of

generation fosters regional growth, improves system resilience and, in particular for wind, reduces variability in electricity supply.

There is also a risk that new technology innovation may not be able to be deployed if limited areas for renewable electricity development are established, restricting or preventing options for development outside of these areas.

Accordingly, in relation to renewable electricity generation and transmission, spatial strategies cannot and should not seek to map everything and they will never, therefore, be exhaustive in regard to renewable electricity generation and transmission, particularly over a 30-year timeframe. A new renewable electricity generation and transmission project should not be penalised for not being identified or mapped in a regional spatial strategy.

In responding to these concerns, the ESEG recommends several possible approaches could be considered.

Adopting alternative ways for enabling future infrastructure investment

Regional spatial strategies should enable future development of renewable electricity generation and transmission where it fits the primary policy direction set out in the national policy framework rather than necessarily seeking to map all potential future renewable electricity generation and transmission or areas of renewable electricity resources. This would be a more flexible approach given the rate of technical change within the sector and the significant opportunities that new technology will provide to more efficiently and effectively meeting our emission targets. Addressing these issues will be important if the intentions of the regional spatial strategies and their implementation through NBA Plans are to be fulfilled.

The ESEG considers these limitations could be addressed in a number of other ways, including:

- Ensuring regional spatial strategies clearly state the need to provide for future upgrade of existing and development of new renewable electricity generation and transmission to support growth and the country's pathway to decarbonisation; and
- Having a responsive and efficient process for reviewing and updating regional spatial strategies once development is consented or designated or when planned developments are known.
- By avoiding any requirement that all areas, sites and corridors for future renewable electricity generation and transmission must be identified and mapped in regional spatial strategies and by limiting support for new renewable electricity generation and transmission only to those areas, sites and corridors.
- If 'energy zones' are being considered, regional spatial strategies should not limit the option of seeking consents in other areas.

Recognising and providing for 'environmental constraints'

While there are many elements of the natural environment that should be managed carefully to protect or enhance their sustainability, that should not equate to a blanket and immutable avoidance as 'environmental limits'. Rather these should be regarded as **potential 'environmental constraints', to be taken into careful consideration in planning, including how any adverse effects may be avoided, remedied, mitigated, offset or compensated**. This concept is of particular importance for future renewable electricity generation and transmission infrastructure which will inevitably involve affecting the natural environment.

Such a distinction between limits and constraints is provided, by way of example, in the draft Wellington Regional Growth Framework which uses the following two concepts in managing urban growth:

- Wāhi Toitū which are areas with enduring presence that, for the purposes of spatial planning, are to be protected from new urban development, and
- Wāhi Toiora which are areas where, for the purpose of spatial planning, potential urban development must be carefully managed with appropriate consideration and mitigation of risks.

The latter concept is mapped as areas of potential constraints and competing tensions rather than 'no-go areas'. The Wellington Regional Growth Framework does not attempt to say how these tensions will be resolved: these will be addressed through Regional and District Plans.

Given the inherent public interest involved with these types of resource management decisions, as well as principles of natural justice, the ESEG considers that regional spatial strategies should not necessarily seek to resolve all tensions, but rather should be addressed at national level (for matters of national priority) and detailed at regional level through NBA Plans.

Pathways for delivering reform objectives

In terms of regional plans and spatial strategies, the key priorities for delivering on the reform objectives should include –

- *ensuring NBA Plans contain policy pathways for enabling renewable electricity generation and transmission, including where such development potentially conflicts with other outcomes;*
- *exploring ways that regional spatial strategies may most effectively provide for both existing and future consented renewable electricity generation and transmission.*

4 Consenting and Designations

Overview

As outlined in the introduction of this paper, meeting New Zealand's decarbonisation targets within the timeframes sought will require a significant investment in new renewable electricity generation and transmission infrastructure. With over 80% of electricity already generated from renewable sources[9], and with a wealth of potential renewable electricity options, New Zealand is well-positioned to lead the world in decarbonisation through electrification and renewable generation investment. Electrification will be the engine that drives our decarbonisation.

