


JOINT SUBMISSION OF ELECTRICITY SECTOR ENVIRONMENT GROUP

Introduction

1. This submission is made by New Zealand's principal electricity generators,[1] collectively referred to as the Electricity Sector Environment Group (**ESEG**), to both the Natural and Built Environments Bill (**NBE Bill**) and the Spatial Planning Bill (**SP Bill**).

2. The ESEG broadly supports the reform objectives of the NBE Bill as recorded in the Explanatory Note, being (alongside the Spatial Planning Act (**SPA**) and a Climate Adaptation Act), to:

   - *protect and, where necessary, restore the natural environment, including its capacity to provide for the well-being of present and future generations:*
   - *better enable development within environmental biophysical limits including a significant improvement in housing supply, affordability and choice, and timely provision of appropriate infrastructure, including social infrastructure:*
   - *give effect to the principles of te Tiriti o Waitangi and provide greater recognition of te ao Māori, including mātauranga Māori:*
   - *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 local democratic input.*

[1] Meridian Energy, Mercury NZ, Contact Energy, Manawa Energy and Genesis Energy, together NZ Wind Energy Association.

3. ESEG shares the widespread concern to ensure that the Natural and Built Environment Act (**NBEA**) does not repeat the failure of the RMA to deliver on its desired environmental and development outcomes. The Explanatory Note states that the reform objectives will address "multiple problems" with the RMA.

4. The ESEG strongly supports the following statement then made in the Explanatory Note, namely that the Bill is expected to help (as one of three identified matters):

   - *enable renewable electricity generation, to affordably decarbonise the economy:*

5. Specific dimensions of the NBE Bill which the ESEG supports in this context are:

   (a) Provision for mandatory national direction within a single comprehensive National Planning Framework (**the NPF**), which all NBEA plans and Regional Spatial Strategies will then need to "give effect to", thereby creating greater coherence, certainty and alignment regarding infrastructure, planning and funding decisions.

   (b) A square focus on both the biophysical and built elements of the environment,[2] with provision for the setting of environmental limits centred on specific natural environment domains.[3]

   (c) A positive and enabling *outcomes* approach embracing well-functioning urban and rural areas along with infrastructure to support wellbeing; the specific system outcome directed at greenhouse gas emission reduction, and the requirement for strategic direction as to how the various system outcomes[4] will be promoted, through the NPF.

   (d) The inclusion of a scheme within the NBE Bill to manage adverse effects, including adoption of the effects management framework, and a mechanism for allowing limited exemptions to this framework and environmental limits.

   (e) The setting of principles for resource allocation, and provision for adaptative management.

6. Conversely, at over 800 pages long, the NBE Bill is very large and complex, even unwieldy.[5]

7. The key dimensions of the Bill, as supported above, have the <u>potential</u> to deliver on the reform objectives.

[2] As proposed to be defined in s 7 of the NBE Bill, and in contrast to the broader definition of the environment under the RMA, which extends to include 'amenity values'.
[3] As listed in s 38.
[4] As set out in section 5 of the NBE Bill.
[5] In the sense of being too large and disorganised to operate effectively.

8. However, as currently drafted, the NBE Bill is considered to be unworkable. Without significant rationalisation and redrafting as sought in this submission, there is a greater potential for the reform objectives to be frustrated, or even defeated, than achieved or ultimately delivered.

9. Attached to this submission are two Tables setting out the detailed submission points and specific amendments to the Bills which the ESEG considers are essential to address this concern, and to better ensure that:

- All reform objectives are able to be achieved;
- The NBE Bill's purpose to protect the environment will also achieve the system outcomes, particularly as to well-functioning urban and rural environments, and the reduction of greenhouse gas emissions; and
- From the outset, the NPF delivers clear and cohesive national direction as to how all elements of the compound purpose of the NBE Bill (as recorded in s 3) are to be reconciled and served through spatial strategies, NBEA plans, designations and consent approvals.

ESEG's Core Concern

10. ESEG's core concern addressed through this submission is to secure a resource management system that adequately prioritises decarbonisation of the New Zealand economy.

11. To that end, the NBEA, SPA and NPF must, in combination, resolve and address two fundamental policy drivers at national scale – decarbonisation to address climate change, and the setting of biophysical limits to address environmental degradation.

12. The ESEG submits that these two policy drivers can be reconciled, and indeed must be.

13. With this core concern in mind, the ESEG, along with its member entities, have participated closely and constructively in the reform process to date, including through making submissions on the Exposure Draft to this Select Committee.

14. The ESEG then commissioned a joint opinion by two King's Counsel (Mr Nolan and Mr Salmon) to clearly demonstrate that an exclusive and unyielding focus on environmental limits to protect biodiversity values, would effectively prevent or render unachievable, New Zealand meeting its international and domestic climate change mitigation commitments (please refer to **Appendix A** of the ESEG submission package).

15. We quote here from the Executive Summary of that opinion, as follows:

2. *The NBEA is intended to provide for environmental limits to protect the ecological integrity of the natural environment and human health…. In line with recent case law, the environmental limits may be interpreted as bottom lines, halting any proposed plan, resource consent application or notice of requirement that crosses them.*

3. *The setting of such limits is a legitimate policy direction: biodiversity, habitats and ecosystems are under stress. There can be no denying that stringent environmental limits will be needed to protect ecological integrity as proposed in the NBEA, and in turn halt and reverse the inexorable decline in biodiversity values within New Zealand.*

4. *At the same time however, the urgent need to cut greenhouse gas ("**GHG**") emissions is equally beyond debate. It has been acknowledged by New Zealand in its ratification of the UNFCCC and the Paris Agreement, in government policy and in legislation. New Zealand has accepted the IPCC science and, pursuant to the Paris Agreement, has submitted an NDC to reduce net GHG emissions to 50% below gross 2005 levels by 2030.*

5. *Renewable energy projects are key to early GHG reductions needed to meet these commitments because the technology is mature, they are cost-effective and they are relatively politically palatable. The effects of renewable energy projects are also readily understood. For New Zealand, renewable energy is particularly critical because of the difficulties in addressing agricultural emissions[6] and the country's intended reliance on electrification to replace fossil fuels in key areas (eg transport, industry and heating).*

6. *The essential problem presented is that the NBEA as drafted would necessarily see environmental limits applying to renewable energy projects. The likelihood that many/most major generation projects will breach, or encounter arguments over compliance with environmental limits, coupled with the scale of each consenting task, introduces the potential for material delay or even prevention of a transition to renewable energy. The simple fact is that immutable environmental limits will mean a number of major renewable energy projects will not be able to be consented under the NBEA.*

7. *The same problem applies to the different language used in the outcomes in s 13A of the NBEA,[7] as the outcome relating to climate change is less directive and, therefore, less forceful than it is for other outcomes relating to the natural environment. This will result in a further barrier to the approval of renewable energy projects when they are assessed on their merits.*

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[6] On 8 June 2022 *He Waka Eke Noa* released its proposal for pricing of farming emissions. *He Waka Eke Noa* proposes modest emissions pricing and targets (including a proposed price cap for agricultural emissions at a fraction of the price that would apply if agriculture was brought within the ETS).

[7] Section 13A being the Exposure Draft equivalent of section 5 of the NBEA, as reported back from the Select Committee.

8. *To fail to both accept and address this reality would be to accept that New Zealand will fail to meet its international climate change mitigation obligations, and deliver on the recently released Emissions Reduction Plan, either:*

   (a) *altogether (worst case scenario), or*

   (b) *without New Zealand incurring major additional costs, assessed at up to $9 billion for more expensive generation and increased power costs for consumers, with associated additional greenhouse gas emissions to meet the electrification deficit through fossil fuel alternatives over an extended transition phase (best case scenario).*

9. *The prospect that the NBEA might function to prevent achievement of emissions targets might seem to be the result of conflicting policy drivers. However we think the underlying policy concerns are aligned: the concerns of the proposed environmental limits (air, soil, waterways, biodiversity, habitats and ecosystems) are also under threat from unaddressed climate change. This threat is existential. (*emphasis added*)*

15. The ESEG commends the acknowledgment of the reality revealed in the KC opinion within the NBE Bill structure. As noted above, provision is now made for the management of adverse effects through the effects management framework, and the allowing of exemptions to environmental limits by the Minister, albeit in very confined circumstances.

16. More recently by letter dated 15 February 2023 the KC's (having considered the NBE Bill structure and provisions), have restated the important role of renewable energy projects, reiterated that the reduction in greenhouse gas emissions is neither sufficiently targeted or directive, and that there must be exemptions to proposed limits for renewable energy activities, where that is necessary to meet New Zealand's climate change obligations (please refer to **Appendix B** of the ESEG submission package).

17. The real challenge therefore as confronted in this submission is to make this overall scheme of the NBEA and SPA workable and coherent, and to enable environmental limits and the effects management framework to operate effectively alongside the system outcomes in particular, in order to sustain the wellbeing of present and future generations.

Overview of Submission Points Made

18. Against that background, the ESEG makes the various submission points and seeks the range of specific amendments to various provisions of the NBE and SP Bills detailed in the appended Tables.

19. By way of summary of the main points addressed in the Tables, the ESEG seeks amendments to the NBE and SP Bills so that:

(a) The NPF would be required to give national direction as to *all* elements of the compound purpose in section 3 of the NBEA, including as to the management of adverse effects, alongside the setting of environmental limits and strategic direction on system outcomes. Direction as to how conflicts between environmental limits and system outcomes are to be resolved, will also be essential.

(b) Infrastructure providers associated with urban development and renewable electricity generation are directly engaged as stakeholders in the process of preparing the first NPF, and regional spatial strategies and NBEA plans in turn, with robust objective, independent and expert processes, including a right to be heard for both spatial strategies and plans.

(c) Greater clarity is achieved over the respective function and place of environmental limits and outcomes aimed at environmental protection and restoration. Specifically, environmental limits should be confined to protection of the natural environment domains expressed in s 38. By contrast, outcomes should be directed at protecting other resource values including landscape and cultural heritage, through the setting of policies and rules (but not environmental limits).

(d) The system outcome relating to the reduction of greenhouse gas emissions is made significantly more ambitious, and directly sheeted to the Target and emission reduction plans set under the Climate Change Response Act 2002.

(e) More express reference is made to (and focus placed on) infrastructure and the built environment within the NBEA, including to enable all renewable electricity generation activities to secure access to the designation provisions of the Act, as a means to deliver on the climate change mitigation outcomes.

(f) Greater clarity is also achieved as to which activities require specific consent or designation approval as determined under the Part 2 of NBEA, relative to the provisions of the NPF and NBEA plans. Further, that existing use rights, resource consents and designations once obtained provide the requisite degree of resource use security needed to underpin renewable electricity generation, transmission, and distribution activities, without this being undermined by later condition reviews, or new NPF or plan rules.

(g) The scheme of provisions addressing the management of adverse effects is substantially rationalised to clarify the application of the effects management framework; the scope for exemptions to that framework and environmental limits, and the criteria for setting limits and targets directed at protecting ecological integrity. Further, so that exemptions can be requested directly through the Minister, and not just by planning committees who will not have the national level perspective or concern in mind.

(h) The unnecessary, cumbersome and confusing additional layer of regulation under the Bill directed at 'places of national importance' be deleted entirely, given those resources and values are adequately protected through environmental limits and system outcomes in any event.

(i) The resource allocation principles and related provisions that better align with the NBEA purpose and system outcomes, with greater certainty and NPF direction required as to which specific processes and methods are to be applied in making allocation decisions under the NBEA. Further, that the critical place of existing renewable electricity generation assets in underpinning decarbonisation of the economy be better secured, through future allocation decisions regarding the renewable resources involved (wind, water, geothermal etc).

(j) The workability of provisions of the NBE Bill regarding resource consenting and designations is improved (including as to notification, submissions and hearings), to achieve the stated system efficiency objectives of the reform.

(k) The proposal to confine the duration of resource consents relating to the taking, damming or diverting of water to 10 years (except for a limited range of major hydro-electric schemes, and renewable electricity generation connected to the national grid) is abandoned, as would undermine the capacity of renewable generation more broadly, to support the decarbonisation of New Zealand's economy. In this respect, all renewable electricity generation should be treated equally.

(l) The transitional provisions of the NBE Bill ensure that existing plan, consent and designation processes in train under the RMA remain unaffected until the first NPF is made operative, and in turn NBEA plans are completed for each region.

Conclusion

20. Stepping back, the ESEG would observe that we are at an historic moment in time. The impact of the NBE Bill needs to be considered alongside the broader set of reforms to our overall resource management and local government system in train at present, which will have profound implications for many generations to come.

21. Failure to deliver on the objectives of the reform is not an option.

22. The overriding purpose of this submission is to ensure the reform objectives are in fact realised, together with addressing both the global scale existential biodiversity and climate change crisis currently faced.

NATURAL AND BUILT ENVIRONMENT BILL
SPECIFIC SUBMISSION POINTS FOR ELECTRICITY SECTOR ENVIRONMENT GROUP

Section	Support / Oppose	Reasons	Relief Sought
2 – Commencement 2(1)	Support and oppose	It is proposed that a number of provisions come into force on the day of Royal Assent and others on date(s) yet to be determined in accordance with Orders in Council. There is no guidance or direction provided about how the commencement of the NBEA will affect RMA planning documents and consenting. This issue is discussed further in relation to Schedule 1 of the Bill.	See relief sought in relation to Schedule 1.
2 – Commencement (2)(2)	Oppose	Sections 499 to 502, which provide for requiring authority approval come into force three (3) months after Royal assent. Care needs to be taken to ensure that the equivalent RMA provisions are not repealed before infrastructure providers, including electricity generators (e.g. Contact Energy Ltd currently has requiring authority status for certain purposes) have obtained requiring authority approval under the NBEA. Otherwise existing requiring authorities may find themselves without requiring authority status, raising legal issues about the lawfulness of their works. The ESEG also questions why the three-month delay is required. Commencing on Royal assent would provide generators with more time to secure requiring authority status.	Existing requiring authorities should be deemed to be Requiring Authorities under the NBEA. An amendment to the definition of a Requiring Authority has been proposed in s 7 of the Bill to achieve this outcome. Ensure equivalent requiring authority RMA provisions are not repealed before generators (and other providers of infrastructure) have had sufficient time to secure requiring authority status under the NBEA.
3 – Purpose	Support and oppose	Section 3 will naturally be of paramount importance in future implementation and interpretation of the NBEA, regardless of the intended extent of its "operative" effect for day-to-day decision making (for example, as to consenting decisions). The National Planning Framework (**NPF**) must "further" the purpose of the NBEA (s 33) as must NBEA plans (s 96). As the anchor or touchstone for future administration of the legislation, certainty, and clarity in drafting for section 3 is imperative. It is imperative that a hierarchy is not imposed between the different elements of the purpose, within the section itself. While (as addressed below,) applying all elements of the purpose on an equal footing may lead to potential future conflict between them in a given situation (with this needing to be resolved through the NPF), that approach is strongly supported over one which imposes a hierarchy between the different purpose elements in section 3.	Retain basic structure and wording of s 3 but ensure that the NPF and NBEA plans give clear, coherent and consistent direction as to how the purpose elements are to be implemented, interpreted and applied, as addressed further below (refer page 17). Amend s 3(a)(i) as follows: *Supports the well-being of present generations ~~without compromising~~ <u>including the capacity to provide for</u> the well-being of future generations.,*

Section	Support / Oppose	Reasons	Relief Sought
		The ESEG largely supports the definition of te Oranga o te Taiao as proposed (as addressed below). In particular, the ESEG considers it important that this definition does not impose a hierarchy as it applies to all land in New Zealand (much of which is privately owned) as well as the 'built environment'. Therefore, while a hierarchy of values may be appropriate for Te Mana o Te Wai because this applies to a 'public resource', that is, freshwater, a hierarchy for the broad scope and purpose of the NBEA is not appropriate. This section is broadly supported by the ESEG in this respect, subject to the following points: (a) The word "compromising" in s 3(a)(i) has no equivalent in RMA s 5 (nor Part 2 as a whole) and is relatively untested through RMA jurisprudence. It is a word of ambiguous and wide-ranging meaning, whereby potentially minor or moderate (in context) impacts of existing activities on future wellbeing, might be said to compromise that wellbeing. A clearer alternative would be to refer *to "including the capacity to provide for the well-being of future generations*" rather than "without compromising" as this would match objective 1 of the reforms as set out in the Explanatory Note for the Bill. (b) It is unclear how ss (i)-(iv) of s 3(a) are intended to operate in relative terms, with the conjunctive "and" appearing to direct that all elements of the purpose must be applied on an equal footing, regardless of potential future conflict between them arising in a given situation. Specifically, as addressed below, the respective function and role of environmental limits and methods to promote system outcomes, and the nature and extent of exemptions to environmental limits (to manage adverse effects (s 3(a)(iv)), needs very careful thought and attention, along with direction under the NPF. (c) As above, the ESEG largely supports the definition of te Oranga o te Taiao as proposed. However, the direction to recognise and "uphold" te Oranga o te Taiao introduces a significant new statutory dimension to the resource management system, which is also untested through RMA jurisprudence. The definition of the term (in s 7) references the "health" of the natural environment, whereas subsequent provisions of the Bill dealing with the natural environment are sheeted to "ecological integrity" (rather than health). Beyond that the drafting of ss (a) and (b) as two distinct purpose components is supported, thereby reducing the extent to which integration or 'reconciliation' of the two	

Section	Support / Oppose	Reasons	Relief Sought
		purpose elements would be required. Instead, each element would presumably need to be applied and promoted or 'stand' on its own terms. Overall, given the place and significance of s 3 to future operation of the NBEA, and with these points as to the future interpretation task in mind, it is vital that the NPF provide clear and coherent direction as to how each of the purpose elements is to be applied and reconciled by all persons exercising functions, powers and duties under the NBEA. This will also be essential to avoid a principal failing of the RMA – a lack of clear national direction addressing the equivalent provisions of RMA Part 2. Many of the specific submission points made below derive from this principle and overriding concern of the ESEG.	
5 – System Outcomes General	Support and oppose	The Explanatory Note to the Bill records that there is no hierarchy intended among the s 5 outcomes (page 3). However, s 5 employs a range of verbs across the various system outcomes. Under established RMA case law, the priority or hierarchy of those outcomes (in the event of conflict) would be determined by the relative strength of the verbs employed. That is, the outcomes expressed in the most directive terms will likely be found to prevail (*Port Otago Ltd v Environmental Defence Society* (2021) 23 ELRNZ 409, at [81]- [82]). To illustrate, if this approach is maintained by the Courts under the NBEA, it would mean outcomes to "protect" or "conserve" (landscape, natural character, heritage) might defeat outcomes relating to climate change and well-functioning urban areas (where the verbs employed include "achieve" and "promotes"). Subsequent provisions of the NBEA direct that the NPF and NBEA plans must include content that provides direction for the "resolution of conflicts" between or among the system outcomes expressed in s 5 (s 57(1)(b), s 102(2)(e)). For those provisions of the Bill to operate to their intended effect, equivalent verbs should be employed across each outcome. Alternatively, if that is not considered feasible or desirable, it should be made clear within s 5 that no specific hierarchy of system outcomes is intended by the section itself (consistent with the Explanatory Note), with this being a matter then left to be determined through the strategic direction set under ss 56 and 57.	Include a new s 5(2) stating as follows: *(2) For the avoidance of doubt, no priority or hierarchy of outcomes is intended by this section*.
5(a)	Oppose	There are a number of elements of proposed s 5(a) that give rise to significant concerns for the ESEG as to how this subsection would be interpreted and applied to the purpose	Amend s 5(a) and add new s 5(aa) as follows:

Section	Support / Oppose	Reasons	Relief Sought
		expressed in s 3(a)(ii) of the NBEA (promoting outcomes) alongside 3(a)(iii) (addressing environmental limits). Those concerns are threefold: (a) The first concern is at the structural level, as to the degree of overlap or duplication in the natural resources covered by subsection 5(a)(i)(A) and (C), and the domains of the natural environment for which environmental limits must be set under s 38 of the NBEA. The result is that both *system outcomes* and *environmental limits* would apply to the protection of the ecological integrity of "air, water and soils" along with "indigenous biodiversity", under 5(a)(i)(A) and (C), and s 38 respectively. (b) It is not necessary to have both environmental limits and system outcomes for *protection* of the s 38 natural environment domains. The reference in s 5(a) to *protection* should instead be confined to those system outcomes which are **not** also covered by environmental limits, i.e. ensuring protection of outstanding landscapes, and the natural character of the coastal environment. Protection of the natural environment domains currently covered by s 5(a)(i)(A) and (C) would still be achieved by environment limits set under ss 38-41. (c) On top of this, protection of landscape and natural character resources, a system outcome for the *restoration (where degraded)* of the s 38 domains can be retained, so that targets can be set (under section 48(2)(c) of the Bill) to promote such restoration, alongside the associated limits. The proposed re-wording of section 5(a) in the relief column would provide for this. (d) The second concern is over the challenges that would be presented for both the NPF and NBEA plans in attempting to reconcile the Te Ao Māori principles of "mana" and "mauri" alongside "ecological integrity" in relation to each natural environment domain covered in s 5(a)(i), in "providing for" these system outcomes. (e) In and of itself, the definition of "ecological integrity" will give rise to considerable challenges under the NBEA, particularly for the setting of limits and targets, given the range, extent and scale of natural resource elements and management units involved, as addressed further below. This is presumably why the Bill provides for the establishment of a specific Limits and Targets Review Panel to provide advice to the Minister in meeting that challenge.	*(a) the ~~protection or, if degraded,~~ restoration, where degraded, of—* *(i) the ecological integrity~~, mana, and mauri~~ of the natural environment domains referred to in s 38(1).* *~~(A) air, water, and soils; and~~* *~~(B) the coastal environment, wetlands, estuaries, and lakes and rivers and their margins; and~~* *~~(C) indigenous biodiversity:~~* *(ii) the mana and the mauri of the natural environment domains referred to in s 38(1). ~~outstanding natural features and outstanding natural landscapes:~~* *~~(iii) the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins:~~* *(aa) The protection or, if degraded, restoration of:* *(i) The attributes and values of outstanding natural features and outstanding natural landscapes.* *(ii) The natural character of the coastal environment (including the coastal marine area) wetlands, lakes, rivers and their margins.* *[CLEAN]* *(a) The restoration, where degraded, of:* *(i) The ecological integrity of the natural environment domains referred to in s 38(1).*

Section	Support / Oppose	Reasons	Relief Sought
		(f) Having to "provide for" the "mana and mauri" of these natural environment domains as well as "ecological integrity", will only compound the complexity of that challenge. (g) Consistent with the structure of s 3, a discrete system outcome should be drafted for mana and mauri in relation to the natural environment domains, rather than the one system outcome covering both ecological integrity and mana and mauri. While no doubt related concepts (e.g. restoring ecological integrity may also restore mana and mauri) neither may be a sufficient condition for the other, with very different factors (and cultural perspectives) involved. (h) The third concern is over the unnecessary further overlap between the natural resource domains addressed in s 5(a)(i)(B) and s 5(a)(iii). Both subsections cover the coastal environment, wetlands, lakes and rivers and their margins. As established under RMA case law, "natural character" (under s 5(a)(iii)) necessarily covers "biotic and abiotic" factors (in essence ecological integrity, under s 5(a)(i)(B)). In short, s 5(a)(iii) adequately 'covers the base' and can do so on its own. Section 5(a)(i)(B) can be deleted without losing anything for the overall set of system outcomes. (i) These points aside, s 5(a)(ii) should address the *attributes or values* of outstanding natural features and outstanding natural landscapes rather than the protection of those features and landscapes *per se*, again in line with established case law under the RMA.	*(ii) The mana and mauri of the natural environment domains referred to in s 38(i).* *(aa) The protection or, if degraded, restoration of:* *(i) The attributes and values of outstanding natural features and outstanding natural landscapes.* *(ii) The natural character of the coastal environment (including the coastal marine area) wetlands, lakes, rivers and their margins.*
5(b)	Support and oppose	The ESEG strongly supports s 5 (b) (i) as a system outcome. For the reasons referred to above (addressing section 5 generally), the ESEG also supports the use of the verb "achieving" employed in s 5(b), as an important improvement on the equivalent provisions of the Exposure Draft. However, the simplistic reference to a "reduction" of greenhouse gas emissions in the expression of that outcome (as needing to be *achieved*) is demonstrably inadequate, in the following respects: (a) For the complete lack of any target or measure as to the scale of reduction of greenhouse gas emissions needed, and specifically as required to meet New	Amend s 5(b) to state as follows: *(b) in relation to climate change and natural hazards, <u>providing for, securing</u> and achieving–* *(i) The reduction of greenhouse gas emissions <u>including through increased generation, storage, transmission and utilisation of renewable electricity, sufficient to enable New Zealand to meet the Target set under s 5Q of the Climate Change Response Act 2002, or an Emissions Reduction Plan.</u>*

Section	Support / Oppose	Reasons	Relief Sought
		Zealand's domestic and international commitments including under the Paris Agreement, New Zealand's Nationally Determined Contribution, and the targets and budgets for emission reductions set through the Climate Change Response Act 2002 along with the 2022 Emissions Reduction Plan. (b) For the lack of any reference to increased *generation, storage, transmission and utilisation of renewable electricity* as an essential pathway for greenhouse gas emission reductions (in contrast to the equivalent outcomes set in the NBEA Exposure Draft (including as reported back by the Select Committee). Under the 2022 Emissions Reduction Plan, a target of 50% of total final energy consumption coming from renewable sources by 2035 is set. This will require an unprecedented scale of new renewable electricity generation development. More than a trebling of development over the next 30 years (compared to the previous 30) will be needed to meet the 2050 target of the Climate Change Response Act 2002. It is notable in this regard that having set out the five key objectives of the Bill, the Explanatory Note then records that the Bill will address multiple problems with the current resource management system, including to help: • Enable renewable electricity generation, to affordably decarbonise the economy. A strongly worded outcome referencing all key components of the renewable electricity system and sheeted to the scale of new generation required to electrify the economy and meet the Target of the Climate Change Response Act 2002 is essential if this reform objective is to be achieved. To this end, ESEG further seeks that the words 'providing for securing' be included alongside the verb "achieving" , having regard to the critical place of existing renewable electricity infrastructure in supporting decarbonisation goals, as addressed later in this submission. As the tragic recent natural hazard events in New Zealand have demonstrated, the lifeline utilities are interdependent in nature whereby one lifeline is reliant on the function and resilience of another. If there is an outage this has a potential cascade effect on the ability for lifeline utilities to function during natural hazards and emergencies. The resilience and functioning of lifeline utilities has a bearing on people and communities' well-being. Therefore, the ESEG considers that in the face of increasing risks arising from natural hazards and the effects of climate change the	… *(iv) the protection of public health and safety from, natural hazards and the effects of climate change*

Section	Support / Oppose	Reasons	Relief Sought
		protection of public health and safety is imperative, and this should be an express system outcome in its own right.	
5(i)	Support but amend	Infrastructure is undeniably essential to support the wellbeing of people and communities (the s 3(a)(i) purpose element of the Bill) and as an integral part of the "built environment". Promoting the ongoing and timely provision of such infrastructure is equally essential to sustain "well-functioning urban and rural areas", and to make sufficient provision for housing and business uses (system outcome s 5(c) more generally). While supported as it stands, the wording of this outcome needs to be strengthened, to be more expressly enabling and to 'protect' the relevant infrastructure so as to support the wellbeing of people and communities. The reference to infrastructure "services" within the outcome creates some uncertainty as to what is covered by the provision, with that term not being defined in s 7 (whereas there is a definition of "infrastructure"). This issue is addressed further below regarding the section 7 definition of infrastructure.	Amend s 5(i) as follows: *(i) "the ~~ongoing and timely provision~~ enablement and protection of infrastructure ~~services~~ in a timely manner to support the well-being of people and communities"*
6 – Decision Making Principles	Support and oppose	The ESEG broadly supports the decision-making principles in s 6, subject to the following reservations: (a) As currently expressed, the section 6(1) decision-making principles only apply to the Minister and Regional Planning Committees (as opposed to persons exercising functions and powers under the NBEA more generally). The ESEG considers that these principles should all apply more broadly across the NBEA, for example to include persons making decisions on resource consents through the various pathways under Part 5 of the NBEA. (b) To the extent that s 6(1)(a) is directed at achieving integrated management between the natural and built components of the environment, as opposed to integrated management more generally (for example between regional and territorial authorities or across natural resource domains – land, air and water), this should be made expressly clear within the provision. Amendment to this effect would be consistent with the equivalent wording in section 96	Amend s 6(1) as follows: *To assist in achieving the purpose of this Act, ~~the Minister and every Regional Planning Committee,~~ all persons exercising powers and performing functions in making decisions under the Act, must—* *(a) provide for the integrated management of the natural and built environment.* Amend s 6(2) as follows: *(2) …all persons exercising functions, ~~duties~~ and powers in making decisions under this Act must favour…:* Replace s 6(2) (a) with:

Section	Support / Oppose	Reasons	Relief Sought
		(addressing the need for NBEA Plans to provide for the "integrated management of the natural and built environment"). (c) Section 6(1)(b) and (c) are supported in referencing the active promotion of outcomes, and recognition of the positive effects of use and development in achieving those outcomes. However, they do not give any guidance as to how those principles sit relative to the purpose element expressed in s 3(iii) of the Bill, whereby use and development of the environment must comply with environmental limits (regardless of whether that use would promote system outcomes). The same point can be made as to the principle in section 6(1)(d) (managing effects so as not to undermine outcomes). As addressed further below, including as to the various relief sought on this broader issue, the NPF and NBEA plans should not be confined to resolving conflicts between or among outcomes, but between or among outcomes and limits in order to further all elements of the purpose of the Act as expressed in s 3. These principles would then be better applied alongside NPF direction having that effect. (d) Section 6(2)(a) requires that all persons exercising functions, duties and powers under the Act must favour "caution" where the information available to them is uncertain or inadequate. It is unclear how this new principle of "caution" relates to established international and domestic law addressing the precautionary principle as currently expressed in the New Zealand Coastal Policy Statement 2010 (**NZCPS**) Policy 3 and the Exposure Draft of the National Policy Statement for Indigenous Biodiversity (**NPSIB**) Policy 3.7, whereby the principle is confined to situations involving effects that are *uncertain, unknown or little understood but potentially significantly adverse*. (e) Beyond that, the reference to a proportionate approach to environmental protection in s 6(2)(b) is supported. Again however, it is unclear how this principle would be applied relative to the various purpose elements in s 3. (f) The s 6 principles should not be applicable to all persons exercising "duties" under the NBEA, as extend to those set through sections 13 to 15 (as addressed further below). The s 6 principles should instead be confined to those persons exercising *decision-making* functions and powers (as would include requiring authorities on notices of requirement under s 513, Boards of Inquiry, expert consenting panels, planning committees etc), rather than the general public.	*(a) The precautionary principle, where effects are uncertain, unknown or little understood but potentially significantly adverse.* Amend s 6(3) as follows: *(3) All persons exercising powers and performing functions ~~and duties~~ in making decisions under this Act must recognise and provide for the responsibility and mana of relevant ~~each~~ iwi and hapū…* The relief sought below (page 17) in relation to section 33

Section	Support / Oppose	Reasons	Relief Sought
		(g) While the principle set in s 6(3) is not opposed at the general level, the specific requirement that all persons recognise and provide for the responsibility and mana of *each* iwi and hapū will prove problematic in practice, where issues of competing or overlapping jurisdiction or rohe/takiwā arise, and the respective iwi or hapū may have different aspirations or perspectives (including specific tikanga and kawa).	
7 – Interpretation Definition of 'affected application'	Support but amend	It is preferable that definitions are provided in the interpretation section itself, rather than requiring cross references to later sections in the Bill. This ensures readability and understanding for system participants.	Amend definition of affected application as follows: *"**affected application** – ~~has the meaning given in section 304~~ is an application for a resource consent of a kind that is required to be dealt with under the affected application consenting process under subpart 7 of Part 5 and made within a required time period."*
7 – Interpretation Definition of 'allocation framework'	Oppose	Section 87 does not refer to "allocation framework". "Section 87 refers to "allocation method" which is separately defined (see below). There is no reference to the "allocation framework" in any of the allocation provisions proposed in parts 3, 4, or 5. Instead, the allocation provisions most commonly refer back to the NPF. This definition therefore is erroneous and should be deleted.	Delete definition of 'allocation framework'.
7 – Interpretation New Definition		A definition of 'right to apply' upfront in the interpretation section would greatly assist readability rather than requiring a cross reference to section 160(2).	Insert the definition of 'right to apply' in the interpretation section as follows: ***right to apply** means an exclusive right to apply for a resource consent to undertake an activity relating to a resource described in section 88(1)* Delete definition of 'right to apply' in s 160(2)
7 – Interpretation New Definition		The Bill includes 'built environment' in its title and in the definition of 'environment' but there is no definition of 'built environment' unlike 'natural environment' which has its own definition. Given the integral role of the 'built environment' in the new system, ESEG considers it critical that a definition of 'built environment' is included in the bill.	Insert new definition of 'built environment' as proposed in the Randerson Report as follows: ***built environment** includes human-made buildings, structures, places, facilities, infrastructure and their interactions which collectively form part of areas in which people undertake activities.*

Section	Support / Oppose	Reasons	Relief Sought
		This position is supported by the Randerson Report which, proposed a definition of 'built environment'. However, while the definition of 'environment' and 'natural environment' as proposed by the Randerson Report were included in the Bill, the definition of 'built environment' was not. The ESEG seeks the inclusion of the 'built environment' as proposed by the Randerson Report to provide clarity as to the meaning of this prominent term.	
7 – Interpretation Definition of "Ecological Integrity"	Support but amend	As addressed elsewhere through this submission, the definition of ecological integrity will be of central importance to the task of environmental limit and target setting. It will also give rise to complex and challenging issues for the setting of environmental limits and targets for the reasons addressed in the paper prepared by Dr Ian Boothroyd at Boffa Miskell (**Boothroyd Paper**) appended to the legal opinion prepared by Derek Nolan KC and David Salmon KC (previously submitted to the Ministry for the Environment) (**KC Opinion**) (**Appendix A**) included with this submission. Very careful attention to the definition of ecological integrity is therefore required. By comparison with the Exposure Draft version of the definition (discussed in the Boothroyd Paper), the element of that earlier definition addressing "resilience to the adverse effects of natural or human disturbances" has been deleted and replaced with a representation element (in addition to the composition and structure elements common to both the definition in the Bill and in the Exposure Draft). Resilience to adverse impacts is submitted to be a critical element of ecological integrity. Representation, composition and structure may or may not be necessary or sufficient conditions for resilience, and conversely resilience may be retained within ecosystems despite elements of composition and structure being absent from a particular ecosystem or ecosystems over time.	Amend definition of ecological integrity by adding a further subclause (e) as follows: *"(e)Resilience: an ecosystem's resilience to the adverse impacts of natural or human disturbances."*
7 – Interpretation Definitions of 'emissions reduction plan' and 'national adaptation plan'	Support but amend	ESEG supports the definitions of 'emissions reduction plan' and 'national adaptation plan', including the references to these terms in the NBEA (including Schedules) wherever they occur. However, as 'national adaptation plan' has its own definition it is not necessary for the definition of 'emissions reduction plan' to reference national adaptation plan. Both definitions need to reference the correct Act (the Climate Change Response Act 2002)	Amend the definition of 'emissions reduction plan' in s 7 to: ***"emissions reduction plan** means the emissions reduction plan ~~or national adaptation plan~~ prepared under the Climate Change Response Act 2009~~2~~"*

Section	Support / Oppose	Reasons	Relief Sought
			Amend the definition of 'national adaptation plan' in s 7 to: *"**national adaptation plan** means the national adaptation plan prepared under the Climate Change Response Act 200~~0~~2"*
7 – Interpretation Definition of 'infrastructure'	Oppose	The proposed definition of infrastructure applies only to renewable electricity generation directly connected to National Grid (clause (c) and the associated definition under the Urban Development Act 2020) and fails to provide for the significant role that distribution networks and electricity generation not connected to the National Grid increasingly plays in the security of supply of electricity and contribution to decarbonisation goals. This is a significant gap and means that renewable electricity generation infrastructure which makes a meaningful contribution to the proposed system outcomes (s 5(b) and (c) in particular) despite not being connected to the national grid, is not supported by these enabling system outcomes. Lifeline utilities are referred to through the Bill (e.g. s66(1)(n)). The ESEG submits that that lifeline utilities should be included in the definition of infrastructure to ensure all generation and distribution of electricity is identified as infrastructure under the NBEA, regardless of whether connected to the national or local grid networks. Such an approach would better align with New Zealand's emissions reduction commitments, and renewable electricity targets, as addressed above.	Add to the definition of 'infrastructure' in s 7 to include: *"(j) Infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002)" and*
7 – Interpretation New Definition		The definition of "Renewable electricity generation" (generally in accordance with the NPS for Renewable Electricity Generation 2011) should also be included in the NBEA. For accuracy, the reference to 'hydro' should be 'water' as the natural resource involved.	Insert a new definition as follows: ***Renewable electricity generation** means generation of electricity from solar, wind, water, geothermal, biomass, tidal, wave, or ocean current energy sources.*
7 – Interpretation	Support and oppose	The definition of 'network utility operator' does not include electricity generators. This means that to secure requiring authority status, electricity generators would have to	Amend definition of 'network utility operator' to include:

Section	Support / Oppose	Reasons	Relief Sought
Definition of 'network utility operator'		apply as an "additional utility operator" which is subject to broad Ministerial discretion and approval. ESEG seeks that all renewable electricity generators (and regardless of whether of whether they connect to the National Grid or local lines distribution, as addressed above), be defined as a "network utility operator", such that renewable electricity generators have the benefit of the more targeted criteria for requiring authority approval under section 500(1)-(3), as opposed to the broader and more onerous criteria for additional utility operators (conferring a broad discretion on the Minister as to what comprises a "public good" and an "identifiable public benefit) under s 500 (4) -(6)). There can be no question (and therefore need for assessment in each case) that renewable electricity generators have an identifiable public good and benefit, given the essential nature of new renewable generation assets to underpin electrification of the economy, and achieve the system outcomes relating to both well-functioning urban environments and the reduction of greenhouse gas emissions . Greater certainty of access to the designation process as a method to enable NBEA approval for such assets would better sustain and promote these system outcomes, through expanding the "network" of renewable electricity generation assets connected to the wider electricity distribution network itself. As addressed above (in relation to the definition of infrastructure), lifeline utilities should therefore be included within the definition of network utility operators.	*(j) "operates or proposes to operate a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002)"*
7– Interpretation Definition of 'Requiring Authority'	Support but amend	The definition of 'requiring authority' provides only for a Minister, local authority, council-controlled organisation, network utility operator or an "additional utility operator" approved as a requiring authority by the Minister to hold such status. As an "additional utility operator" electricity generators can apply to the Minister for approval as a requiring authority, but with more onerous criteria conferring a broad discretion on the Minister, as noted above. Without requiring authority status, electricity generation will not have the benefit of: - access to the designation framework (as submitted above); - the right to be consulted as part of the NBEA plan development (clauses 15 and 22, Schedule 7) (as addressed further below); and	As sought above, amend definition of *"network utility operator"* to include *" operates or proposes to operate a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002."* Amend definition of 'Requiring Authority' to include: *(f) Where, immediately before the date of commencement of this Act, a person is a requiring authority under s167 of the RMA, that person shall be deemed to be a requiring authority for the purposes of this Act and the provisions of this Act shall apply accordingly.*

Section	Support / Oppose	Reasons	Relief Sought
		- opportunities to provide information or technical support to the Regional Planning Committee during the Regional Spatial strategy (**RSS**) process (SPA clause 58). These benefits need to be secured for renewable electricity generators, for the various reasons addressed throughout this submission. The application to the Minister for requiring activity status, even if largely an administrative exercise, is an inefficient exercise creating undue uncertainty. ESEG seeks electricity generators as well as those providers that are currently requiring authorities under the RMA be explicitly included in the definition of requiring authority to avoid the need for further ministerial approval under the NBEA.	
7 – Interpretation Definition of "Operative"	Oppose	The term "operative" in the Bill is defined to mean a provision in the NPF or a Plan that has: (a) come into force and has legal effect; and (b) not ceased to be operative. This definition does not correlate with ss 130-136 of the Bill, which draw a distinction between plan rules which have "legal effect" (ss 130-134) and rules which are to be treated as "operative" (s 135). These provisions in turn refer to clause 41 of Schedule 7, which addresses the point at which a Regional Planning Committee approves a plan and publicly notifies the date on which it becomes operative. In short, coming into "effect" and "operative" are quite different things, and this definition will create confusion for future interpretation and administration of the Act, particularly as new plans are notified and developed through the Schedule 7 process, while existing plans are still in force. As to plan rules, the definition of "operative" should simply be sheeted to clause 41 of Schedule 7 (to reference the point of completion of a plan process) and otherwise under s 135. Plan provisions would have "legal effect" in accordance with the prescription in ss 130-134.	Amend definition of operative as follows. ***Operative**, in relation to a provision in the national planning framework or a plan, means that the provision:* *(a) In relation to the national planning framework, is contained in a decision published by the Minister under clause 22 of Schedule 6; or* *(b) In relation to a plan, is part of a plan that has been approved and publicly notified under clause 41 of Schedule 7 or is otherwise treated as operative under s 135.*