However, the ESEG has grave concerns that the lack of a supportive policy framework in combination with inefficient, complex and lengthy consenting processes (including information requirements) will inhibit the delivery of a decarbonised future. As outlined above, the critical priority will be to introduce a supportive national and regional policy framework for renewable electricity generation and transmission as a key plank towards achieving our emissions targets. A good example of this approach is the relative success in consenting geothermal electricity generation projects in the Waikato and Bay of Plenty Regions, which is backed by well-crafted regional policy that carefully balances the protection of geothermal systems having high environmental values and managing the development of other geothermal systems through an adaptive management framework. An efficient consenting process would be undermined by the absence of a clear policy pathway..

The ESEG is concerned that, even if a separate consenting process is established for nationally significant infrastructure, if there is no pathway for decision-makers under the NBA for proposals that affect environmental limits, there will continue to be significant and avoidable consenting costs and risks for new or renewed renewable electricity generation and transmission infrastructure.

The timely delivery of electricity infrastructure projects relies on improving consenting processes, otherwise the likely outcome is a failure to provide sufficient new renewable electricity generation and transmission to achieve our emission and electrification targets.

The proposed removal of non-complying activity status will assist the consenting of projects, particularly those in which just one aspect that requires consent as a non-complying activity 'bundles' the whole application into non-complying activity status. However, if there were restrictions that prevented consent being granted for any breach of environmental/biophysical limits or national environmental standards, the removal of the non-complying activity status will not reduce the consenting risks and constraints faced by the renewable electricity sector. The removal of non-complying activity status is more than trumped by the prohibited status for the breach of any limit. The ESEG is concerned that an outcome of removing non-complying activities could create an effective widening of prohibited activities.

The Review Panel recommended retention of the direct referral process to the Environment Court, as well as the retention of the process for consenting proposals of national significance via the EPA, with some minor changes in the process. The ESEG supports the simplification and streamlining of these consenting pathways, robust decision-making processes, and highlight that it is useful to have consenting pathway options available that can be considered when consenting a project. Sometimes, the standard Council hearing process is the most appropriate means of obtaining consents.

However, given the urgency if our emission targets are to be met, the ESEG does consider that there should be an option for consenting some projects that have national priority, including some forms of renewable electricity generation and transmission projects, such as through the use of an 'Infrastructure

[9] Ministry of Business, Innovation and Employment: Data Tables for Electricity.

https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/electricity-statistics/

Panel', along the lines of that used for the freshwater planning decision making. The ESEG recognises that care will be required in developing how such a process could operate in an apolitical framework.

Whatever option is adopted in the NBA, the ESEG considers that the preferred approach to decision-making for renewable electricity generation activities is an expert panel chaired by highly experienced resource management legal professional in the case of Council hearings and an Environment Court judge in the case of single process hearings (Direct Referral, Board of Inquiry etc).

The ESEG also considers there is some uncertainty as to how consenting authorities might process consent applications for new types of renewable electricity generation (or new technology). The application of a 'precautionary approach' under the proposed s9 Implementation[10] could unduly hinder the consenting of these activities. Either explicit policy recognition for new technology or the continual updating of National Environmental Standards to recognise new technology may be of assistance.

Priorities for consents and designations

The ESEG considers there are abundant opportunities to improve the consenting pathways with, in relation to renewable electricity generation and transmission, priority being given to the following:

- **Simplifying and standardising the regulatory framework**, reducing the current complexity and inconsistencies and the significant costs involved with obtaining minor consents, or upgrading existing renewable electricity generation and transmission infrastructure
- **Standardising reconsenting processes** to significantly reduce the level of churn and uncertainty through the review of existing consents, and to ensure the existing renewable generation output is maintained as an outcome of reconsenting
- **Making resource consents more durable** and fit-for-purpose for renewable electricity generation and transmission activities, recognising their longevity and fundamental importance to our wellbeing
- **Improving the consenting pathways** by retaining and streamlining current consenting pathways and providing a purpose-built consenting process for major new infrastructure projects
- Introduction of **a dedicated infrastructure approval pathway**, with appropriate policy support and decision-making criteria allowing for consideration of the range of relevant matters, and
- **Improving the designation process**, including enabling renewable electricity generators to apply for requiring authority status, and enabling the two staged approach recommended by the Review Panel.

Standardising the regulatory framework

The ESEG considers that significant gains could be achieved by **standardising the regulatory framework for managing the development and upgrading of renewable electricity generation and transmission infrastructure**. While having fewer (and better) plans is fully supported, the ESEG would highlight other opportunities for standardising the regulatory framework.

As outlined on pages 7-8 of this paper, one significant opportunity is broadening the use of national environmental standards for renewable electricity generation and transmission. The ESEG, however, would highlight that, even under a more standardised national regulatory framework, there is still a need for clear enabling and well-written NBA Plans. Moreover, if NBA Plans are able to be more restrictive than national environmental standards, it is recommended that there will need to be criteria for introducing more restrictive provisions that an independent pre-notification audit of proposed plans would have to be satisfied have been met.

[10] As set out in Cabinet Paper 'Reforming the Resource Management System', released February 2021

Standardising reconsenting processes

The renewal process for resource consents creates significant cost and uncertainty for consent holders, particularly for hydro-electric power schemes involving water takes, diversions and discharges where there are no significant changes to the hydro operating regime. In addition, the consenting requirements for repowering wind farms (replacing out-of-date less efficient technology with more efficient wind turbines) also creates significant costs and risks to proposals for improving our generation capacity. To protect New Zealand's existing 'baseline' of renewable electricity generation assets, the ESEG recommends a review of the reconsenting and repowering consenting processes.

The ESEG acknowledge that consented activities may still have a wide range of matters for discretion to be exercised over and may still be complex consenting processes. For example, any repowering is going to have different effects, which are potentially quite substantial given changes in turbine technology. However, the ESEG considers there are still opportunities to improve the consenting framework, assisted by improved support from national direction and changes to existing environment presumptions noted below.

One opportunity identified by the ESEG is to **reclassify all applications for consent renewals for electricity infrastructure across New Zealand as 'controlled' activities**, with notification only to those persons directly affected by the activity as well as mana whenua, and clear triggers for when 'special circumstances' can be used for notification. This could be readily achieved through National Environmental Standards for Renewable Electricity Generation and Transmission. In addition, a 'controlled' activity consent process could also be instituted for electricity infrastructure activities where the generation or transmission activity is to be changed, but the scale and nature of effects of the altered activity are not materially different to the original consent and/or where the variation is triggered by technology or operational improvements or changes.

Where there may be material changes involved with some upgrades of renewable electricity generation and transmission, such as the replacement of older wind technology with newer more efficient and productive turbines, the ESEG recommends a consenting pathway such as restricted discretionary activity that only focuses on the identified potential effects, rather than a de novo process.

The ESEG also considers that there should be **improved statutory direction on the concept of 'existing environment' which explicitly recognises the current and ongoing altered environments as the baseline for assessment of long-term significant infrastructure**. Case law under the RMA conflicts and some examples unhelpfully require a 'zero base' assumption when consent renewals are sought (for example, for water permits for hydro-electric power schemes), which generally requires assessments to assume the environmental baseline is one without that particular generation scheme in place. That approach can seriously undermine the reconsenting of such schemes, many of which are built to last over 100 plus years.

More durable consents

The ESEG considers there are a number of opportunities to make resource consents more durable and fit-for-purpose for renewable electricity generation and transmission.

The first is to p**rovide for longer lapsing periods for electricity generation and transmission infrastructure** (both for resource consents and designations) to provide for the long lead times associated with establishing electricity generation and transmission infrastructure. This could include a long duration default lapse period, where a substantive test must be applied to justify a shorter lapse period. The current standard five-year lapse period is too short to undertake detailed design and source funding for major energy projects and consent holders are frequently required to apply to extend lapsing periods. The ESEG notes that the RMA does not constrain the duration of lapsing periods: rather it simply has become embedded council practice. National direction under the NBA could help change that practice.