Section	Support / Oppose	Reasons	Relief Sought
		For the NPF, operative should be defined to mean the point at which the Minister makes a decision under clause 22 of Schedule 6.	
7 – Interpretation Definition of Significant Biodiversity Area	Support and oppose	"Significant biodiversity area" as proposed under the Bill is defined as meaning a place that meets the criteria for significant biodiversity set out in the National Planning Framework. As it stands, the Bill would require that all significant biodiversity areas must be identified (at regional scale) in plans, (other than areas within the coastal marine area or in freshwater bodies where exempt from such identification by the NPF (s 556)). Under s 557 and s 558 the Minister must set criteria for identifying significant biodiversity areas in the NPF based on the considerations expressed in s 558. While the ESEG seeks that these provisions be deleted (as principal and preferred relief as addressed later in this submission table), the criteria for identifying significant biodiversity areas in s 558 are supported and should be retained to guide the Minister in preparing the NPF.	Amend the definition of 'Significant Biodiversity Area as follows: ***Significant biodiversity areas*** *means a place meeting the criteria for significant biodiversity set out in the national planning framework, as determined* under [apply wording of current sections 557 and 558, as otherwise sought to be deleted] .
7 – Interpretation New Definition		For reasons discussed below, given the significance of the concept of the Te Mana o te Wai this concept must be referred to where appropriate in the NBEA. A definition of Te Mana ō te Wai is therefore required. ESEG consider it to be most efficient to refer to the definition of Te Mana o te Wai as provided for in the NPSFM.	Insert definition of Te Mana o te Wai as follows: **Te Mana o te Wai** means Te Mana o te Wai as defined in the National Policy Statement for Freshwater Management
5(g) 7 130(4) – cultural heritage and specified cultural heritage	Support and oppose	The ESEG broadly supports the definition of "specified cultural heritage" and its application in the NBEA, such as for the effects management framework in sections 62 and 63, and its associated offsetting redress in Schedule 5. However, "cultural heritage" is a much broader term that includes (amongst other matters) "*the surroundings associated with [*cultural heritage*] sites*" and "cultural landscapes". There are examples where cultural heritage sites are directly associated with electricity generation activities. For example, the Arapuni Powerhouse and Dam are Category 1 historic structures and remain in use today for generation purposes; and a recorded archaeological site is located immediately adjacent to generation assets at Karapiro. In addition, cultural landscapes have been identified in some district plans to date and tend to cover large geographical areas, including areas of towns, infrastructure and rural production. The term "cultural landscape" is not defined in the NBEA.	Delete system outcome s 5(g) and merge with outcome s 5(aa) (as amended in earlier relief) to: *(aa) the protection or, if degraded, restoration of–* *…* *<u>new (iii) specified cultural heritage.</u>* Amend s 130(4)(d) for the legal effect of rules as follows: *(d) protects <u>specified</u> cultural landscapes:*

Section	Support / Oppose	Reasons	Relief Sought
		This is seen as being problematic in the context of the system outcome in s 5(g) requiring the "conservation of cultural heritage". "Conservation" is a more restrictive concept than "protection". Case law indicates that it requires the relevant feature to be preserved in its existing state. Conversely, protection has broader scope and can include restoration or enhancement. This distinction has implications for development affecting cultural sites and landscapes, which as defined would have wide application. A restrictive "conservation" obligation could require any cultural heritage to remain unchanged and pose a significant barrier to development, including for the ongoing operation, maintenance and upgrade of some existing generation assets. It is expected that a higher threshold would apply to specified cultural heritage but ESEG question whether the "conservation" requirement in s 5(g) is necessary and appropriate rather than a requirement for "the protection or, if degraded, restoration of", consistent with that in s 5(a). It is considered that rules having immediate legal effect under s 130(4)(d) should be those relating to specified cultural heritage rather than all cultural heritage. Additionally, in support of changes sought to system outcome in s 5(g), s 130(4)(d) relates to rules that "protect" cultural heritage, not its conservation.	Amend Schedule 5 – Principles for cultural heritage offsetting redress, to be consistent with sections 62 and 63 for "*specified cultural heritage*".
13 and 14 – Environmental Responsibility and Duty to Avoid, Minimise, Remedy, Offset, or Provide Redress for Adverse Effects	Support and oppose	While the ESEG generally supports s 14, the setting of a general duty to "offset, or take steps to provide redress" for any adverse effect on the environment is opposed. The equivalent provision under the RMA requires persons generally to "mitigate" (rather than minimise) effects which are not avoided or remedied. While reflecting the effects management framework structure in s 61, a general obligation to "minimise" is more onerous than to "mitigate" and consequently the potential scope of the requirement to "offset" (or indeed provide redress to) remaining effects, is substantially expanded by comparison with s 17 of the RMA. Beyond that, the reference to "redress" is opposed. The term "redress" (in terms of its natural and ordinary meaning) carries with it the implication of a need to rectify some "wrong" or grievance. Environmental effects otherwise needing to be avoided or remedied are not necessarily of that character. Regardless, the term "compensate" should be employed to draw on RMA jurisprudence as to the distinction between mitigation, offsetting and compensation generally, and noting that Schedule 4 of the	Add a new s 13(2) as follows: *(2) The duty referred to in subsection (1) is not of itself enforceable against any person, and no person is liable to any other person for a breach of that duty.* Amend the title of section 14 as follows: ***14 Duty to avoid, minimise, remedy, offset, or provide compensation ~~redress~~ for adverse effects*** Amend s 14(1) as follows: *(1) Every person has a duty to avoid, minimise, remedy, offset~~,~~ or take steps to provide compensation ~~redress~~ for any adverse effect on the environment…"*

Section	Support / Oppose	Reasons	Relief Sought
		Bill (principles for biodiversity redress) employs the term "compensation" rather than "redress" throughout the principles set out in that schedule. ESEG also submits that s 13 (which is new under the Bill by comparison with the RMA), should have an equivalent to s 14(2), whereby the duty is not, in and of itself, enforceable.	Replace the word "redress" with "compensation" in Schedule 4.
Part 2, Subpart 2 – 17-30	Support and oppose	This part of the NBEA has fundamental implications in terms of setting or conversely displacing the need for activities to be expressly authorised by the NPF, plans or through resource consent approval. It is therefore critical to get the wording and "structure" of these provisions correct. There are a number of drafting errors made within these sections which need to be corrected to ensure that they operate to their intended effect, including in the manner established through the equivalent provisions of the RMA. Specifically: • Section 17(2)(b) and (c) have no equivalent reference to existing use rights relative to "framework rules" (as afforded under s 9(1) of the RMA, in relation to contravention of a national environmental standard), through currently being confined to plan rules. This needs to be rectified, bearing in mind that framework rules can extend beyond environmental limits, and existing use rights relative to such framework rules should be provided for. A consequential change to s 26(1) is also required for this purpose. • Section 17(2)(a) should also refer to permitted activity notices as provided for under s 157 of the Bill (in addition to the reference to a resource consent). Permitted activity notices are expressly referenced in (for example) s 20(4) and s 21(4) and should similarly be referenced in this equivalent provision of s 17. The same point applies under s 20(2). • Sections 19(4) and 22(4) wrongly include reference to framework rules with the effect that contravention of a framework rule (under s 19(3) and s22(3) respectively) can be expressly authorised by another framework rule. The reference to "framework rule" in s 19(4) and s 22(4) should be deleted. Similarly,	Amend s 17(2)(a) as follows: *(a) in every case, is expressly allowed by a resource consent or a permitted activity notice; or…* Amend s 17(2)(b) and (c) as follows: *(b) in the case of a plan rule or a framework rule within the jurisdiction of the regional council, is an activity allowed by section 30";* *(c) in the case of a plan rule or a framework rule within the jurisdiction of a territorial authority, is an activity allowed by section 26 or 28.* Amend s 19(3) as follows: *(3) Without limiting subsection (1), a person must not carry out the following in a way that contravenes a framework rule, a plan rule within the jurisdiction of the regional council~~, or a resource consent~~:* Delete ss 19(4)(a). Amend s 20(2) as follows: *(2) However, a person may carry out an activity referred to in subsection (1) if the activity is expressly allowed by a framework rule, a plan rule within the jurisdiction*

Section	Support / Oppose	Reasons	Relief Sought
		the reference to "resource consent" in s 19(3) should be deleted such that s 19(3) and s 19(4) then operate sensibly in combination. These sections would then better match their equivalent wording in s 20(4) and s 21(2). Beyond that, ESEG has significant concerns regarding s 26 and the capacity afforded within s 26(2)-(4) for plan rules to defeat existing use rights that would otherwise prevail over other plan rules. This scenario applies not only in relation to plan rules that are set to respond to natural hazards and climate change, but also for any plan rule relating to the "natural environment" (where expressly provided for under the NPF). This very substantial erosion of existing use rights that might otherwise prevail over plan rules is strongly opposed as creating an intolerable degree of uncertainty in relation to rights that may need to be relied upon to secure the capacity of existing renewable electricity generation (transmission and distribution) infrastructure to underpin electrification of the economy, as addressed elsewhere through this submission. Section 26(1)(b)(ii) is also opposed in requiring that any change in effects associated with an activity subject of existing use rights is confined to reducing the adverse effects on the environment or otherwise enhancing that environment. This would provide no scope for any incremental change in adverse effects relative to the extant activity, and again undermine the degree of certainty which existing use rights would otherwise afford (as under the RMA).	*of the regional council, or by a resource consent, or a permitted activity notice.* Delete s 22(4)(a). Delete s 26(1)(b)(ii). Delete s 26(2)-(4). Amend s 26(1) as follows: *(1)A person may use land in a way that contravenes a plan or framework rule within the jurisdiction of a territorial authority if— ….*
Environmental limits and exemptions 33 37-40 44-46 57 61-67 102(2)(c) 154(4) 223(11) 555-567	Support and oppose	The ESEG broadly supports the basic intent of the NBEA to set environmental limits for the protection of ecological integrity of the natural environment and human health, to further the purpose element in s 3(a)(iii). However, such limits cannot be immutable and provision for exemptions will be essential if the climate change system outcomes of the NBEA are to be promoted and ultimately *achieved*. As stated in the legal opinion prepared by Derek Nolan KC and David Salmon KC (**Appendix A**): 8. To fail to both accept and address this reality would be to accept that New Zealand will fail to meet its international climate change mitigation obligations, and deliver on the recently released Emissions Reduction Plan, either: a. altogether (worst case scenario), or	Redraft these provisions as proposed in **Appendix C** to this submission. Beyond that, amend the Bill to direct that: • The NPF must identify the places of national importance (as currently defined in s 555); and/or set criteria for the identification of such areas (including significant biodiversity areas) in NBEA plans, with these criteria to be set following advice of the Limits and Targets Review Panel in accordance with the considerations currently set out in s 558.

Section	Support / Oppose	Reasons	Relief Sought
		b. without New Zealand incurring major additional costs, assessed at up to $9 billion for more expensive generation and increased power costs for consumers, with associated additional greenhouse gas emissions to meet the electrification deficit through fossil fuel alternatives over an extended transition phase (best case scenario). 9. The prospect that the NBEA might function to prevent achievement of emissions targets might seem to be the result of conflicting policy drivers. However, ESEG thinks the underlying policy concerns are aligned: the concerns of the proposed environmental limits (air, soil, waterways, biodiversity, habitats and ecosystems) are also under threat from unaddressed climate change. This threat is existential. More recently by letter dated 15 February 2023 the KC's (having considered the NBE Bill structure and provisions), have restated the important role of renewable energy projects, reiterated that the reduction in greenhouse gas emissions is neither sufficiently targeted or directive, and that there must be exemptions to proposed limits for renewable energy activities, where that is necessary to meet New Zealand's climate change obligations (**Appendix B).** The acknowledgment of that reality within Part 3 of the Bill, in providing for <u>exemptions</u> to limits, is commended by ESEG. That said, the ESEG has significant concerns that the overall range of provisions providing for the setting of limits under the NBEA, and the allowance of <u>exemptions</u>, is: • unnecessarily complex, to the point of being unworkable, impossible to implement or effectively "self-defeating"; • contradictory, incoherent and confusing; and • as a result, as it stands, inevitably going to be the subject of future (but avoidable) litigation in the Courts. As recorded earlier in this submission, the critical matter needing to be addressed by the NPF (and in turn NBEA plans) in this context, is that of providing clear and coherent	• Further, that any place of national importance not identified in the NPF or an NBEA Plan is <u>not</u> to be treated as such for any other (consenting or designation) process. • The NPF and NBEA Plans <u>must not</u> set environmental limits to protect outstanding natural features or landscapes and areas of cultural heritage (including for the further reasons addressed below in relation to limit and target setting specifically) but may include policies and rules regarding such areas. Otherwise delete ss 555 to 567. Amend s 102 (2)(c), 154(4) and 223(11) to provide for exemptions to environmental limits i.e. that in each case, the provisions apply "*<u>unless and to the extent that an exemption to an environmental limit is approved under Part 3 of the Act</u>*". Amend s 33(a), (b) and (c) and set a new s 33(d) and (e) as follows: *(a) Providing directions on the integrated management of the <u>natural and built</u> environment in relation to-* *…* *(b) <u>Providing direction as to how</u> ~~helping to resolve~~ conflicts about environmental matters <u>are to be resolved</u>, including between environmental <u>limits and system outcomes and</u> between or among system outcomes.* *(c) Setting environmental limits ~~and strategic directions~~.*

Section	Support / Oppose	Reasons	Relief Sought
		direction on how the various elements of the compound purpose of the NBEA expressed in s 3 are to be reconciled. In that regard, the NBEA currently requires that: (a) *environmental limits* be set for all s 38 natural environment domains through either the NPF or NBEA plans (s 38 and s 39, thereby addressing the purpose element in s 3(a)(iii)); and (b) the NPF include strategic direction on how decision makers are to achieve the *system outcomes* (s 56, addressing the purpose element in s 3(a)(ii)). However, there is no corresponding requirement that the NPF give direction on the purpose element recorded in s 3(a)(iv) (*management of adverse effects*), nor indeed as to the relationship between these respective purpose elements. This omission needs to be addressed. Beyond that, the ESEG reiterates the point made earlier that the purpose and content of the NPF should be extended to resolving conflicts; not just among or between system outcomes (as under ss 33(b) and 57(1)(b)), but *between those outcomes and environmental limits*. As also touched on previously, the ESEG submits that it is vital that environmental limits and targets are only set for the s 38 natural environmental domains (to protect ecological integrity and human health) and not for natural resources otherwise subject of the system outcomes (noting the issues of duplication addressed earlier in these submissions in relation to s 5(a)(i)). This key concern is in line with the Select Committee Report recommendation (on the Exposure Draft) that environmental limits may only be set for the purposes now expressed in ss 37 and 38. Given the statutory effect of environmental limits, and the need for specific exemptions to be approved through the NPF regarding them (as addressed below), system outcomes should instead be promoted by *polices and rules* (rather than limits), in case they otherwise become 'de facto' limits allowing no exceptions under an NBEA plan, for example to protect landscape values (and thereby inappropriately and unnecessarily defeat a renewable electricity proposal from being consented).	*(d) Setting strategic directions on system outcomes.* *(e) Providing direction as to the management of adverse effects.* Amend s 38(2) as follows: *(2) Environmental limits may not be set for any other aspect of the natural environment ~~in accordance with the purpose of setting environmental limits~~ or for any other purpose including in relation to system outcomes.* Amend s 102(2)(c) as follows: *(c) achieve environmental limits (including interim limits) and targets unless and to the extent that an exemption to an environmental limit is approved under Part 3 of the Act;* Amend s 154(4)(a) as follows: *(a) it would breach a limit specified in the national planning framework or a plan (either taken in isolation or, if allowed to be carried out in addition to consented activities that have existing use rights or are permitted) unless and to the extent that an exemption to an environmental limit is approved under Part 3 of the Act;* Amend s 223(11) as follows: *(a) it is contrary to—* *(i) an environmental limit or target unless and to the extent that an exemption to an environmental limit is approved under Part 3 of the Act.* If the relief sought above is rejected (deletion of ss 555-567), amend s 560(1) as follows:

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		For these reasons, the ESEG therefore submits that s 33 should be improved by: • Amending subsection (b) to require that the NPF provide direction as to how conflicts between environmental limits and system outcomes (as well as between or among system outcomes) are to be resolved, rather than simply "helping" to resolve conflicts between or among system outcomes. • Amending subsection (c) to refer solely to setting environmental limits. • Addressing the setting of strategic directions on system outcomes (reflecting s 56 of the Bill) in a separate subsection (to make it clear environmental limits are not to be set for system outcomes). • Adding an additional purpose of the NPF, being to provide direction as to the management of effects (s 3 purpose element (a)(iv)). In addition, as addressed previously (in relation to the s 6 principles) the reference to "integrated management" in s 33(a) should be expressly sheeted to the integrated management of the *natural and built* environment. These points aside, very close and careful attention is needed as to the overall scheme of the Bill in addressing environmental limits themselves, and for exemptions to be approved to those limits, in confined circumstances. The ESEG submits that it will be challenging enough for the Minister (and Board of Inquiry) along with Regional Planning Committee to propose, recommend and in turn set limits and targets to: (a) prevent the ecological integrity of the natural environment from degrading from the state it was at the commencement of (Part 3 of the NBEA); and (b) protect human health (ss 37 and 38)	*(1) A plan may provide for cultural heritage to be identified in a closed register if—* *(a) ~~a person~~ an iwi or hapū makes a request to the relevant Regional Planning Committee; ~~and~~* *(b) the cultural heritage relates to a place that has cultural and / or spiritual values of significance to Māori, including wāhi tapu and wāhi taonga, that would be better protected by not disclosing specific locations; and* *(~~b~~c) the requester provides good reason why the precise location of the cultural heritage should not be shown in a plan.*

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		Given the complex set of issues presented by the definition of "ecological integrity" in its own right, as evidenced by the Boothroyd Paper appended to the KC Opinion, attached to this submission (**Appendix A**). Compounding that difficulty is that the NBEA, as currently drafted, establishes the following illogical, incoherent and contradictory overall regime whereby: (a) Exemptions to environmental limits may be directed by the Minister (ss 44-46) but within certain constraints (as set by s 46), and only at the request of a Regional Planning Committee. (b) The tests as to what comprises an "essential feature" of an exemption are unclear and ill conceived. For example, as to s 45(2), it is not just a "public benefit" that should justify an exemption, but also an environmental outcome, or indeed 'system outcome' more generally. (c) Exemptions must be temporary (s 45(3)), when infrastructure projects that would be unconsentable without such exemptions will comprise major capital works with long term life cycles and need commensurate (even indefinite) duration of approval. (d) Similarly, as to s 45(4), an exemption (under the NPF) may provide for certain activities to subsequently be approved (by way of resource consent or designation), but the appropriate conditions to be set for (say) a specific electricity generation asset would not be known on approving that exemption at NPF level. (e) The effects management framework (subpart 5 of Part 3 of the Bill which is confined to certain domains (significant biodiversity areas and specified cultural heritage unless otherwise directed by the NPF) contains its own (and additional) code for exemptions to that hierarchy, and in turn limits to those exemptions, along with considerations that must be applied in specifying such exemptions. This point is addressed further below. (f) NBEA plans (under Part 4) must "achieve" environmental limits including interim limits and targets (s 102(2)(c)), seemingly regardless of any exemptions being approved under Part 3.	