An additional option would be to **amend the current s125(1A) test whereby consent holders are required to demonstrate that substantial progress or effort has been, and continues to be, made towards giving effect to the consent in order to avoid a consent from lapsing**. For example, another

criteria could be introduced about whether the consent is required to meet our emission and electrification targets.

The ESEG considers there is an opportunity to **make provision for unlimited or substantially longer consent durations** (in excess of 35 years) for significant infrastructure activities involving renewable electricity generation and transmission (for example, for permanent riverbed structures, and for water takes and discharge permits).

Another opportunity would be to **restrict the scope and frequency of consent reviews for electricity infrastructure so they are linked to a change in an external or predetermined threshold trigger**: for example, a threshold reached in monitoring specific ecological parameters directly associated with an operation.

Improving the Consenting Pathways

The current reform presents a number of significant opportunities to improve the consenting framework. In addition to the above recommendations, the ESEG suggests:

- **Retaining and simplifying the existing consenting pathways for renewable electricity generation and transmission**; and
- **Providing a purpose-built consenting process for major new infrastructure projects**.

If the NBA retains the blanket "avoid, remedy, mitigate adverse" effects approach of the RMA, the ESEG strongly recommends the legislation enables the ability for project proponents to be able to use offsetting and compensation as part of the consenting pathway, as options for achieving net positive outcomes for the natural environment, particularly where the project has a functional, operational or locational need to be sited or routed in locations where there may be adverse effects on the natural environment. For example, the resource consents for the Wairakei Geothermal Plant include a condition requiring the consent holder to facilitate the enhancement and /or protection of and research into a number of geothermal issues right across the Taupō Volcanic Zone over the term of the Consent.

Another form of economic instrument include environmental compensation such as contributing to a bio-bank or similar system, where more effective and collective use of funds could be made to protecting and enhancing the natural environment, such as through combined funding efforts to achieve New Zealand's 'Predator Free 2050' ambitions.

Another improvement to the consenting pathways for renewable electricity generation and transmission considered by the ESEG is the removal of subjective assessment where sites are outside significant landscapes. For example, adverse landscape effects and/or amenity values could be removed as a matter for consideration if the development is located outside ONL/F and provided that there is a setback of x metres from the property boundary.

More efficient consenting for major projects / national priorities

The ESEG strongly recommends improving our consenting processes for significant infrastructure projects. The current options and associated timeframes for obtaining resource consents do not reflect the level of urgency before New Zealand in decarbonising our nation[11].

The ESEG considers there is merit in **the introduction of some form of permanent consenting process for significant infrastructure, particularly where it would assist in New Zealand meeting its emissions and electrification targets and international obligations**. Such a process should be a one stage decision-making route, either building on the existing direct referral to the Environment Court process or the EPA Board of Inquiry referrals process. Bespoke hearing panels as now in force for freshwater planning (with built in independent decision-makers, clear timelines and reduced appeal rights)

[11] Reference should be made to the dossier of case studies supplied with the first discussion paper.

could be established to enable accelerated renewable electricity generation and transmission to meet emission reduction targets.

The ESEG would highlight that not all renewable electricity generation and transmission projects would necessarily benefit from a separate process, and that other consenting options should be kept available so that a fit-for-purpose consenting route can be taken as appropriate. The ESEG envisions that any customised infrastructure consenting process should be employed relatively carefully, using some form of non-political selection process.

Improvements to the Designation Process

Designations are a critically important tool for authorising and protecting key infrastructure. The ESEG considers that there are opportunities to improve the use of designations to further enable the development of renewable electricity generation and transmission. The ESEG generally concurs with many of the issues with, and proposed changes to, the designation process identified in the Review Panel Report.

This includes:

- **Extending the designation process to apply to the coastal marine area and the beds of rivers and lakes,** without the contingent property acquisition abilities under the Public Works Act 1981
- **Extending the default lapsing period from five to ten years, and enabling the ability to extend beyond that period** subject to meeting the following considerations (for example):
    - a national significance test (not solely based on scale)
    - an expectation that the infrastructure is identified in a Regional Spatial Strategy (whether mapped or not)
    - that the designation facilitates co-location of infrastructure (which may necessitate longer delivery timeframes)
    - uncertainty or risk management responses.