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		(g) Any activity that would breach a limit specified in the NPF or an NBEA plan is a prohibited activity (under s 154(4)), yet exemptions to limits are available through the provisions just outlined (and as such presumably would not support prohibited activity status under an NPF or NBEA plan). (h) Similarly, resource consents for activities which would breach an environmental limit or target must be refused (s 223(11)), again without regard to the prospect of an exemption being available under the NPF, for particular activities needing resource consent. (i) A yet further complex, even unintelligible, set of provisions requiring the mandatory protection of "places of national importance" (including outstanding natural features and landscapes as well as significant biodiversity areas) is set out in Part 8 (subpart 3), along with protection of "areas of highly vulnerable biodiversity", with this part of the Bill again having its own prescription, generally precluding the granting of resource consents or designations in relation to such areas and with very limited scope for exemptions. (j) This entire part of the Bill is unnecessary with protection of "places of national importance" (including natural landscape and significant biodiversity areas) needing to be provided through the NPF and NBEA plans regardless (as a result of ss 37-39, and 56), as would cover areas of cultural heritage and "areas of highly vulnerable biodiversity" in any event. The addition of a special category of "highly vulnerable" biodiversity on top of significant biodiversity areas will create unnecessary confusion, uncertainty and costs to the overall NBEA system. (k) Of significant concern in this context, is the prospect that yet further "places of national importance" might emerge during a consenting or designation process, as can be the case under the RMA and would seem contemplated by s 561(c). This is again untenable given the overall reform scheme involving spatial planning, and the need for certainty as to where infrastructure can locate (without recourse to alternatives, as under s 512(2)(c)). (l) The specific provision for a closed register of areas of cultural heritage (s 560) lacks certainty on who can make the request and the purpose of the request to be on the closed register. The closed register should relate to places of cultural and/or spiritual values of significance to Māori, including wāhi tapu and	

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		wāhi taonga, at the request of iwi or hapū, where the cultural and/or spiritual values would be better protected by not disclosing specific locations. This provision should set out who an applicant needs to consult with regarding the cultural heritage in the closed register. While supporting some of the criteria or reasons for which exemptions may be granted under the Bill (for example, enabling exemptions for activities that would contribute to the s 5(b) system outcomes (reduction of greenhouse gas emissions, under s 66(1)(j)), that only provides for *exemptions to the effects management framework*, not *exemptions to environmental limits* themselves for the activities covered by section 6(1)(j). Overall, very significant rationalisation of this statutory scheme is imperative, and in order to set and establish in one place and in a coherent way: • That direction over the management of adverse effects for the purpose of s 3(a)(iv) of the NBEA must be made under the NPF (as addressed earlier in this submission) . • That, in providing for such direction, the effects management hierarchy may be applied. • The limitations on the setting of exemptions to environmental limits and the effects management framework, and the factors to be considered by the Minister (or planning committees) in allowing them. • How this overall regime providing for exemptions relates to operative provisions of the NBEA, including in relation to the setting of prohibited activity status under NBEA plans, and for the purpose of consenting and the approval of designations. • The process through which such exemptions may be set (including at the request of submitters to the Board of Inquiry process established for the NPF). In that regard, it is untenable that exemptions may only be allowed upon the request of a Regional Planning Committee. System outcomes of national significance are at stake (greenhouse gas emission reductions in particular) but the effects of renewable electricity generation (transmission and distribution) activities which are essential to	

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		secure and achieve those outcomes, would be felt at local scale . It is only the Minister who would have the ability (including broader and objective overview needed) to consider the case for exemptions at a level of national public interest. Beyond that, the ESEG assumes that the NPF process would sensibly precede the preparation of NBEA plans (noting the intent of clause 31 of Schedule 6 to the NBEA), and there is no deadline set within Schedule 8 as to when planning committees need to be established under the Act (this instead being a matter for regulation under clause 41 of Schedule 8). To only allow an exemption to be approved by way of a change to the NPF under Schedule 6 is both inadequate, and too late in overall system implementation. Regardless, the Minister should be able to allow an exemption from environmental limits of his/her own volition, not just following the request of a planning committee. The ESEG also perceives that the issue of planning committee composition will not be straight forward. There is every prospect then that the NPF would be at least notified or in process before any planning committee is available, through which a request for an exemption may in turn be made to the Minister prior to notifying the NPF. There is no prescribed process set under the Bill for how any other party (than a planning committee) might engage with the relevant planning committee seeking that it in turn request an exemption under s 44. Accepting that exemptions will be essential to achieve the s 5(b) system outcome (reduction in greenhouse gas emissions), this situation must be addressed. The ESEG submits that any party to the NPF process should be entitled to seek an exemption through that process, as established under Schedule 6 to the NBEA. Finally, as to the effects management framework, this should refer to "compensation" (rather than redress) in s 61(e), for the reasons recorded earlier in relation to s 14. In addition, and consistent with the NPSIB, the requirements for offsetting and compensation in ss 61(d) and (e) should only apply to residual effects which are more than minor, not to any adverse effects. *Appended to this submission is a revised set of provisions (**Appendix C**) addressing these concerns regarding the overall statutory scheme for managing effects under the NBEA, including through the allowance of exemptions to environmental limits and the effects management framework.*	

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Resource Allocation 36, 87, 88, 126(3), 128, 233, 268-271, 275, 276, and 689-693	Support and oppose	The ESEG generally supports the intention of the Bill to provide a framework for resource allocation but considers that the allocation provisions as currently proposed in the Bill must be improved in the following respects: • Through providing guidance and direction in the allocation principles including by linking the principles to the purpose of the NBEA and the system outcomes. • Requiring the allocation principles to be "given effect" rather than "had regard to" when giving direction on allocation in both the NPF and NBEA plans. • Requiring the NPF to provide direction on the application of the resource allocation principles. • Filling the current 'gap' in the allocation process to avoid the expiry of existing consents while awaiting the next time period for determining allocation applications. • For applications concerning resources that are needed to support renewable electricity generation activities, preserving both the existing 'investment test' such that the value of the investment of existing consent holders can be 'had regard to' on renewal, and preserving the priority regime. • Requiring the 'allocation statements' to be incorporated into the NBEA plans via a plan change process as provided for in the Bill to allow for participation of infrastructure providers such as electricity generators. While accepting that continuation of the “first in first served” approach established under the RMA is no longer tenable, in order to sustain the capacity of existing wind, geothermal and hydro generation assets to underpin the electrification of New Zealand's economy, secure and continued access to the renewable resources involved *is essential*. The ESEG refers in that regard to the report prepared by Concept Consulting appended to the KC Opinion produced with this submission (**Appendix A**), which addresses the vital need to ensure that existing allocations are not eroded and existing resource consents for electricity generation assets can be effectively and efficiently renewed under the new NBEA system (see sections 4.2 and 5.1.4). The ESEG has significant concerns about the complete absence of guidance in the Bill about the process, assessment and outcomes of consent applications affected by allocation. As currently drafted, there is no direction within the Bill to guide:	As will be clear from the adjacent 'reasons' column, the ESEG has a high level of concern about the proposed allocation regime which is a significant departure from the RMA allocation provisions. The allocation provisions are in of themselves complex and difficult to understand. However, when coupled with the numerous new processes and requirements which create (at the very least) significant uncertainty for generators and all water interests (for example, the limitations on consent duration as well as the uncertainty for all generators created by the broadened powers of review and to cancel consents), it becomes particularly difficult to quantify how substantial the impact of the new allocation regime will be on generators as a whole. Overall however, it appears to the ESEG that the impacts of the proposed new allocation regime on generators with existing consents would be extraordinary because they are at risk of losing relative priority and the significant investment in existing assets would not be a relevant considerations in decision-making. For these reasons the ESEG seeks that the introduction of this new allocation regime be re-considered. ESEG seeks that Ministry officials engage with ESEG to determine whether this new regime should be introduced. If the new regime is to be introduced, ESEG seeks that Ministry officials collaborate with the ESEG in the development of any new regime. It is critical that Ministry officials work through the allocation provisions with ESEG to ensure that they are conducive to enabling the continued operation of renewable electricity generation as well as the development of

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		- the policy development for the inclusion of allocation processes within plans, including in relation to key aspects such as recognition of existing consent holders and their investments; - which methods or processes (e.g. MBAM or affected applications) are to be preferred, over which resources and activities, for what purposes, and having regard to what criteria at each stage of the process (setting plan rules, granting resource consents etc) - for the discretionary allocation processes, when and how such powers will be exercised; and - the processes and assessment criteria for determining an allocation application. The only direction is provided by the allocation principles. It is therefore critical that the allocation principles provide substantive guidance on allocation that is clear and certain. However, as currently drafted, the allocation principles in section 36: - are too high level to provide useful direction; - refer to concepts that do not align with the purpose of the Bill. By using sustainability as an allocation principle, the drafting incorporates an approach that has been largely removed from the Bill (see Explanatory Note, page 1) . Sustainability is not within its purpose and is not one of its outcomes; and - are completely disconnected from the purpose of the Bill, and importantly its outcomes. The principles must link to the system outcomes as these set the framework for the entire NBEA system. For the ESEG, it is important that, allocation decisions (principles and methods) align with the system outcomes in s 5(b),(c), and (i) because these decisions, principles and methods will have major, even profound, implications for the ability of both new activities and existing renewable electricity generation activities (which as discussed in the Concept Consulting report, require renewals reliant on access to these resources) to deliver on these outcomes. As currently drafted, therefore, the allocation principles: - create fundamental issues as to the certainty and robustness of the new system; - leave enormous scope for interpretation and legal argument; and - will result in ad hoc approaches to allocation throughout the country.	new renewable electricity generation to enable decarbonisation of the economy to the required extent. It is imperative that if renewable electricity generation is to be subject to the allocation regime, that the regime serves this objective and does not jeopardise renewable electricity generation which, as currently drafted, the ESEG fears it will. If the above relief is not granted, the ESEG seeks that renewable electricity generation be exempted from the allocation regime either in its entirety, or at least in relation the MBAM and affected application processes. This would include for example deleting section 269(4), or at the very least as it relates to renewable electricity generation. If however, renewable electricity generation is to remain subject to the allocation regime, including in relation the MBAM and affected application processes, the ESEG considers that the amendments set out below will be critical. The ESEG is however again willing to work with officials on these matters. Subject to the proviso below, if renewable electricity generation is to remain subject to the new allocation regime, the ESEG seeks that section 36 be amended as follows: **36 Resource allocation principles** *(1) The resource allocation principles are as follows:* *(a) sustainability:* *(b) efficiency* *(c) equity* *(2) The resource allocation principles in subsection (1) must be applied in a manner that:* *(a) furthers the purpose of this Act; and*

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		Further, the allocation regime for freshwater including the principles (and the Bill) is silent on the concept of Te Mana o te Wai despite it being central to the National Policy Statement for Freshwater Management (**NPSFM**), the water regulator and new Three Waters legislation. Te Mana o te Wai provides a hierarchy of obligations / priorities. Without any linkages and direction in the Bill, integration of systems and frameworks is not enabled, and significant potential uncertainties and argument are created. Te Oranga o te Taiao Statements may be prepared by iwi/hapū (section 106) and these may relate to allocation matters. Such statements may weave in the concept of Te Mana o te Wai. However, there is no clarity as to what, if anything, they may say about (or require change to) Te Mana o te Wai. Importantly, there is no linkage between those statements and the NBEA outcomes, nor are there any linkages between those statements and the allocation provisions. Such statements cannot, therefore, be relied on to incorporate the concept of Te Mana o te Wai. Clear and certain direction on the processes and outcomes for allocation, including in relation to Te Mana o te Wai, is essential so electricity generators can understand at least to some degree within the Bill itself when allocation methods will be imposed as well as what the process, assessment criteria and outcomes of those allocation processes will be. Given the fundamental implications that allocation may have on both new and existing electricity generation, it is critical that detail on the meaning of the principles is provided in the Bill itself rather than leaving this entirely to the NPF. As currently drafted, the Bill requires the Minister (ss 87 and 88) and NBEA plans (ss 126 – 128) to "have regard to" the allocation principles when including directions on allocation. As the only criteria for establishing and directing allocation processes in NBEA plans, the allocation principles will be pivotal. It is key that these principles (once they are amended to provide greater clarity of meaning as sought above) are "given effect" to so rather than only "having regard to" so that they meaningfully guide the form, nature and assessment criteria of the allocation processes to be included in plans. The ESEG also considers that requiring the NPF to provide direction on the application of the allocation principles would provide some certainty to generators about allocation process and outcomes to be included in NBEA plans.	*(b) furthers the outcomes provided for under this Act; and* *(c) recognises the positive effects of using and developing the environment to achieve the outcomes; and* *(d) furthers Te Mana o te Wai in relation to freshwater; and* *(e) ensures the efficient use of the resource; and.* The ESEG considers it crucial that definitions of sustainability, efficiency and equity are provided to provide guidance for the introduction of allocation methods through the NPF and NBEA plans to provide sufficient investment certainty for resource users, and renewable electricity generators in particular. ESEG seeks to develop these definitions in collaboration with Ministry officials. The ESEG does however consider that the following definition of equity may be acceptable to the ESEG as follows: *"equity includes the prioritisation of use of resources that supports the well-being of people and communities"* We note that we have sought relief in relation to section 7 to include a definition of Te Mana o te Wai as provided for in the NPSFM. If REG is to remain subject to the new allocation regime, the ESEG seeks the following amendments to ensure the allocation principles are given significant weight in decision making and that investment in existing REG assets is a relevant consideration during decision-making: Amend s 87 (1)(a), (d) and (2) as follows:

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		Currently, under the RMA, renewal applications have priority over others (except in limited circumstances). In addition, in considering renewal applications, the value of the investment is a relevant consideration. Section 223(5) of the Bill proposes to exclude consideration of the value of an existing consent holder's investment where a renewal application (s 268) is subject of an affected application or MBAM to determine a right to apply. In addition, section 269(4) of the Bill proposes to remove an existing consent holder's priority to have their renewal application heard before others where that application is the subject of these allocation processes. While the RMA also provides for the removal of priority in some limited circumstances, the removal of priority where an application is subject to an affected application process or a MBAM to determine a right to apply is new. The affected application process may relate to allocation-based rules (s 127) which could apply to freshwater and generator's associated hydro schemes, and the MBAM to determine a right to apply process may related to allocation of geothermal water and its associated generation facilities. In combination, therefore, these provisions are of significant concern to the ESEG. These provisions mean that an electricity generator's renewal consent application would be just another application among many and would be vulnerable to being relegated (pushed back in the queue) by other applications in the MBAM or affected application process. If renewal applications are not afforded priority allocation to finite resources, and the value of investment in existing electricity generation activities is not a relevant consideration in allocation applications, the ongoing operation of crucial generation, which supports decarbonisation and therefore New Zealand's security of supply and the Government's renewable energy and emissions reduction plans, would be defeated. ESEG is concerned that the inherent difficulties with the affected application process and MBAM will make it very challenging to consent both new and existing generation activities. Given the significance of electricity generation schemes to the underpinning and sustaining of electrification of New Zealand's economy and achieving the relevant system outcomes (as previously addressed in this submission), it is crucial that generators seeking renewal consents for their electricity generation activities retain priority and that the value of the investment is a relevant consideration when assessing such applications. Where priority is granted, an application must still be assessed on its merits in accordance with the NBEA, and ESEG is not seeking that investment	*(1) The national planning framework ~~may~~ must give directions that—* *(a~~)~~ provide ~~further~~ detail on the application ~~meaning~~ of the resource allocation principles:* *…* *(d) direct how a Regional Planning Committee must give effect ~~have regard~~ to the allocation principles when developing an allocation method in a plan:* *…* *(2) The Minister must, when developing a direction under any of subsection (1)(b) to (i), give effect ~~have regard~~ to the resource allocation principles and have regard to the value of the investment of existing consent holders.* Amend subsections 88 (3) as follows: *(3) Before making a direction under subsection (1) or (2), the Minister must give effect ~~have regard~~ to the resource allocation principles and have regard to the value of the investment of existing consent holders.* Amend subsection 126(2)(b) and (5)(b) *(2)(b) give effect ~~have regard~~ to the resource allocation principles and the directions on their application set out in the national planning framework and have regard to the value of the investment of existing consent holders.* *(5)(b) give effect ~~have regard~~ to the resource allocation principles and the directions on their application set out in the national planning framework and have regard to the value of the investment of existing consent holders.* Insert new subsection 127(3) as follows:

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		prevail over other considerations, rather that it is one matter to be considered among many. To assist in meeting the RM reform objectives, system outcomes and the Government's targets concerning the mitigation of climate change, the ESEG considers that the affected application process and MBAM to determine a right to apply should not apply to applications for the use of resources that are needed for new and continued renewable electricity generation in order to preserve the existing investment test and priority regime. This is the ESEG's preferred position. If this relief is not granted, alternative relief is sought to address this issue, as well as the issues set out below. If electricity generation is not excused from the MBAM and affected application processes, a further issue of significant concern to the ESEG is s 129 which creates a problematic gap for existing consents for activities made subject of the affected application process (s 127(b)). Under this section, existing consents for renewable electricity generation activities could expire due to lack of continuing right to exercise the consents in the interim, before the required time period opens for affected applications or other allocation methods. This gap could fundamentally undermine the entire system, result in the shutdown of all affected electricity generation, all other affected infrastructure no matter the significance of its benefits – for example for lifeline utilities) and all other existing consent holders. This would have catastrophic effects across New Zealand and must be addressed. Further, the new 'affected application' consenting process established in ss 304-314 provides for an open, combined and time restricted, application and consenting process for a resource (via the NPF (s 87) or plans (s 127)). The process involves the notification of a time period within which the consent authority will receive potentially multiple affected applications. This creates a goldrush where every speculator, no matter their merits, enters the system. All applications submitted to the consent authority within the required time period (of which there could potentially be multiple) are to be processed and considered at the same time (s 308). In assessing affected applications, the consent authority must consider the merits of each application against the merits of all the other applications (a beauty parade) and "have regard" to any applicable criteria set out in the NPF or a plan (which is already required in Part 5) (s 314).	*(3) If a Regional Planning Committee develops rules under subsection (2), the committee must—(a) ensure that the rules are consistent with the direction in the national planning framework; and* *(b) give effect to the resource allocation principles and the directions on their application set out in the national planning framework; and* *(c) have regard to the value of the investment of existing consent holders.* Amend subsection 128(2) and insert new subsection (ii), as follows: *(2) A Regional Planning Committee must:* *(i) give effect ~~have regard~~ to the allocation principles before developing any provision for the purpose of subsection (1); and* *(ii) have regard to the value of the investment of existing consent holders.* Insert new subsection 129(3) as follows: *(3) An application for an activity that is held by the consent authority under subsection (2) and is received by the consent authority within 6 months of its expiry may continue to be exercised until the decision on the applications in subsection 1(a) and (b) is made.* Amend section 223(2) as follows: *(2) The consent authority must have regard to* *…* *(h) the cumulative effects of allowing the taking, use and diversion of water on an existing consent holder's use of resources required for renewable electricity generation*

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		The ESEG is concerned about consent authorities only being required to "have regard to" any criteria in the NPF or NBEA plans for deciding affected applications. This should be strengthened to provide more certainty about how applications will be decided. As discussed above, as currently drafted, section 223 removes the value of an existing consent holder's investment as a relevant consideration for activities subject of the affected application process and a MBAM. As currently draft, section 269 removes priority for application subject to the affected application and MBAM processes. If the ESEG's primary relief to exempt electricity generation from the affected application and MBAM processes is not granted, ESEG seeks that the value of existing investment be a relevant consideration for any renewable electricity generation application and seeks to retain the priority of for renewal applications for electricity generation. An additional issue of concern to the ESEG is the current uncertainty for existing consent holders that arises when individuals seek and obtain consents for activities that may cumulatively impact existing consent holder's resource allocations. This is a particular issue for hydro electricity generation. Consents for the take, use and diversion of water, impact the water resource available for generation and therefore generation outputs. The ESEG seeks to ensure that such impacts on electricity generation are at least a consideration during consenting. Finally, in relation to the co-governance Freshwater Working Group, following the production of their report, the Minister must present a response on the report to Parliament. There is no further mention on the role / purpose of the report beyond this point in the Bill. It appears that a lot of work is completed without a purpose, beyond the next steps to developing allocation statements (which may duplicate te Oranga o te Taiao statement). The Minister must then engage with iwi and hapū on matters of freshwater allocation that are relevant for the plan for the region. The outcome of that engagement may be reflected in an 'allocation statement' on the issues relevant to the allocation of freshwater, if agreed between the Minister and iwi and hapū.	Delete subsection 223(5). Amend section 314 as follows: *(1) When determining affected applications under Part 5, a decision maker must* *(a) consider the merits of each affected application against the merits of all other affected applications; and* *(b) give effect ~~have regard~~ to any applicable criteria set out—* *(i) the national planning framework; and* *(ii) a natural and built environment plan.* Amend section 692(2) and insert new subclause (3) as follows: *(2) The Minister must make the report publicly available by whatever means the Minister considers appropriate* *(3) The Minister must invite written submissions on the report from any person and state the closing date for submissions (which must not be earlier than 40 working days after the date the report is publicly notified).* Amend section 693(6) as follows: *(6) When the Regional Planning Committee receives an allocation statement submitted under subsection (5), the Regional Planning Committee must—* *(a) determine how the plan is to be updated which must be in accordance with the plan change processes provided for under Schedule 7 of this Act; and* *(b) update the plan in a manner that is consistent with the plan change processes under Schedule 7 of this Act.*