One of the biggest issues with obtaining a designation under the RMA is that Notices of Requirement are now processed in a similar way to resource consent applications, with a considerable amount of very detailed information being required by consent authorities. This is despite the purpose of the two-stage approach under the RMA: first, seeking a designation for the work through Notice of Requirement, and second, confirming details of the work through the Outline Plan process. The considerable level of information required to support a Notice of Requirement creates difficulties when more detailed design work occurs as part of the construction process, and changes to the design are inevitably required.

This issue was recognised by the Review Panel, who concluded that "at this first stage of the process the assessment should be kept at a high level, focused on considering the designation's impact on the outcomes set out in the Natural and Built Environments Act, and the environmental effects of the designation footprint, rather than on the detail of potential impacts of the works within the footprint."[12] The Review Panel recommended a subsequent process to address the potential effects of works within the footprint through construction and implementation plans using an amended Outline Plan process.

The ESEG supports the principle behind the Review Panel's suggested changes to the two staged Designation/Outline Plan process, with some differences, and considers that the second stage could incorporate obtaining the necessary resource consents (for activities not captured in the Outline Plan process). However, it is important that the second stage does not revisit the original purpose and need for the project, but instead focuses solely on:

- The detail of what is being constructed;

[12] Page 299, Review Panel Report

- How it will be constructed; and
- How the specific effects of constructing and operating the designated work will be managed.

The ESEG recommends that any resource consents that are sought in the second stage must be deemed granted (similar to controlled activities), but would be subject to controls and conditions for construction and operation to address the potential adverse effects of the works. The consent authority would, however, be able to recommend changes to design to reduce effects as part of this second stage.

The ESEG refers to the UK approach of seeking outline planning permission that allows for a decision on the general principles of how a site can be developed. Outline planning permission is granted subject to conditions requiring the subsequent approval of one or more 'reserved matters'. It does not require further environmental effects assessment during the second stage.

Regional spatial strategies could be of benefit in removing the reasonable necessity and alternatives' assessment tests from the regulatory framework for renewable electricity generation and transmission under the NBA, given that such strategies deal with wider matters of central and local government prioritisation and funding, which are underpinned by the rigorous business case (or similar) processes that support decision-making in investment planning. In other words, regional spatial strategies should be place for determining the merits of a particular proposal.

The extent of public involvement in each stage of the process would need to be clarified. The ESEG is concerned that there is a risk of layers of public involvement: during regional spatial strategy development, when the Notice of Requirement is notified and at Outline Plan stage. The ESEG considers that the matter of public notification should depend on the scale and extent of effects, and not necessarily default to full public notification. If the Notice of Requirement stage is to be publicly notified, the ESEG would prefer the Outline Plan/resource consents stage to be non-notified or limited to affected persons.

The ESEG has identified a number of other potential improvements to the designation process:

- **Application of requiring authority status to electricity generators**: currently, it is possible to attain requiring authority status for lineal infrastructure such as transmission and geothermal pipelines, those organisations involved in generating renewable electricity do not qualify.
- **Enabling designations to apply over the beds of lakes and rivers as well as the coastal marine area** where required for renewable electricity generation and transmission activities (such designation would be confined to land use activities and not for resource allocation or property-rights purposes).

Designations enable the requiring authority to compulsorily acquire the interests of affected properties under the Public Works Act, and the ESEG recognises that some of the opportunities identified above would have some unintended implications. The ESEG also acknowledges that the ability to designate the coastal marine area and the beds of rivers and lakes would need to be carefully considered in the light of iwi/Māori rights and interests. The ESEG therefore recommend that some statutory amendments may be needed to recognise that, for some forms of designation, it may not be necessary or appropriate to have access to the Public Works Act acquisition powers.