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		The Minister is to support the submission of the allocation statement to the relevant Regional Planning Committee . It appears that this would include adding provisions into the NPF (that then must be given effect to). On receipt the Regional Planning Committee must: - determine how the plan is to be updated; and - update the plan in a manner that is consistent with this Act. The question for the ESEG is what involvement will communities other than iwi and hapū have in allocation issues once the report and Minister's response is provided? If an 'allocation statement' is submitted to the Regional Planning Committee , will the Regional Planning Committee update the plan under one of the specified plan change processes such that groups other than iwi and hapū can be involved in that process? Given the critical place of infrastructure in sustaining wellbeing (provision for housing, electricity generation capacity and the like) ESEG submits that it is critical that all plan users including infrastructure providers have an opportunity to participate in the updating of plans to reflect allocation statements to ensure that the outcomes are workable for generators and therefore do not cut across the RM reform objectives and government's emissions reduction and decarbonisation objectives. The outcomes of this process will also have dramatic implications for consent duration as discussed below (in relation to s 266- 276). This can be achieved by providing clarity in the Bill that any amendments to the plans to reflect the allocation statements or outcomes of discussions on allocation must be made through the standard plan change processes provided for in Schedule 7 of the Bill. The ESEG also notes that there is no link between the 'allocation statements' and the statement by an iwi or hapū on te Oranga o te Taiao, which may relate to allocation matters and may be provided by iwi/hapū in accordance with section 106 such that there may be duplication, clarity on this matter should be provided in the Bill.	Clarify the linkages if any between the 'allocation statements' and the statement by an iwi or hapū on te Oranga o te Taiao which may relate to allocation matters.
37-43 and 47-55 – Limits and Targets	Support and oppose	As stated above, the ESEG broadly supports the basic intent of the NBEA to set environmental limits for the protection of ecological integrity of the natural environment and human health, to further the purpose element in s 3(a)(iii). Leaving aside the issue of exemptions (addressed above), the ESEG nevertheless has a number of specific concerns regarding the workability of this set of provisions and considers that, as drafted, they do not represent a logical, coherent or likely achievable scheme for the setting of environmental limits and targets.	Delete sections 41-43 Amend section 49(1) as follows: *(1) Targets must <u>only</u> be set for each aspect of the natural environment for which limits are required by section 38(1) <u>and the system outcome in s 5(a)(i) and (ii).</u>"*

Section	Support / Oppose	Reasons	Relief Sought
		Specific concerns in this regard include: • The inherent difficulty in setting scientifically robust but defendable environmental limits for each of the natural environment domains required under s 38, with the NPSFM 2020 experience under the RMA demonstrating just how fraught in practice limit setting can be, at least if it is to be based on any semblance of consensus within the scientific community (as exemplified with the difficulties in landing on a comprehensive National Objectives Framework). • The challenges of that experience would be significantly compounded under the NBEA by the requirement for environmental limits to be set across other natural environment domains including air, indigenous biodiversity, coastal water, estuaries and soil, and to protect (or prevent further degradation of) the "ecological integrity" of these domains. • In that regard, the scientific, conceptual and practical issues raised by the definition of ecological integrity under the Bill is clearly demonstrated through the Boothroyd Paper appended to the KC Opinion included with this submission (**Appendix A**); for example, whereby very different outcomes could result depending on whether limits are to be set on a "minimum biophysical state" or "maximum amount of harm or stress" basis (s 40), and the spatial scale applied for limit setting purposes (noting s 54 and s 55 in this regard, as addressed further below). For these reasons alone, the ESEG strongly supports the proposal that a Limits and Targets Review Panel must be established at the initial stage of the NPF process (under Schedule 6). However, the ESEG considers that it should be mandatory that this Panel be established for the first NPF produced under the NBEA (and as such opposes Schedule 6, clause 31(1)(b), as addressed further below). The ESEG also considers that the expertise of the Panel should be expanded beyond the dimensions covered in clause 3(3) of Schedule 6 to include climate change and emissions reduction including renewable electricity generation so that the Panel is aware of some of the practical implications of limits setting for the overall reform objectives (and system outcomes) before advising the Minister.	Delete section 50(2)(c)(i) Delete section 55(1)(a) The relief sought below (on pages 64-66) regarding Schedule 6, clauses 2 and 3.

Section	Support / Oppose	Reasons	Relief Sought
		The question of "baseline" or starting point also needs careful consideration for the purpose of environmental limit setting, as again addressed in the Boothroyd paper. To that extent, the ESEG supports the sheeting of environmental limits to the state of the natural environment at the commencement of Part 3 of the NBEA (s 37(a)), rather than any more historic references or 'pristine state'. This starting presumption however appears to be contradicted by s 41(2)(a) providing for interim limits to be set as "a state in a management unit *that is more degraded than it was at the commencement of this part*". The implication in this subsection is that the environmental state of a management unit might become more degraded than it was at the commencement of Part 3 of the Bill (s 41(2)(a)) when the very purpose of environmental limits it to prevent that situation from arising (s 37(a)). Rather than providing for the setting of interim limits, this scenario should be addressed through targets for the purpose expressed in s 47, and as addressed further below, or through exemptions to limits (as addressed above). The ESEG supports the purpose of setting targets, including for the purpose of achieving system, framework or plan outcomes (s 48). This however raises the need to be very clear about which system outcomes targets may be set for (the issue of duplication between ss 5 and 38 as addressed above). Specifically, targets should only be set for the section 38 natural environment domains (reflecting s 49(1)), and the system outcome in ESEG's proposed reworded s 5 (a)(i) and (ii) (as set out above). Beyond that, ESEG generally supports: • that targets be set at a level better than that of the associated environmental limit (as would reflect the natural environment state on commencement of Part 3 of the NBEA), under s 49(4); and • that targets set in plans be better than applicable *minimum level targets* set under the NPF (s 49(4)(b)); and • provision for such minimum level targets where the environmental limit represents unacceptable degradation of the natural environment (as at commencement of Part 3 of the NBEA, per s 50).	

Section	Support / Oppose	Reasons	Relief Sought
		That said, the test as to what comprises unacceptable degradation in s 50(2)(c)(i) is opposed. Indigenous plants or animals can face increased risk of local displacement or even extinction through very minor and otherwise innocuous activities. This element of the test of unacceptable degradation is overly stringent and would result in minimum level targets (which all other targets would have to be "better than") relating to levels of impact that very commonly cannot be avoided. While also supporting the model of 'management units' being applied (consistent with Freshwater Management Units under the NPSFM), the ESEG notes that there is a circularity of logic inherent to s 55(1)(a). That is, the size of a management unit is to be determined by whether it would enable limits and their associated targets to meet the purposes set out in s 37 and s 47. However, limits and targets should presumably be set to prevent further degradation in (or restore) ecological integrity in management units with the question of scale determined on a credibly derived ecological basis, independently of the scale of the unit concerned. Simply put, this sets up a "chicken and the egg" scenario. The ESEG submits that management units should be set at a sensible spatial scale such as ecological districts (again refer to the Boothroyd Paper) with environmental limits then reflecting the natural environment state on commencement of Part 3 of the NBEA in such districts. The s 55(2) criteria could also be applied in setting management unit scale, but again through an independent (sequenced, rather than circular) approach. Beyond that, the ESEG supports s 55(3) providing that the scale of a management unit should be set to provide flexibility and to maximise opportunities for appropriate offsetting. Again, all of these points underscore the critical role of the Limits and Targets Review Panel; the need for that Panel to have sufficient expertise to perform its functions, and to engage with infrastructure providers (as detailed further below) during the process, before it provides advice to the Minister in the initial stage of the NPF process. This is addressed further below.	

Section	Support / Oppose	Reasons	Relief Sought
56-60 NPF Purpose and Content	Support and oppose	As addressed above, the NPF has a critical role and place in delivery of the NBEA purpose and overall reform objectives. Done right, the NPF has the potential to avoid a central failing of the RMA – a lack of national guidance from the outset, particularly in terms of setting a framework to enable local authorities to reconcile the many competing tensions within (current RMA) Part 2, and issues of national versus local significance and priority. The converse also applies, and the NPF, if done poorly, could set the NBEA down a path which substantially prolongs or even defeats the reform objectives from being realised. In that context, the ESEG supports s 33 to the extent that it sets the purpose of the NPF as being to further the purpose of the Act in the various ways then stated, but in the form amended as set out above (see page 22). The ESEG supports s 56 and s 57 requiring that the NPF includes strategic direction on system outcomes but seeks that s 57(1)(b) be amended in the same way as s 33(b) (as referred to above) i.e. to address conflicts between environmental limits and system outcomes, in addition to conflict between or among system outcomes. It is also observed that s 56(1)(b) implies that wellbeing is only to be provided for "within relevant environmental limits". To the extent that exemptions are enabled through the NPF (as addressed in the previous section of this submission) whether in relation to (say) provision of housing or to meet the s 5(b) system outcomes (reduction of greenhouse gas emissions), wellbeing would also be provided for through such exemptions. The ESEG supports the mandatory direction in s 58 that the NPF enable infrastructure and renewable electricity generation and its transmission (ss (d) and (e)) but seeks recognition of electricity storage as a contributing element to the wider electricity system.	Amend subsection 57(1)(b) as follows: *(b) <u>as to how</u> ~~for the resolution of~~ conflicts about environmental matters <u>are to be resolved</u>, including ~~those~~ <u>between environmental limits and system outcomes and</u> between or among the system outcomes.* Amend subsection 58(e) as follows: *(e) enabling renewable electricity generation, <u>electricity storage</u> and its transmission.*
68-74 – Giving Effect to NPF Content	Support	The ESEG generally supports the requirement for Regional Planning Committees to amend NBEA and spatial plans to give effect to the NPF. These provisions generally replicate equivalent provisions under the RMA and will create coherency across the NBEA planning system. Again, however, this all underscores the critical place of the NPF in terms of setting environmental limits (with limited exemptions), providing clear and coherent direction as to system outcomes, and over the management of adverse effects.	Retain ss 68-74.

Section	Support / Oppose	Reasons	Relief Sought
75-80, 89 and 92 NPF Direction, Review, Relationship to Consents and Designations	Support and oppose	While these provisions are generally consistent with their equivalent under the RMA) section 75 is opposed along with s 92(4). Section 75(1) would enable the NPF to direct that "all of the following" or "a specified class of" land use, coastal permits, water permits, and discharge permits are reviewed within a specified time period. Section 75(2) would enable the NPF to direct that the duration of any resource consent be reviewed in the circumstances described in s 277(7)(a)-(c), namely where: • there are "exceptional circumstances" relating to the effects of climate change and natural hazards, or a risk of "significant harm or damage to human health, property or the natural environment"; or • there is new information which identifies significant harm of this kind; or • it is necessary to ensure compliance with limits and achieve targets. This goes significantly beyond the equivalent provision in s 43A(1)(f) of the RMA, as it enables a national standard to direct condition reviews where new standards have been made. It is unrealistic to authorise a direction that all resource consents in New Zealand (land use, coastal, water or discharge) might need to be reviewed within a specified time period. The resource management system simply does not have the capacity to cope with such a direction. This is also unnecessary as s 277 provides for the review of consents for these purposes regardless, at the discretion of the consent authorities who would be aware of specific local circumstances potentially triggering the stated review grounds. Beyond that, as to s 75(2), it is unclear why the *duration* of a resource consent would need to be reviewed in response to new environmental limits or targets (s 277(7)(b)). The issue of consent duration specifically is addressed further below, and a matter of significant concern to the ESEG. Section 92(4) is opposed in providing that a framework rule that exists when a designation is made prevails over the designation. Framework rules may go considerably beyond the scope of environmental limits, for example addressing matters such as landscape, natural character, or system out comes relating to urban and rural	Delete section 75. If this is not accepted, delete subsection 75(2) Amend s 92(4) to exclude framework rules relating to the use of land.

Section	Support / Oppose	Reasons	Relief Sought
		environments. While this provision has an equivalent under the RMA (s 43D(4)), the scope and likely effect of framework rules will be considerably more expansive than for a national environmental standard under the RMA. Resource consents (including land use consents) can be obtained to contravene a framework rule (see s 17(2) of the Bill). There is no reason why a designation should not be able to be secured in order to prevail over a framework rule relating to the use of land.	
Sections 86 and 233 and 276–Adaptive Management Approach	Support	The ability of the NPF to direct the use of an adaptive management approach in the circumstances stated in s 86(1) is supported. While the s 233 factors and tests are also generally supported, the following specific elements are opposed: • The requirement that an adaptative management approach must only allow an activity to commence on a "small scale" or for a "short period" (s 233(2)(a)). • The requirement in s 233(4)(c) that indicators prompt remedial action before *any* adverse effects "occur". While the factors and tests in this section are otherwise sensible and generally consistent with the Supreme Court direction in *Sustain Our Sounds v New Zealand King Salmon Company*, any direction that an activity commence on a small scale (or for a short period) should be at the discretion of a consent authority. The adaptive management approach is particularly important for geothermal electricity development and a requirement that both the development of new and existing infrastructure must only occur on a small scale or for a short period or in stages would be very problematic as it would effectively prevent such development from occurring due to the investment risk and high development costs. Indicators (or triggers) should trigger remedial action before adverse effects become "overly damaging" (*Sustain Our Sounds*), rather than before any adverse effects arise at all (s 233(4)(c)). Similarly, triggers should be the primary tool for determining unacceptable effects for permanent discontinuation of the activity in s 233(2)(f).	Amend s 233(2) as follows: *(2) An adaptive management approach ~~must~~ may -* *…* *(f) include provisions to allow for an the [sic] activity to be discontinued permanently where triggers are met for any ~~(in circumstances where the effects~~ that are found to be unacceptable.* Amend s 233(4)(c) as follows: *(c) indicators are set to prompt remedial action before adverse effects ~~occur or~~ reach unacceptable levels;*

Section	Support / Oppose	Reasons	Relief Sought
93 – Preparation of NPF	Support and oppose	Refer submission points under Schedule 6 below (page 58.	
96-112 124 (5) & (6) – NBEA Plans	Support and oppose	These provisions of the NBEA addressing the purpose, scope and content of NBEA plans are generally supported, with the following specific points made: • As addressed previously, the purpose of NBEA plans as expressed in s 96 including to further the purpose of the Act and provide for the integrated management of the *natural and built environment* is supported and should be retained. • Also supported is the requirement in section 97 that an NBEA plan must give effect to the NPF and be consistent with the relevant regional spatial strategy (the consistency and coherence point addressed previously). • Sections 104 and 109 are supported in that context (but appear to duplicate each other). • A plan must have strategic content reflecting the major policy issues, but strategic content cannot be amended through an independent plan change request (clause 69(3) of Schedule 7). It is important for development purposes that requests can be made to change plan rules and therefore it should follow that strategic content does not include rules. • While the scope of what plans must include (under s 102(2)) is generally supported, ESEG reiterates the need (as to s 102(2)(e)) for both the NPF and NBEA plans to resolve conflicts between limits and outcomes (not just between or among environmental outcomes). • The ESEG also reiterates the point made earlier about s 102(2)(c) needing to accommodate provision for exemptions to environmental limits being allowed by the Minister through the NPF. • Given the importance of plans and strategies prepared under the Climate Change Response Act 2002, these should be referenced in s 107(1) as matters to be given	Retain ss 96-112 to the extent addressed in this part of the submission, subject to the following: Amend s 102(1) as follows: *"A plan must have strategic content that reflects that major policy issues of a region and its constituent districts, but the strategic content must not include rules."* Amend s 102(2)(c) to provide for exceptions to environmental limits i.e. that in each case, the provisions apply "*unless and to the extent that an exemption to an environmental limit is approved under Part 3 of the Act".* Amend s 102(2)(e) as follows: *(e) provide direction as to how ~~resolve~~ conflicts relating to any aspect of the natural and built environment in the region are to be resolved, including conflicts between or among the environmental outcomes and between system outcomes stated for the region and its constituent districts and environmental limits* Delete sections 105(2), and 124(5) and (6). Amend s 107(1) to add: *"(d) any emissions reduction plan or national adaption plan prepared under the Climate Change Response Act 2002".*

Section	Support / Oppose	Reasons	Relief Sought
		particular regard (consistent with the requirements in the RMA for the preparation of regional and district planning documents). • The ESEG supports the specific exclusions (matters to be disregarded) under s 108 to ensure the intended focus is on true environmental issues (rather than broader amenity considerations). However, these exclusions should be extended to include 'amenity values', as defined under the RMA. • The ESEG also supports provision for requirements relating to environmental contributions to be set through NBEA plan rules (including to ensure positive effects are achieved and mechanisms to offset adverse effects are available (s 112). The ESEG opposes s 105(2), and the equivalent provision in s 124(5) and (6) whereby an NBEA plan may set rules that affect the exercise of existing resource consents. That provision is not necessary and should be deleted given the scope to review resource consent conditions to ensure compliance with limits and achieve targets.	Add to s 108: (e) *amenity values.*
153-159 Consent categories	Oppose in part and amend	Section 153(1) categorises the different types of consent activities. Notably the explanation of a controlled activity provides a consent authority with the ability to grant (with or without conditions) or decline an application for a controlled activity in accordance with any relevant provisions of the NPF or Plan. Many of the generation assets managed and operated by the ESEG (hydro in particular) are permanent structures that form part of the existing environment within which they operate. In the context of existing planning frameworks, many of these structures are sensibly provided for as Controlled Activities under RMA plans (where consents must be granted) in acknowledgement of their enduring nature. If these assets retain their categorisation as Controlled Activities under the NBEA, it creates a nonsense that consent may not be granted for these permanent structures. The ESEG submits that the RMA definition of Controlled Activities should be retained. Under s 154(4)(b), an activity is to be prohibited if it would "not contribute to" relevant outcomes.	Delete the description of Controlled Activities in s 153(1) and replace it with the RMA description (RMA s 87A(2).Delete s 154(4)(a) and amend s 154(4)(b) to read: *(4) An activity is a **prohibited** activity if* *(a) it would breach a limit specified in the national planning framework or a plan unless and to the extent that an exemption to that limit has been granted by the Minister ~~(either taken in isolation or, if allowed to be carried out in addition to consented activities that have existing use rights or are permitted)~~; ~~or~~ and* *(b) it would ~~not contribute~~ be contrary to the relevant outcomes.* Amend s154(6) to read: *(6) An activity is a discretionary activity if—*

Section	Support / Oppose	Reasons	Relief Sought
		Activities which have a neutral (or no) effect on a system outcome could be classified as prohibited on the basis that they do not positively contribute to that outcome. To give an example, renewable electricity generation projects may contribute to some outcomes (e.g. well-functioning urban areas and greenhouse gas emission reduction) but not others. As worded, such activities would need to be prohibited. The requirement in s154(4)(b) should be amended to refer to activities which are *contrary* to the relevant outcomes. Further, the reference to activities which would breach a limit if carried out "*in addition to consented activities that have existing rights or are permitted*" would likely be unworkable, as necessitating a national or at least regionwide assessment of the cumulative effect of all existing activities of a particular kind or effect (relative to the environmental limit involved), and a prediction of the incremental impact of as yet unknown future activities of that or similar kind or effect. Given the consequence of prohibited activity status, a high threshold should be met before an activity is classified as such. This cumulative impact consideration is best left addressed in the context of discretionary activities, i.e. whereby it is unclear whether the activity concerned would breach a limit. In summary, s 154(4)(a) requires amendment in order for the prohibited activity requirements to be workable. Changes are needed in s 154(6) for discretionary activities to ensure the requirements work effectively along with those for prohibited activities in s 154(4). It is not necessary for a discretionary activity status to be based on contribution to relevant outcomes alone, as this is a matter for consideration on consent decisions under s 223. In addition, a catch-all should be provided where an activity is not otherwise a permitted, prohibited or controlled activity. For the reasons addressed earlier in this submission, s 154(4) needs to provide for situations in which exemptions to limits are granted by the Minister.	*(a) it is unclear or unknown whether the activity will breach a limit, or not achieve targets ~~or not contribute to the relevant outcomes~~; or* *(b) it is likely to breach a limit, or not achieve targets~~, or not contribute to the relevant outcomes.~~; or* *(c) it is not a permitted, prohibited or controlled activity in accordance with subsections (2) to (5).*
163 - Consultation	Oppose in part and amend	The reference in s 163(2) to 's 6(3)' appears to be in error. The more likely reference should be to 'Schedule 10, clause 6(3)', otherwise potential conflict arises between the requirements of s 163 and Schedule 10. More broadly the ability for the NPF or a plan to direct consultation is opposed as being contrary to long established practice under the RMA and as being inconsistent with	Amend s 163(1) by deleting the words "…~~*unless the national planning framework, the relevant plan… requires*~~". Amend s 163(2) as follows:

Section	Support / Oppose	Reasons	Relief Sought
		clause 6(3) of Schedule 10. This aspect of s 163(1) should be deleted with consequential amendments made to s 818(3)(c) and clause 41 of Schedule 8, deleting the ability for regulations to be made or for policies to be set by Regional Planning Committees requiring consent holders to meet engagement costs with Māori in order to comply with the Act. Engagement with iwi and hapū would continue to be required as a matter of best practice and any costs associated with that should be a matter determined within the context of that engagement.	*To avoid doubt, ~~section~~ Schedule 10 clause 6(3) is subject to subsection (1).*
178(5)(a)	Oppose	The ability for a consent authority to return a notified application for a resource consent if no response is made by an applicant to a request for further information is opposed as being unnecessary and inappropriate. A consent authority may decline an application if it considers that it has inadequate information to determine that application (s 223(13)). It is unclear within the provision as to whether it would be triggered by an applicant failing to respond to part of a further information request (where other parts are responded to). Further information requests are frequently made for matters reasonably assessed by consent applicants to be beyond the proper scope of consideration of a resource consent (having regard to the statutory tests set under the RMA) and undoubtedly that would continue to be the case under the NBEA.	Delete s 178(5)(a).
198-206 Notification	Support and oppose	These sections provide direction for how plans and the NPF will provide direction related to notification and affected person tests/rules. Some aspects of these provisions are **supported**, in particular: - The focus on the purpose of notification (being the move towards provision of relevant information that is likely to materially affect the ultimate consent decision) is supported over the current minor but not less than minor test, which is often highly subjective, however this needs to be made more express within s 198 itself . It is common for consent applicants to go through time consuming, costly hearings following notification decisions that are designed to provide submitters with participation in a consenting process, regardless of the likelihood (in many cases) that the submitter's contribution to the hearing will contribute new or cogent information and therefore materially alter the decision. Public participation will be provided at the front-end in the plan-	Amend ss 198, 200 to 202, and 204 to 207 as follows: ***198 Purpose of notification*** *(1) A purpose of notification (whether public or limited notification) of an application for a resource consent is—* *(a) to obtain further information about the ~~application~~ proposed activity's effects from ~~individuals~~ affected persons or members of the public that is likely to have a material effect on the consent decision; and* *(b) through that information, to better understand the proposed activity and its effects including how the proposed activity ~~meets or~~*

Section	Support / Oppose	Reasons	Relief Sought
		making process and need not be replicated in the consent process unless it is likely to provide additional information about its effects or impact the consent decision outcome. - The ability to weigh the positive and negative effects when assessing affected persons under s 201(2)(a) is necessary and appropriate. Electricity generation often produces significant positive effects at a national and regional level. A focus on purely adverse local effects when considering affected persons and notification ignores the overall effects of an activity and this wider lens is necessary and supported. - The default position in s 203 that public notification is not required for controlled activities. While supporting the purposive aspects of the provisions, as drafted the clauses are unclear and require the following **amendments to improve clarity**: - It is unclear whether the clauses that relate to the initial decision to include notification/affected person provisions in the NPF/plans or if they are also relevant to the subsequent notification decision in the context of a future resource consent application. This should be clarified from the outset and throughout to ensure these clauses are relevant only to the former. - The notification purpose section should also clarify the purpose of limited notification as contrasted to public notification, with a clear direction that the latter is only to be used where the nature of information received justifies its use. - A recognition of the impact of notification on the efficiency of the planning and consenting system should also be included as a matter of consideration whether imposing notification provisions in the NPF and plans. - Delete the reference to "meet" or" (alongside "contribute to") outcomes in s 198(b) and s 205(2)(a). These are the only references to "meeting" outcomes in the Bill and is inconsistent with the intention of outcomes which no one activity will be able to meet (as opposed to "contribute to", which reference can be retained) . - Reference only to "mitigation" in s 205 (2)(b) is inappropriate given the focus on the effects management hierarchy as providing for a cascade of effects management tools. As a minimum redress and offset should be recognised	*contributes to the framework or plan outcomes.* *(2) Public notification should only be required where it is likely to improve the resulting decision on the basis that material and relevant information to the purpose stated in **subsection 1** is likely to be obtained from public notification that would not be likely to be obtained through limited notification.* ***200 National planning framework or plans may set or provide for consent authority to determine notification requirements*** *(1) The national planning framework or a plan must, in relation to each activity that requires a resource consent,* *(a) state the notification status of the activity; or* *(b) provide for the consent authority to determine, in accordance with the national planning framework or plan, the notification status of the activity.* *(2) The national planning framework or plan must, in relation to an activity that requires a resource consent,—* *(a) identify who are affected persons for the purposes of notification ~~or persons from whom approval must be obtained (in relation to a permitted activity notice);~~ or* *(b) provide for the consent authority to determine who are affected persons.*

Section	Support / Oppose	Reasons	Relief Sought
		as providing other avenues that mean that notification may not necessarily be required. - S 205(2)(d) requires additional guidance as to when scale or significance 'warrants' public notification. Scale and significance should relate to the effects of the activity and not simply the activity itself. Limited notification should be preferred unless the scale of the effects make that outcome impractical. - New or amended subsection in ss 201, 205, and 206 should be included to ensure the notification considerations link back to the purpose of notification, being the provision of additional information that is likely to be material to and influence the resulting consent decision. - The s 207(a) prohibition on notification where an application is aligned to outcomes or targets is supported but requires clarification because it is unclear how an activity would show that it is aligned to *all* outcomes or targets. Alignment should refer to one or more outcome, and should include plan, framework and system outcomes. - Various other necessary improvements set out in the relief column. Additionally the following aspects of the clauses are **opposed** and require deletion for the following reasons: - Requiring approval in relation to permitted activities should be removed. Approval requirements in relation to permitted activities will substantially increase costs associated with activities that do not have sufficiently significant effects on the environment to justify notification. There is no evidence that further management/participation in permitted activities is necessary or warranted. It is likely to add unnecessary cost, burden and delay to the planning system. - S 200(3)(a) references the likely state of the future environment. This clause adds unnecessary complication at the notification stage. The future environment as a concept will already be addressed through the requirement to assess effects, which is defined to include future effects in s 7 (interpretation) and therefore the future environment is already relevant. - The involvement in proceedings for persons with an interest (provided for by s 201(2)(c)) is not necessary and will likely result in notification that does not	*(3) For the purpose of **subsection (1)(a) or (b)**, the Minister or Regional Planning Committee (as the case may be) must consider—* *~~(a) the likely state of the future environment in light of information they consider relevant in the plan, the regional spatial strategy, or the national planning framework or any combination of those documents~~; and* *(~~a~~b) whether any information obtained from the notification process is likely to make a material difference to the consent decision; and* *(b) the need for efficiency in the planning and resource consenting system and the need to avoid notification and affected person provisions that do not result in information of the sort referred to in subsection (a).* ***201 Determination of whether person is affected person ~~or person from whom approval required~~*** *(1) In this section and **section 202**, decision maker means a Regional Planning Committee, the Minister, or consent authority, as the case may be.* *(~~1~~2) This section applies to a decision maker when determining whether a person is—* *~~(a)~~ an affected person for the purposes of ~~notification of an application for a resource consent; or~~ developing notification provisions in the national planning framework or in a plan in **sections 206 and 207**; ~~or~~*

Section	Support / Oppose	Reasons	Relief Sought
		achieve the purpose of notification as set out in s 198. The purpose of notification should be the touchstone not mere interest in an application. - ESEG considers that mandatory public notification for discretionary activities in section 204 is unnecessarily directive and restrictive. Public notification is costly and should only be required in relation to discretionary activities where it will clearly benefit and materially influence the decision on the application. Furthermore, while public participation has an important role, it must be proportional to the issues at hand. Flexibility should be given to discretionary activities to provide for limited notification where effects are readily understood and public notification will not assist the decision-maker. - The s 205(2)(b) reference to "concerns from the community" is likely to increase the cases where notification is required, even where effects of the activity do not require notification and where notification will not benefit or materially change the decision making process. Community concern by itself without actual effects should not be a reason for public notification, as this will not help achieve the purpose of notification in s 198. - Limited notification based on the 'scale and significance' of an activity (as provided for in s 206(c)) provides a very unclear basis for determining limited notification. The magnitude and extent of notification will already be relevant in determining who are affected persons and the test should therefore be limited to affected persons and the purpose of notification and not build additional uncertainty regarding unclear concepts related to scale and significance.	*~~(b) a person from whom approval must be obtained in relation to a permitted activity.~~* *(~~2~~3) The decision maker must—* *(a) weigh the positive effects of the relevant ~~proposed~~ activity against the adverse effects that the activity has on the person:* *(b) consider whether information from the person is necessary to understand the extent and nature of effects or contributions towards outcomes:* *(c) consider whether the relevant effects on the person means they have ~~has~~ an interest in the application greater than that of the general public and their notification will achieve the section 198 purpose of notification:* *(d) consider whether the person's involvement will result in information that has a material effect on the consent decision ~~or permitted activity decision~~ (whether granted or not) and any conditions imposed:* *(e) determine whether the proposed activity is on ~~or adjacent to~~, or may adversely affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 14:* *(f) determine whether there are any—* *(i) affected protected customary rights groups; or*

Section	Support / Oppose	Reasons	Relief Sought
			(ii) affected customary marine title groups (in the case of an application for a resource consent for an accommodated activity). *(~~3~~4) A person is not an affected person ~~or a person from whom approval must be obtained~~ if—* *(a) the person has given, and not withdrawn, approval for the proposed activity in a written notice received by the decision maker before they make a determination under this section; or* *(b) the decision maker is satisfied it is unreasonable in the circumstances for the applicant to seek the person's written approval.* *(45) For the purpose of* ***subsection (~~2~~3)(e)****, the decision maker must have regard to every relevant statutory acknowledgement made in accordance with an Act specified in* ***Schedule 14****.* *~~(5) In this section and **section 202**, **decision maker** means a Regional Planning Committee, the Minister, or consent authority, as the case may be.~~* ***202 Determination of affected protected customary rights group and affected customary marine title group*** *For the purpose of section 201(~~2~~3)(f),—* *…* ***204 Public notification for discretionary activity*** *Subject to section 198 a ~~A~~ discretionary activity must be processed with public notification unless a plan or*

Section	Support / Oppose	Reasons	Relief Sought
			the national planning framework states ~~that no notification or limited notification is required~~ otherwise. ***205 When to require public notification in the national planning framework or a plan*** *(1) This section and sections 206 and 207, apply to the development of notification provisions the national planning framework or in a plan.* *(2) In this section and sections 206 and 207 **decision maker** means—* *(a) a Regional Planning Committee in relation to a plan; or* *(b) the Minister in relation to the national planning framework.* *(~~2~~3) A decision maker must include provisions in a plan or national planning framework that require public notification of an application for a resource consent if satisfied that:* *(a) 1 or more of the following apply:* *(~~a~~i) there is sufficient uncertainty as to whether the relevant ~~an~~ activity could ~~meet or~~ contribute to outcomes, or the activity would breach a limit:* *(~~b~~ii) there are clear risks or impacts that cannot be mitigated, offset, or redressed by the proposal:* *~~(c) there are relevant concerns from the community:~~*

Section	Support / Oppose	Reasons	Relief Sought
			(~~d~~iii) the scale or significance (or both) of the effects of the proposed activity ~~warrants it~~ requires public notification because limited notification is not practicable; and *(b) The information that would result from public notification:* *(i) is necessary to understand the extent and nature of effects, or contributions towards outcomes and will materially affect the decision on the application and any conditions imposed, and* *(ii) would not be likely to be secured via limited notification in accordance with section 206.* ***206 When to require limited notification in the national planning framework or a plan*** *A decision maker must include provisions in a national planning framework or a plan that require limited notification of an application if satisfied that 1 or more of the following apply:* *(a) it is appropriate to notify any person who ~~may~~ represents a public interest that can provide information about an activity's effects that may materially affect the decision on the application and any conditions imposed:* *(b) there is an affected person in relation to the activity:* *~~(c) the scale or significance (or both) of the proposed activity warrants it.~~*

Section	Support / Oppose	Reasons	Relief Sought
			207 Prohibiting public or limited notification <u>in the national planning framework or a plan</u> *A decision maker must <u>include provisions in a national planning framework or a plan that</u> prohibit public and limited notification of an application for a resource consent if satisfied that 1 or both of the following apply:* *(a) the activity is clearly aligned with <u>one or more relevant</u> ~~the~~ system, framework, or plan outcome~~s~~ or targets ~~set by legislation or plans~~; and* *(b) there is no affected person.*
215 – Discretionary Hearings	Oppose	The ability for a consent authority to decide not to hold a hearing regardless of whether the applicant or a submitter wishes to be heard is a substantial departure from the RMA. For the scale of projects of concern to the ESEG, it is untenable that the applicant would not have a right to be heard given the very substantial capital commitment to the project involved, and the costs and investment associated with the resource consent process itself. While it is accepted that an objective of the Bill is to improve process efficiency, that outcome is better secured through attention to the notification provisions (as addressed elsewhere in this submission table) to ensure that those parties including submitters to a resource consent hearing would add value to that process. This section should be amended to require that an applicant (at least) would have the right to be heard regardless of whether a resource consent application is notified (public or limited).	Amend s 215 as follows: *(1) A consent authority may decide not to hold a hearing on an application for resource consent.* *(a) If it considers it has sufficient information to make a decision on the application without a hearing, and* *(b) ~~regardless of whether~~ <u>neither</u> the applicant <u>nor</u> any submitter wishes to be heard.* Add a new subsection (3)(c). (c) *<u>must hold a hearing if the applicant wishes to be heard.</u>*
221(3) and (4)	Oppose	These subsections are unnecessary and inappropriate given that under clause 87 of Schedule 7, the well-established standard timeframes for provision of evidence by applicants and submitters are set out, with those timeframes having worked well under the RMA since introduced through s 41B. There is no need for a provision directing that briefs of evidence must be filed within the time limit prescribed by regulations or otherwise "as soon as practicable" after the closing date for submissions. Regardless, leaving aside the considerable uncertainty as to what is meant by "as soon as practicable", it is unrealistic to require provision of evidence with reference to the	Delete ss 221(3) and (4).

Section	Support / Oppose	Reasons	Relief Sought
		closing date for submissions. There can be very real issues facing an applicant (or indeed submitter) in terms of the availability of experts with relevant qualifications and experience. The deadline for filing evidence should be set with reference to the hearing date enabling applicants and consent authorities to sensibly case manage application and hearing processes in an efficient way. It is, after all, the date of the hearing that matters in terms of fair notice to other parties as to the content of evidence being relied on, not the date upon which submissions close.	
222 Technical review of draft conditions	Support	ESEG supports section 222 allowing an applicant to request a technical review of any draft conditions of a consent. The associated exclusion from processing timeframes under s 188(k) is similarly supported.	Retain ss 188(k) and 222.
223 Consideration of resource consent application	Oppose in part and amend	Sections 223(2)(c) and (d) require that a decision-maker must have regard to the NPF. However, s 223(10)(a) states that a consent authority may have regard to NPF if satisfied the Plan doesn't adequately deal with matter. Given that the core focus of the NBEA will be on system outcomes, it is unclear as to why there is no requirement to consider, in the context of a resource consent application, whether a proposal provides, promotes or will achieve the system outcomes. Given the importance of plans and strategies prepared under the Climate Change Response Act 2002 these should be referenced in s 223(2)(d) as part of the matters to be considered. As addressed previously in this submission, the exclusion in s 223(5) leads to the disregarding of the value of an existing consent holder's investment when applying for renewed consent 6-months prior to expiry (s 268) for affected application consenting process (ss 304 to 314). The affected application process may relate to the allocation-based rules (s 127) which could apply to freshwater and its associated hydro schemes, and geothermal water and its associated generation facilities, where the level of investment should not be disregarded, particularly given the significance of these schemes/facilities (and their renewal) in underpinning and sustaining electrification of the economy and achieving relevant system outcomes as addressed previously in this submission .	Clarify what is required. Amend s 223(2)(c) by adding new (iv): *(iv) section 5 of the Act* Amend s 223(2)(d) to add (*iii) any plan or strategy prepared under the Climate Change Response Act 2002.* Delete s 223(5). Amend s 223(11)(a)(i) by adding the words "*unless and to the extent that an exemption to that limit or target has been granted by the Minister."* Delete s 223 (11) (a) (vi) and (vii). Add a new s 223(8)(f) as follows: *(f) Any adverse effects on amenity values.*

Section	Support / Oppose	Reasons	Relief Sought
		The preclusion of ability to grant consent to activities that breach a discharge permit restriction (or that in a coastal permit) is opposed, as new consent applications (or applications for changes to consent condition to which these same tests apply under s 274) may be sought to do precisely that, and this needs to be provided for under the NBEA. For the reasons addressed earlier in this submission, s 223(11) needs to provide for situations in which the Minister has granted an exemption to environmental limits. As also addressed previously in this submission, in relation to plan content, ESEG supports the scope of matters that must be disregarded under s 223(8) but considers that this should be extended to include a reference to amenity values as defined under the RMA.	
229 – Grant of permits	Oppose	Section 229(2)(a) states that a consent authority must not grant a discharge permit if, *before reasonable mixing*, a discharge gives rise to any significant adverse effects on aquatic life or irreversible effects on the waterbody, unless there are exceptional circumstances. This is considered to be unworkable. It will have fundamental implications for the operation of infrastructure and may well prove fatal to many such applications for activities essential to achieve key system outcomes including in relation to well-functioning urban and rural environments, and greenhouse gas emission reduction. Given the general requirements to comply with environmental limits to protect the natural environment, this section is unnecessary regardless.	Delete s 229(2)(a).
253(2)(b)	Oppose	The ability for a submitter to raise an issue on appeal that was not raised in that person's submission is opposed. This provision has the potential to significantly expand the scope and costs of (and render less efficient) the overall resource consent application process. Submitters should be required to at least identify the issues of concern to them from the outset so that all issues are on the table for the first instance hearing, rather than keeping their powder dry for any appeal phase to follow. While a resource consent application can be amended (within scope) as the resource consent process progresses, that is not in a way that would raise any new or additional effects on the environment.	Delete s 253(2)(b).
254(2)	Oppose	It is not necessary to allow up to 15 working days for a notice of appeal to be served on the other parties to the application. From an applicant's perspective, they may have	Amend s 254(2) to refer to five rather than 15 working days.