Another idea considered by the ESEG is to introduce some form of consent for infrastructure that would have many of the features of designations without the contingent relationship with the Public Works Act in terms of property acquisition. Such consents, for example, would be spatially bound, control the adverse effects of other activities on the performance of the consent, and have enduring consent durations. Some consideration was also given to whether such consents could operate in the two-stage approach recommended for designations in the Review Panel Report.

Pathways for delivering reform objectives

In terms of the consenting framework, the priorities for delivering reform objectives should include –

- *a standardised regulatory framework for managing the development and upgrading of renewable electricity generation and transmission infrastructure*
- *improved and standardised consent renewal processes*
- *providing more durable consents for renewable electricity generation and transmission*
- *providing more efficient consenting processes for priority renewable electricity generation and transmission infrastructure projects, and*
- *making designations more effective in support the renewable electricity generation and transmission network.*

5 Additional topics for Future Discussion

There are several additional topics that the ESEG see as critical matters for discussion at the appropriate point in time as the resource management system reform proceeds:

- The transitional arrangements as we move from the RMA to the NBA;
- Water allocation principles; and
- Moving away from non-complying activities.

Transitional arrangements

Existing assets and operations rely on a degree of regulatory certainty to maintain capacity and output. There is a significant risk that, during the transition from one regulatory framework to another, there will be a loss of certainty and diminution of rights and authorisations held by electricity generation operators.

It will be important to ensure that there is no diminution of authorisations during the transition. The modelling for our pathway to a decarbonised future is founded on a baseline of existing generation. Therefore, it is critical that any reconsenting processes occurring during the transition period do not result in any unjustified or unintended loss of generating output.

The transformation of our resource management system, on top of the other reform processes occurring or proposed in New Zealand, will rely on good funding and resourcing support, particularly at central government level. The ESEG considers that central government will need to properly resource the transition, otherwise New Zealand is likely to be facing an inadequately implemented reform, without comprehensive national direction and support, which occurred under the RMA.

Water allocation

The foundation of New Zealand's renewable electricity generation capacity and output is largely based on hydro-electricity generation. It is critical that this capacity and output not be undermined.

The Issues and Options paper notes that the Government has a separate programme of work on fair allocation to address iwi rights and interests in water. The Land and Water Forum (the Forum) has reported extensively on the topic of allocation and there is a large body of literature to inform the topic.

It has previously been signalled by Government that there would be extensive public consultation on the alternatives for addressing water allocation, which would be fundamental to current and future water authorisations. The ESEG would welcome the opportunity to facilitate discussion within the sector on this issue.

Moving away from non-complying activities

While the ESEG supports the removal of non-complying activities in principle for the reasons outlined in the Review Panel Report, it considers that the implications of its removal as a consenting category will need to be carefully worked through in the new legislation.

Under the RMA, non-complying activity status indicates the types of activities that are seen to be generally inappropriate in an area or zone because of the potential effects on the environmental characteristics and values of that area/zone. Conversely, discretionary activities have had the function of recognising that some activities are considered to be generally appropriate in an area/zone, but need careful scrutiny through the consenting process to ensure the adverse effects are appropriately managed to avoid,

remedy, mitigate effects to acceptable levels, with the discretion available to decline consent if the residual effects are not acceptable. The ESEG makes two points on this aspect:

1. The need to avoid using prohibited activities as the default category for what would previously have been non-complying activities; and
2. The need to have policies supporting the consideration of discretionary activities crafted to identify circumstances where consideration could be given to functionally, or operationally dependent activities in areas of high environmental values.

Prohibiting activities is a significant restriction, and the ESEG considers that making an activity prohibited should be undertaken either at a national level or that clear direction on the circumstances is provided in the NBA. Current experience of the National Environmental Standard for Freshwater relating natural wetlands highlights the unintended consequence risks of binary (and poorly drafted) prohibited activity status.

Transpower notes that non-complying activities have been an effective tool for preventing inappropriate activities and development inside transmission corridors: if non-complying activities are not carried over into the NBA, the ESEG urges careful consideration be given as to how inappropriate activities near renewable electricity generation and transmission infrastructure should be managed.

The ESEG suggests that, in the transitional period when the NBA comes into effect, non-complying activities should default to discretionary activities.