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		taken steps by way of preliminary implementation of the resource consent application without any knowledge of an appeal having been filed and be unduly prejudiced by the passage of three weeks from the date of filing until notice that appeal is received. The RMA provides for five working days for an appeal to be served. Given the ability to file documents electronically, even that is a generous (more than adequate) timeframe.	
266-276 Duration	Oppose in part and amend	Section 275 specifies a consent duration of 10 years for water activities unless a Plan specifies differently, following completion of the Freshwater Working Group recommendation process and preparation of allocation statements as agreed with iwi/hapū at a regional level. This gives rise to considerable uncertainty as to whether and when any plans will provide for a different (longer or shorter) duration period for the range of activities covered by the section. More broadly, for reasons addressed throughout this submission, to confine consent duration to 10 years for all but the major hydro schemes (and national grid connected renewable electricity generation but excluding its operation) is strongly opposed. This would materially impact on the capacity of the Bill to deliver on the system outcomes relating to reduced greenhouse gas emissions and well-functioning urban environment, by undermining the degree of investment certainty needed to warrant the substantial capital investment required in new renewable electricity generation assets, where not practicably able to be connected directly to the national grid. The duration limitation would apply to many renewable electricity generation activities, including existing operations, reliant on the taking, using, damming, diverting or discharge of water. For example, all geothermal electricity generation operations and the numerous hydro schemes that are not one of the major hydro schemes provided for under s 276(3)(b). In the case of geothermal electricity generation the geothermal takes and discharge are inextricably linked to provide pressure support to the geothermal reservoir in order to maximise its sustainability over the long-term and to protect geothermal features and vegetation. Under s 275(1)(a) the taking and use of water does not apply to geothermal water (i.e. geothermal takes can be for longer than 10 year duration) but any geothermal discharges are caught by subclauses (b) and (c) of s 275(1) and thereby limited to 10 year duration. A 10 year duration limit would not provide investment certainty for geothermal operations due to its very high costs of development and such projects would be unlikely to proceed. Further, it is noted that many of the development	Delete s 275. Alternatively amend s 276 as follows: *(1) **Section 275** does not affect the duration of a resource consent if —* *~~(a) an applicant for a resource consent—~~* *~~(i) seeks, as part of their resource consent application, a determination from the consent authority that section 275 does not apply; and~~* *~~(ii) demonstrates that the~~* *~~(a)~~the application is primarily for an activity described in subsection (3).~~; and~~* *~~(b) the consent authority determines that section 275 does not apply after being satisfied that application is primarily for an activity described in subsection (3).~~* *(2) If subsection (1)~~(b)~~ applies the consent authority must determine the duration of the resource consent in accordance with sections 223 and 266.* *(3) The activities referred to in subsection (1)~~(a)(ii)~~ are:* *…* *(c) the construction, operation, upgrading, or maintenance of any of the following infrastructure activities:* *…* *(v) renewable electricity generation facilities that connect directly to the national grid ~~electricity~~ ~~transmission~~ or local distribution network:*

Section	Support / Oppose	Reasons	Relief Sought
		geothermal systems within the Taupo Volcanic Zone are located on land held by Māori land trusts and the duration limit would constrain the ability of these trusts to develop their lands. Electricity generation facilities are long term assets, so even with longer duration consents (up to the maximum 35 years currently allowable) there will be a need for periodic consent renewals without additional works necessarily taking place. Accordingly, there should be scope for an extended consent duration to allow for certainty/efficiency in the operation of these assets. An applicant can seek a determination that s 275 does not apply, if they can demonstrate that the application is consistent with infrastructure exemptions in s 276. It is unclear why this determination is necessary or appropriate given the exemptions would be in the Act regardless, i.e. are set out in s 276(3). Section 276(3)(b) provides exemptions for major hydro schemes, including the construction, **operation**, upgrading, or maintenance, subject to approval of the consent authority (s276(1)(a)(i)). By contrast, the s 276(3(c)(v) exemption for grid connected renewable electricity generation provides only for its construction, upgrading, or maintenance **but not its operation**. The reason for this is unclear given the infrastructure activities referenced in s 276(3)(c) are clearly all nationally significant. It is common for renewable electricity generation to be developed in stages, with the early stages connected to the local distribution network rather than the national grid. Beyond this, the ability of an NPF or Plan to reduce the maximum duration of consents involving use or access of or to renewable resources (to less than 35 years) under s 266(4) is opposed, for the same reasons.	… Delete s 266(4)
281(7) and (8)	Oppose	The excessive and draconian powers for a consent authority to cancel a resource consent as provided for under s 281(7) and (8) are strongly opposed. A territorial authority would be able to cancel a land use consent that does not comply with a plan rule giving effect to any part of the NPF relating to the natural environment (in addition to rules addressing natural hazards, climate change and contamination). Regional Councils would have the ability to cancel resource consents following a review where a relevant environmental limit is breached resulting in significant adverse effects on the environment that cannot be rectified through any consent condition.	Delete s 281(7) and (8).

Section	Support / Oppose	Reasons	Relief Sought
		The whole purpose of a resource consent is to provide statutory authorisation to depart from plan rules (whether addressing natural environment dimensions of the NPF, natural hazards, climate change or otherwise). Under the NBEA, resource consents would not be able to be granted in contravention of an environmental limit unless an exemption is provided for through the NPF. Whether granted under the RMA, or in turn under the NBEA, it would completely undermine the requisite degree of resource consent security to reserve the power for a consent authority to later cancel a resource consent that was legitimately approved in these circumstances. Dealing with renewable electricity generation infrastructure specifically, it would also undermine the capacity of the NBEA to deliver on the system outcomes relating to well-functioning urban environments and the reduction of greenhouse gas emissions if resource consents for existing renewable electricity generation assets were able to be cancelled in this way, including for the reasons addressed elsewhere in this submission table. It is one matter for the conditions of a resource consent to be reviewed in the situations referred to in s 281(7) and (8) but that is already provided for under s 277 in relation to climate change adaptation and natural hazards. The range of plan rules that could be said to give effect to parts of the NPF relating to the natural environment could be extensive. Being able to cancel resource consents in these circumstances is simply a bridge too far.	
315-327 Alternate consenting pathways	Oppose in part and amend	Section 316 'eligible activities' means any activity that is, or is ancillary to: (*d) renewal of a consent for renewable electricity generation (including hydro-electricity)* *(e) wind or solar energy generation* ESEG is concerned that new geothermal, ~~new hydro, carbon storage,~~ battery storage, hydrogen production or upgrade/expansion of renewable electricity generation would not be eligible for the fast-track process. The ESEG considers that the fast-track process should be considered to include these activities and thus ensure that good progress is made toward decarbonising the New Zealand economy in accordance with the Government's targets and objectives. It is considered that eligible activities in s 316(d) should apply to the upgrade or expansion of renewable electricity generation (i.e. brownfield development), rather than just renewals.	Amend s 316 (d) and (e) and add a new clause after (e) as follows: *(d) upgrading, expansion or a renewal of a consent for, renewable ~~energy~~ electricity generation (including hydro-electricity~~)~~:* *(e) geothermal, wind or solar ~~energy~~ electricity generation:* *(ee) hydrogen production utilising renewable energy or electricity storage technologies:* Amend s 324(1) as follows:

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		Section 324(1) sets out the matters to be considered by a panel on a consent for an eligible activity (such as ss 223 to 239 on decisions and conditions). In addition, it would be appropriate for the panel to enable and consider a technical review of draft conditions under s 222, where requested by an applicant. Section 326(6) specifies a maximum 2-year lapse period which means that it only works for "construction ready" projects. Renewable electricity generation activities typically have long lead in times (e.g. it can take two years to secure a turbine alone) such that this lapse period is unworkable. The required lapse period is best assessed by the Minister when determining whether to accept the application for fast-tracking based on the criteria set out in s 318. Deleting subsection 326(6) would provide for an appropriate lapsing date to be decided on a case-by-case basis by the expert consenting panel. This would better provide for staging of development and to accommodate supply chain issues and disruptions.	*(1) The panel must consider an application for a resource consent for an eligible activity in accordance with* ***sections 222~~223~~ to 239, 242, and 293****. Those sections apply as if the panel were a consent authority.* Delete s 326(6).
352(1)	Oppose	Under s 352(1) Boards of Inquiry would be given the discretion to dispense with a hearing (through reference to s 215). For the reasons submitted in relation to s 215 above, and particularly for the nature of matters referred to a Board of Inquiry (being confined to matters of national significance) a hearing should be mandatory.	Amend s 215 as requested above and otherwise ensure that hearings are mandatory where requested by an applicant for matters referred to a Board of Inquiry.
555-567 Places of national importance	Oppose	Section 562 sets out the following highly vulnerable biodiversity area criteria: … • *area of 1 or more nationally critical species (e.g. long-tail bat, Australasian bittern)* • *critically endangered ecosystem* • *remaining example nationally of type of ecosystem* Section 563 provides that an activity that would have a more than trivial adverse effect on the attributes that make an area a HVBA **must not be allowed** by a rule, a resource consent, unless exempt in s 564 (where specified in NPF). Section 565 provides for exemptions via the NPF. However, these exemptions are limited to activities on Māori land, conservation, biodiversity activity and/or settlement legislation (but not renewable electricity generation).	See earlier reference to **Appendix C** and suggested deletion of ss 555-567 (at page 22 of this submission) .

Section	Support / Oppose	Reasons	Relief Sought
		For reasons, set out above, including the significant contribution that renewable electricity generation makes towards enabling the decarbonising of Aotearoa New Zealand, the ESEG seeks that these provisions be deleted in their entirety.	
662	Amend	Section 662(2) of the Bill imposes a number of obligations on the National Māori Entity in carrying out its primary functions of monitoring and assessing the effect of the exercise of functions, powers and duties under the NBEA and SPA. The ESEG considers that these obligations should be expanded to include making recommendations to the Minister, Boards of Inquiry and Regional Planning Committees during the course of the preparation of the NPF and NBEA plans, and to consenting authorities, as to how those instruments and their decisions should give effect to the principles of Te Tiriti o Waitangi, and as to what those principles comprise for the purpose of the NBEA.	Amend s 662(2) to add new subsection (e) as follows: *(2) In carrying out its primary function, the National Māori Entity must—* *(e) Make recommendations to the Minister, Boards of Inquiry and Regional Planning Committees during the course of the preparation of the national planning framework and plans, and to consenting authorities during consenting, as to how those instruments and their decisions should give effect to the principles of Te Tiriti o Waitangi, and as to what those principles comprise for the purpose of this Act and the Spatial Planning Act.*
Schedule 1 Transitional provisions	Oppose in part and amend	Several parts of the Bill (including for example, Part 1 including, the purpose, te Tiriti o Waitangi clause, outcomes and decision-making principles) will commence the day	Amend Schedule 1 clause 2(1) as follows: *"Every RMA document in force immediately before the commencement of this clause continues in force according to its terms ~~subject to this Act~~; and"* Or by way of alternative relief, amend Schedule 1 clause 2(1): *"Every RMA document in force immediately before the commencement of this clause continues in force according to its terms subject to the national planning framework once published ~~this Act~~."* And add the following new clauses to Part 1, Subpart 1, Schedule 1: *"Every consent application and every notice of requirement lodged prior to the national planning*

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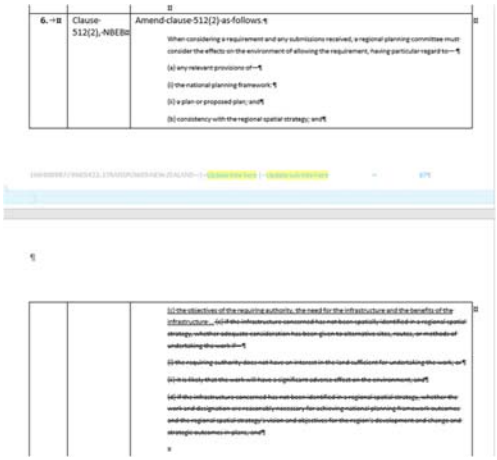
		after Royal assent.[1] Many parts of the NBEA also come into effect at an undetermined date depending on when the Minister seeks that the Governor General issue an Order in Council. There is no direction about whether any of these provisions will impact existing RMA planning documents or consenting, and if so how, to what extent or when. This is a significant concern for the ESEG. The ESEG assumes the intention is that the new NBEA provisions that come into force on Royal Assent or via Orders in Council are relevant only insofar as they inform the preparation of the NPF, NBEA plans and RSSs, as opposed to consenting generally, and designation processes (outside of plan preparation, i.e. under Part 8, subpart 1). However, there is no direction or guidance giving effect to this intention, creating significant uncertainty. It is critical to the ESEG that the new NBEA provisions do not retrospectively affect consent applications as this will lead to inefficiencies, delays, and strongly discourage investment in the development of electricity generation which New Zealand so desperately needs, for reasons addressed previously in this submission.	*framework being made operative continues to be processed under the RMA as if this Act (or relevant parts thereof) had not come into force."* *"Every consent application and every notice of requirement lodged after the national planning framework has been made operative continues to be processed under the RMA subject only to the application of the national planning framework and at which point the equivalent RMA national direction that may have applied to the relevant region ceases to have any further legal effect."* *"Every consent application and every notice of requirement lodged after the Regional Planning Committee notifies its decisions on IHP recommendations for the first plan for the relevant region is to be processed in accordance with this Act."*

[1] NBE Bill, cl 2(1).



Section	Support / Oppose	Reasons	Relief Sought
		It is also assumed that once the NBEA plan is in place for a region, consents in that region are to be considered under the NBEA as opposed to the RMA (clause 2(5)). Once all NBEA plans are developed the RMA can be repealed at that point. Explicit direction on these points is required to remove the uncertainty. To that end ESEG seeks that consent applications and notices of requirement lodged prior to the Regional Planning Committee notifying its decisions on the NBEA plans and RSSs continue to be processed under the RMA as opposed to the new NBEA provisions. Alternatively, if the intention is for the NPF to be had regard to in consenting renewable electricity generation in a manner similar to new NPSs under the RMA (as can have immediate effect), ESEG seeks that absolute certainty be provided about when this will occur, because the NPF could have very significant implications for consenting electricity generation activities. Therefore, the ESEG considers it critical that the Bill clarify that: - consent applications and notices of requirement lodged prior to the notification of the final decision on the NPF continue to be processed under the RMA as opposed to the NBEA, unaffected by that NPF; and - consent applications lodged after the notification of the final decision on the NPF continue to be processed under the RMA subject only to the application of the NPF. The ESEG understood that the intention of the Ministry for the Environment was to develop the RSS and the NBEA plans in tranches. This is not provided for in the NBEA. It is not clear which NBEA plans, or RSSs (if any) will be developed first. ESEG seeks clarity on this matter. The ESEG also notes some inconsistencies that need to be clarified. For example, Schedule 10 commences immediately (information requirements for consent applications), but Part 5 (consenting provisions) does not. The ESEG is concerned that the provision providing for the repeal of the RMA (s 860) is also currently drafted in the absolute, such that there is no ability to repeal the RMA in parts, which may be necessary to ensure a smooth transition.	[Note the above changes are contingent on the ESEG's proposed relief to change the definition of 'operative' in section 7 (interpretation) as set out above] Insert new provisions to clarify that the RSSs and NBEA plans will be developed in tranches or stages and provide specificity as to what regions will be developing their RSS and NBEA plan first. Resolve timing inconsistencies, for example, Schedule 10 commences immediately (information requirements for consent applications), but Part 5 (consenting provisions) does not). Amend s 860 to allow the Minister to recommend Orders in Council repealing different provisions of the RMA on different dates. Such a procedure would ensure that there are not duplicate consenting or designation procedures (under the RMA and NBEA) in force at the same time.

Section	Support / Oppose	Reasons	Relief Sought
Schedule 6 Preparation of NPF		Given the critical place of the NPF, the requirement that the NPF be established through a full Board of Inquiry process (as provided for under clauses 9-20 of Schedule 6) is supported. Also, for the reasons addressed earlier, in relation to the challenge presented in setting environmental limits (and associated targets), establishment of the Limits and Targets Review Panel is supported as a critical initial stage of the process. The ESEG further supports (in particular): • The requirement to disregard the matters referred to in clause 19(2), noting that these exclusions should be replicated in clause 21 as part of Ministerial decision making. However, as submitted above in relation to plan content, these exclusions should be extended to include 'amenity values', as defined under the RMA. • The requirement that the NPF not be inconsistent with an Emissions Reduction Plan (or National Adaption Plan), noting that this underscores the need for exemptions to enable the scale and pace of new renewable electricity generation needed to decarbonise the economy to the extent envisaged by (and including) the first Emissions Reduction Plan prepared under the Climate Change Response Act 2002. However, the ESEG has the following significant concerns regarding the Schedule 6 process: • The lack of any direction that the Minister and Limits and Targets Review Panel must engage with the infrastructure sector generally prior to notifying an NPF, including as is part of the review and advice around environmental limits and targets. • The apparent intent that the first NPF would essentially comprise an assemblage of existing RMA national direction without input from the Limits and Targets Review Panel (clause 31(1)(b)), given that this existing national direction was prepared under an entirely different statute within a sustainable management and effects (rather than limits and outcomes) based paradigm.	Amend clause 2(b) by adding: *(iii) infrastructure providers and requiring authorities* Amend clause 3(3) by adding new: *(f) climate change and emissions reduction including renewable electricity generation.* Amend clause 6 by adding a new subclause: *(g)assess the cost-effectiveness of acting or not acting in relation to the proposal being examined.* Add a new clause 19(2)(d): (d) *amenity values* Add to clause 19(3)(a) "*The Board must ensure its recommendations on the NPF proposal are –* *(a) in accordance with –* *…* *(v) the system outcomes set out in* ***section 5*** Amend clause 21 by adding new: (*2(a) The responsible Minister must not have regard to—* *(a) any effect on scenic views from private properties or land transport assets that are not stopping places; or* *(b) any effect on the visibility of commercial signage or advertising; or*

Section	Support / Oppose	Reasons	Relief Sought
		• As a case in point, the National Policy Statement (Renewable Electricity Generation) is woefully inadequate to support or enable the pace and scale of new renewable generation activities required to electrify the economy in line with the Emissions Reduction Plan, and to resolve a principal failing of the RMA system as recorded in the Explanatory Note ("*to enable renewable electricity generation, to affordably decarbonise the economy*"). • The expertise and knowledge of the Limits and Targets Review Panel being confined to the matters stated in clause 3(3), as addressed above. • The prospect that the "streamlined process" could be applied for any amendment to the NPF which does not represent a "significant departure" from any existing direction (with uncertainty as to what a given Minister might find represents such a "significant departure") in deciding whether to proceed with that pathway. • Clause 6 lacks any requirement for a rigorous cost analysis, such as an assessment of the cost of regulatory intervention. The requirement to "encourage a cost-effective process" is not directive or aimed at implementation of the options. Without this rigour, evaluation reports risk being lengthy, qualitative documents that simply justify the status quo. The ESEG submits that: • Engagement with the infrastructure sector and infrastructure providers (requiring authorities, lifeline and network utility operators), particularly as associated with provision for housing, urban land development, and electricity generation including renewable electricity (greenhouse gas emission reduction) is not only justified, but essential given how central these system outcomes are to achieving the objectives of the reform (as recorded in the Explanatory Note) and given how vital such infrastructure is to promoting the wellbeing purpose of the NBEA (s 3(a)(i)). • Inclusion of persons with expertise in climate change emissions reduction including renewable electricity generation within clause 3(3) would better ensure that recommended environmental limits and targets do not defeat the system outcomes relating to greenhouse gas emissions under the NBEA.	*(c) any adverse effect arising from the use of the land by—* *(i) people on low incomes; or* *(ii) people with special housing needs; or* *(iii) people whose disabilities mean that they need support or supervision in their housing.* (d) amenity values Add to clause 21(3)(a) *The responsible Minister must ensure that their decision on the NPF proposal is –* *(a) in accordance with –* … *(v) the system outcomes set out in* ***section 5*** Clarify what is meant by a "significant departure" for the purpose of clause 23(a)(i), as including whether the changes would impose new or more stringent environmental limits. Delete clause 31(b) to ensure input from the Limits and Targets Review panel is required for the first NPF.

Section	Support / Oppose	Reasons	Relief Sought
		• The test for what is "significant" in terms of a departure from any existing direction (under clause 23) should be made having regard to whether those changes would impose new or more stringent environmental limits than set under the existing NPF. • Evaluation reports should include an analysis on the cost effectiveness of acting or not acting in relating to the proposal being examined. • Both the Board of Inquiry and the Minister must ensure that their recommendations and decision on the NPF proposal are in accordance with the system outcomes given the fundamental role the system outcomes play in the new NBEA system.	
Schedule 7 Preparation of NBEA plans		The ESEG is concerned that there are significantly limited opportunities for involvement in the plan making process, creating a risk that matters integral to the development and operation of existing, expanded and new renewable electricity generation assets may not be appropriately considered. Clause 25 lacks any requirement for a rigorous cost analysis, such as an assessment of the cost of regulatory intervention. The requirement to "encourage a cost-effective process" is not directive or aimed at implementation of the options. Without this rigour, evaluation reports risk being lengthy, qualitative documents that simply justify the status quo. Clauses 21, 34(3)(c), 36(2)(c) and 87(5) regarding the making of submissions requires (at the time of making the submission) the provision of evidence that the submitter intends to submit in support of the submission. Hence, the timeframe to make primary submissions AND provide expert evidence is 40 working days under the standard process (which would include full plan review) or 20 working days for the proportionate or urgent processes, while the timeframe to make secondary submissions (standard process only) AND provide expert evidence is 20 working days. This timeframe to provide evidence with submissions is unreasonable and unworkable. On complex planning issues, including full plan reviews, it can take considerable time to identify the relevant issues for the submission, let alone the expert evidence required to support the submission. In addition, under the standard process the evidence on primary submissions must be provided prior to secondary submissions being received. The process is likely to result in evidence that is rushed, has poor coverage of the issues or overstates the significance of the issues, relates to matters that would be	Amend clause 14(2)(a) by adding new (iv): *(iv) generation of renewable electricity* Amend clause 15(3) by adding new (f): *(f) lifeline utility operators* (or alternatively electricity generators). Amend clause 21: *Persons making an enduring submission must provide evidence in accordance with the timeframe required under clause 115 relating to IHP directions to provide evidence. ~~either —~~* *~~(a) with the submission; or~~* *~~(b) during the primary submission period.~~* Amend clause 22(1) by adding new (i): (i) *lifeline utility operators* (or alternatively electricity generators). Amend clause 25(1) by adding a new subclause:

Section	Support / Oppose	Reasons	Relief Sought
		better explored or canvassed through secondary submissions in response to the primary submissions from others, or relates to matters that would be better explored or narrowed through later parts of the process, such as pre-hearings, expert conferencing and alternative dispute resolution. This evidential process means there would not be a narrowing of the issues for which evidence is required early in the process, resulting in an extremely inefficient and costly process for submitters. This would severely affect many organisations and interest groups, including community groups and iwi and hapū, many of which are already resource constrained. While clause 115 (for the standard process) does provide for the update of evidence, it only applies to limited circumstances. For the proportionate and urgent plan making processes, changes are needed to ensure that the provision of evidence from submitters is able to support robust decision-making on plan processes, such as a period of time after the close of primary submission for the provision of evidence. In this regard 30 working days is considered reasonable and justified without causing undue delays to the hearing and decision making timeframes. For the standard plan making process, the independent hearings panel (**IHP**) sets directions to provide evidence in accordance with clause 115 of Schedule 7, including the timeframe for briefs of evidence as set by the IHP. No further changes are needed to clause 115. Under clause 93(2), all members of the IHP are appoint by Chief Environment Court Judge but this is limited to those with knowledge/expertise on certain matters, such as planning, legal, te Tiriti, tikanga, and freshwater quality, quantity and ecology. There may be other matters relevant to the region relating to the major regional policy issues that fall outside of those listed, e.g. expertise in landscapes, lifeline utilities, urban design, climate change, just to mention a few. Each region may have different issues needing specialist expertise on the IHP. Amendments are required to allow for this.	*(e) assess the cost-effectiveness of acting or not acting in relation to the proposal being examined.* Amend clause 34 by deleting subclause (3)(c): (*3) A primary submission must—* *(a) be in a form (if any) approved for the purpose by the chief executive; and* *(b) identify each provision of the plan being submitted on~~; and~~* *~~(c) include all the evidence that the submitter intends to submit in support of the submission~~.* Amend clause 36 by deleting subclause (2)(c): *(2) A secondary submission must—* *(a) be made in the prescribed form; and* *(b) be limited to a matter in support of or in opposition to the relevant primary submission or enduring submission made under **clauses 20 and 34**; and* *~~(c) include all the evidence that the submitter intends to submit in support of the submission; and~~* *(~~d~~c) explain how the submitter is directly affected by a provision in the plan.* Amend clause 44(5) by adding new (e): (e) *lifeline utility operators* (or alternatively electricity generators). Amend clause 48(5) by adding new (e): (e) *lifeline utility operators* (or alternatively electricity generators).

Section	Support / Oppose	Reasons	Relief Sought
			Amend clause 87(5): *"(5) Where a proportionate or urgent process is being used, all supporting information, including any expert evidence, must be provided within [30] working days after the closing date for ~~the~~ submissions."* Amend clause 93 by adding new (i): *"(i) any other skills, knowledge and experience deemed relevant to the major regional policy issues."* Amend clause 126(1) by adding new (da): "(da) *have regard to any emissions reduction plan or national adaption plan prepared under the Climate Change Response Act 2002".*
Schedule 8 - Regional Planning Committees		The proposed regional planning committees (RPCs) will be the key drivers of the regional spatial strategy and NBEA plan development processes which are integral to the new regime. It is therefore critical that generators and communities have certainty that the RPC membership will be conducive to producing the best possible planning outcomes to ensure the system outcomes and NBEA's purpose is achieved, including the outcomes for mitigating climate change and the timely delivery of infrastructure, including electricity generation. The ESEG considers that political influence of regional planning decisions can and have led to in effectual planning outcomes, including for electricity generation. To achieve this the RPC membership must be limited to those who are independent and who have sufficient knowledge, skills, diversity, and experience, in planning matters but also on key infrastructure matters including electricity generation to be able to make decisions on technical matters. As currently proposed the Bill does not provide for the above. RPC membership is open ended creating much uncertainty and therefore risk about who will be appointed to the RPCs.	Amend the Bill to require members of the RPC to be independent persons who have sufficient knowledge, skills, diversity, and experience.

Section	Support / Oppose	Reasons	Relief Sought
Schedule 10 Information required in application for resource consent	Support and Oppose but amend	It appears from the drafting of Schedule 10 that it has mostly been pulled across from Schedule 4 of the RMA without little regard as to how the consenting information requirements need to be amended to reflect the new approach taken in the Bill. ESEG seeks that Schedule 10 be reviewed in its entirety to ensure consistency with the remainder of the NBEA. At a minimum however, the ESEG seeks the deletion of clause 6(1)(a) because this requirement to provide information on alternative locations for an activity is inconsistent with the purpose of the SP Bill and the intent of the regional spatial strategies.	Consider Schedule 10 further to ensure consistency with the remainder of the Bill and at a minimum delete clause 6(1)(a).
Schedule 15 Amendments to RMA		Clause 38(a) appropriately has an exclusion for geothermal water (in relation to the take and use of water) however there is no corresponding exclusion for geothermal water in clause 38(b) in relation to the discharge of geothermal water. Clause 39 refers to consents 'granted', not consent applications lodged. If electricity generators lodge prior to the NBEA coming into force, but do not have consent granted by that point, there is a risk that electricity generators will be caught by the expiry provisions (assuming Schedule 12 of the RMA is amended in the interim). The exception in clause 40 only applies to consent applications lodged after the NBEA comes into force. It does not appear to apply to consents lodged prior to the NBEA coming into force. If applicants lodge their application prior to the NBEA coming into force, they are caught by clause 39 but do not qualify for the exemption in clause 40. The ESEG considers that an applicant should not have to seek leave for an exemption from the consent authority if they fall within the list of activities in clause 40(3). This is an inefficient waste of time and resources. The clause 40(3)(b) exemption for the larger hydro schemes applies to construction, **operation,** upgrading, or maintenance on approval of the consent authority. However, the exemption for grid connected renewable electricity generation applies to construction, upgrading, or maintenance (Clause 40(3)(c)), but not its **operation.** Likewise, the s 40(3)(c)(v) exemption for grid connected renewable electricity generation relates to construction, upgrading, or maintenance but not its **operation**.	Include a reference to geothermal water as an exclusion in clause 38(b)(i) and (ii). Amend Clause 39 as follows: *"An affected resource consent that is lodged prior to ~~granted on or after~~ the date that the Natural and Built Environment Act 2022…"* Alternatively, if the provisions are to apply retrospectively that should be made explicit. *Amend Clause 40(1)(a)(i) as follows:* *(i) applies, during or prior to the interim period…* Amend clause 40(3)(c)) as follows: *(c) the construction, operation, upgrading, or maintenance of any of the following infrastructure activities:* Amend clause 40(3)(c)(v) as follows:

Section	Support / Oppose	Reasons	Relief Sought
		There is no reason why only renewable electricity generation activities that are connected to the national grid should be the subject of s 40(3)(c)(v).	*(v) ~~renewable~~ electricity generation facilities that connect directly to the national grid ~~electricity transmission~~ or local distribution network* Alternatively, include the following instead of clause 40(3)(c) insert: "Infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002)"

Appendix A

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10 June 2022

Electricity Sector Environment Group
C/- Contact Energy Ltd, Genesis Energy Ltd, Meridian Energy Ltd, Mercury Energy Ltd, Manawa Energy Ltd and the NZ Wind Energy Association

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POTENTIAL IMPACT OF THE NATURAL AND BUILT ENVIRONMENTS ACT ON CONSENTING OF RENEWABLE ENERGY PROJECTS AND CONSEQUENCES FOR NEW ZEALAND'S CLIMATE CHANGE OBLIGATIONS

INTRODUCTION AND SUMMARY

1. We have been requested to prepare an opinion for New Zealand's principal electricity generators (the "**Electricity Sector Environment Group**" or "**Group**") to consider the potential impact of the Natural and Built Environments Act ("**NBEA**") on the consenting (and reconsenting) of renewable energy projects required to meet New Zealand's international climate change mitigation obligations.[1]

2. The NBEA is intended to provide for environmental limits to protect the ecological integrity of the natural environment and human health (ss 5, 12A-12E of the NBEA). In line with recent case law, the environmental limits may be interpreted as bottom lines, halting any proposed plan, resource consent application or notice of requirement that crosses them.

3. The setting of such limits is a legitimate policy direction: biodiversity, habitats and ecosystems are under stress. There can be no denying that stringent environmental limits will be needed to protect ecological integrity as proposed in the NBEA,[2] and in turn halt and reverse the inexorable decline in biodiversity values within New Zealand.

4. At the same time however, the urgent need to cut greenhouse gas ("**GHG**") emissions is equally beyond debate. It has been acknowledged by New Zealand in its ratification of the UNFCCC and the Paris Agreement, in government policy and in legislation. New Zealand has accepted the IPCC science and, pursuant to the Paris Agreement, has submitted an NDC[3] to reduce net GHG emissions to 50% below gross 2005 levels by 2030.

5. Renewable energy projects are key to early GHG reductions needed to meet these commitments because the technology is mature, they are cost-effective and they are relatively politically palatable.[4] The effects of renewable energy projects are also readily understood.[5] For New Zealand, renewable energy is particularly critical because of the difficulties in

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1 We acknowledge the contribution made by Aidan Cameron, Barrister, to the development of this opinion.
2 Refer appended paper (**Appendix 3**) prepared by Dr Ian Boothroyd (Boffa Miskell) as addressed further below.
3 Nationally Determined Contribution.
4 As discussed by the IPCC and summarised below.
5 See eg NZS6808:2010 in relation to noise generated from wind turbines.

addressing agricultural emissions[6] and the country's intended reliance on electrification to replace fossil fuels in key areas (eg transport, industry and heating).[7]

6. The essential problem presented is that the NBEA as drafted would necessarily see environmental limits applying to renewable energy projects. The likelihood that many/most major generation projects will breach, or encounter arguments over compliance with environmental limits, coupled with the scale of each consenting task, introduces the potential for material delay or even prevention of a transition to renewable energy. The simple fact is that immutable environmental limits will mean a number of major renewable energy projects will not be able to be consented under the NBEA.

7. The same problem applies to the different language used in the outcomes in s 13A of the NBEA, as the outcome relating to climate change is less directive and, therefore, less forceful than it is for other outcomes relating to the natural environment. This will result in a further barrier to the approval of renewable energy projects when they are assessed on their merits.

8. To fail to both accept and address this reality would be to accept that New Zealand will fail to meet its international climate change mitigation obligations, and deliver on the recently released Emissions Reduction Plan, either:

    a. altogether (*worst case scenario*), or

    b. without New Zealand incurring major additional costs, assessed at up to $9 billion for more expensive generation and increased power costs for consumers, with associated additional greenhouse gas emissions to meet the electrification deficit through fossil fuel alternatives over an extended transition phase (*best case scenario*).[8]

9. The prospect that the NBEA might function to prevent achievement of emissions targets might seem to be the result of conflicting policy drivers. However we think the underlying policy concerns are aligned: the concerns of the proposed environmental limits (air, soil, waterways, biodiversity, habitats and ecosystems) are also under threat from unaddressed climate change. This threat is existential.[9]

10. In this advice we:

    a. address the existing case law on bottom lines;

    b. identify why the environmental limits and outcomes in the NBEA present barriers to renewable energy projects;

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6 On 8 June 2022 *He Waka Eke Noa* released its proposal for pricing of farming emissions. *He Waka Eke Noa* proposes modest emissions pricing and targets (including a proposed price cap for agricultural emissions at a fraction of the price that would apply if agriculture was brought within the ETS).

7 If private vehicle use is maintained and EV adoption is a key part of the transport solution then renewable electricity generation is all the more important.

8 The best case scenario assumes project substitution is available (for any renewable generation project declined consent as a result of NBEA limits), refer appended paper prepared by Concept Consulting (see, in particular, sections 1 and 5) (**Appendix 4**) as also addressed further below.

9 It is settled science, accepted by successive New Zealand governments, that anthropogenic climate change will result in damaging changes to the physical environment (to rivers and soil from drought, erosion, flooding; to the oceans from ocean acidification; to coastlines from rising sea levels; etc), with compounding negative impacts on biodiversity and ecosystems. Climate change is predicted to turbo-charge biodiversity loss. Threats to food and water security are predicted. These risk geopolitical instability that may cause further environmental degradation.

c. outline the sources of New Zealand's climate change law and policy, and its present emissions targets;

d. review the (settled and accepted by New Zealand) IPCC science on climate change, which shows material overlap with the concerns covered by the NBEA environmental limits;

e. address the importance of renewable energy in meeting emissions targets and the vulnerability of New Zealand's pathway to delays or constraints in the rollout of renewable energy projects; and

f. propose amendments to the NBEA to accommodate the vital role renewable energy projects will have in mitigating climate change and therefore avoiding environmental harm.

11. The proposed amendments to the NBEA are set out in **Appendix 1** to this opinion. They include:

a. an exception to the environmental limits for renewable energy projects where the Minister is satisfied that such exceptions are necessary to enable New Zealand to meet its international climate change obligations, the Target set under the Climate Change Response Act, or an Emissions Reduction Plan under that Act; and

b. amendments to the environmental outcome relating to climate change by adopting strongly directive verbs to ensure equivalent weight is afforded to this critically important outcome as it is to other outcomes.

12. The amendments in Appendix 1 will ensure the NBEA does not score an "own goal" by immutable environmental limits preventing renewable energy projects required for climate change mitigation from being assessed on their merits where they may, or may not, be approved with reference to the environmental outcomes and other tests in the NBEA.

13. It is acknowledged that an exception to the bottom line approach for renewable energy may mean that on some occasions after a full merits assessment, transgression of environmental limits may be allowed. However, this exception would not undermine the purpose of those limits, but instead enhance it: the scale of species loss, habitat loss and threat to human health that flows from delaying emissions reduction will readily eclipse relatively minor localised impacts from particular projects. This is not to downplay such harms but rather to put them in context: inaction on climate change risks much greater harm to the very environmental concerns that the NBEA is designed to protect.

14. The proposed exception for renewable energy and the more directive outcome, as recommended in this opinion, are both required by, rather than in conflict with, the NBEA's underlying policy drivers.

THE LEGISLATIVE PROBLEM

15. Prior to 2014, proposals (whether they be applications for resource consent, a notice of requirement for a designation, or relief in a plan review or change) were ultimately assessed against the purpose provision of the Resource Management Act 1991 ("**RMA**") and the need to promote the sustainable management of natural and physical resources. This approach came to be characterised as the "overall broad judgment" approach.

The origins of the overall broad judgment

16. The approach has its origins in a decision of the Planning Tribunal in *NZ Rail Ltd v Marlborough District Council* (1993) 2 NZRMA 449. Judge Skelton, hearing an application for the establishment of a new port facility in Shakespeare Bay within the Marlborough Sounds, was tasked with determining the weight to be given to various factors under s 104 and Part 2 of the RMA when considering whether or not to grant consent under what was then s 105. The Tribunal held that no particular matter was to be given primacy. The Tribunal then went on to say:

> *That is not to say, of course, that in any particular case the strength of any one or more of them may not, as a matter of judgment, outweigh other factors. All we are deciding here is that those matters do not, for the purposes of s 105 of the Act, have a headstart as it were when it comes to* ***formulating the overall judgment required by subs 1(b) of that section****.*
>
> (emphasis added)

17. The Tribunal's decision was appealed to the High Court, including on the grounds of whether Part 2 of the RMA had primacy over the other criteria in s 104. Greig J found no error in the Tribunal's approach, which in turn was consistent with an earlier decision of the Full Court of the High Court in *Batchelor v Tauranga City Council* [1993] 2 NZLR 84 (FC). In addressing a similar argument regarding the weight which could be given to the protections in s 6(a) of the RMA, the Court noted that "*there is a deliberate openness about the language [in Part 2], its meanings and its connotations which I think is intended to allow the application of policy in* ***a general and broad way***" (emphasis added). The Court concluded, in language that would be familiar to the pre-*King Salmon* landscape:

> *In the end I believe that the tenor of the appellant's submissions was to restrict the application of this principle of national importance, to put the absolute preservation of the natural character of a particular environment at the forefront and, if necessary, at the expense of everything except where it was necessary or essential to depart from it. That is not the wording of the Act or its intention. I do not think that the Tribunal erred as a matter of law. In the end it correctly applied the principles of the Act and had regard to the various matters to which it is directed. It is the Tribunal which is entrusted to construe and to apply those principles, giving the weight that it thinks appropriate.*

18. The test was further refined on appeal to the Environment Court in *North Shore City Council v Auckland Regional Council* [1997] NZRMA 59 (EnvC), which was a challenge to the boundaries of the metropolitan urban limit set by Auckland Regional Council under its proposed regional policy statement. The question of "central importance" identified by the Environment Court in that decision was "*whether the policy defining the metropolitan urban limits in the Long Bay/Okura area in the proposed regional policy statement is necessary in achieving the purpose of the Act, being the sustainable management of natural and physical resources?*", which again will be familiar to practitioners from the pre-*King Salmon* era. The Court reviewed a series of earlier decisions building on *NZ Rail* above, before concluding:

> *Application of s 5 in the way described…involves consideration of both main elements of s 5. The method calls for consideration of the aspects in which a proposal would represent management of natural and physical resources in a way or at a rate which enables people and communities to provide for their social, economic and cultural wellbeing, health and safety. It also requires consideration of the respects in which it would or would not meet the goals described in paras (a), (b) and (c).*
>
> ***The method of applying s 5 then involves an overall broad judgment of whether a proposal would promote the sustainable management of natural and physical resources****. That recognises that the Act has a single purpose…Such a judgment allows for comparison of conflicting considerations and the scale or degree of them, and their relative significance or proportion in the final outcome*. (emphasis added)

West Wind

19. A good example of how that approach was applied is the decision of the Environment Court in the *West Wind* case.[10] In that case, there were no areas of outstanding natural landscape formally identified in the district plan. However, the Court held at [412] that, despite this, and overall, the "*coastal environment from Ohariu Bay southwards to the boundary of [another landscape unit] is an outstanding natural landscape punctuated by a smattering of outstanding natural features…"*. At [438], the Court went on to say:

> *Part of the outstanding natural landscape will inevitably have its natural character affected by a defined number of the turbines. Because we find the windfarm appropriate in this coastal location,* ***we consider any residual inability to provide complete protection of the coastal environment must be outweighed by the need to provide for the sustained management of our energy resources.***
>
> (emphasis added)

20. The New Zealand Coastal Policy Statement 1994 ("**NZCPS 1994**") which subsisted at the time required the protection of outstanding natural landscapes (Policy 1.1.3) and the need for outstanding natural landscapes to be given both "special" and "appropriate protection" (Policy 3.1.2). The Court found, in the context of determining what is "appropriate development" under Policy 1.1.1 that *"what is appropriate is a value judgment, to be arrived at by weighing the values of the particular coastal environment with the positive and adverse effects of the proposal"* (at [279]). This, again, is an overall broad judgment approach to the NZCPS 1994. The Court concluded at [283] that it seemed *"clear that the coastal environment here has a natural character which will, inevitably, be adversely affected by this proposal"*, before returning to the issue of "inappropriate development" later.

21. Fundamentally, the Court decided at [584] that with the removal of a small number of turbines, *"sustainable management of Makara's natural and physical resources will be achieved"*. It went on to say that *"[c]areful weighing of all aspects of this proposal has meant that some additional emphasis must be put on the residents concerned"*. Again, an overall broad judgment.

King Salmon

22. The prevailing theory of decision-making under the Act above, which had subsisted for some 17 years, was directly challenged in the Supreme Court in *Environmental Defence Society Inc v New Zealand King Salmon Company Ltd.*[11]

23. The primary point of appeal was whether the Board of Inquiry erred in applying the overall broad judgment approach to approving a plan change and a resource consent for a salmon farm in Port Gore in the Marlborough Sounds, in which it was accepted (or at least, not subject to challenge) that the farm would generate adverse effects on an outstanding natural landscape and/or area of outstanding natural character, and thus failed to comply with Policies 13 and 15 of the New Zealand Coastal Policy Statement 2010 ("**NZCPS**").

24. The Supreme Court rejected the overall broad judgment approach. Central to that finding was an interpretation that s 5, as far as plan changes were concerned, *"was not intended to be an operative provision, in the sense that it is not a section under which particular planning decisions*

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10 *Meridian Energy Ltd & Ors v Wellington City Council* EnvC Wellington, 14 May 2007.

11 *Environmental Defence Society Inc v New Zealand King Salmon Company Ltd* [2014] NZSC 38, [2014] 1 NZLR 593.

are made; rather, it sets out the RMA's overall objective" (at [151]). The majority of the Court went on to say:

> *Reflecting the open-textured nature of Part 2, Parliament has provided for a hierarchy of planning documents the purpose of which is to flesh out the principles in s 5 and the remainder of Part 2 in a manner that is increasingly detailed both as to content and location.* ***It is these documents that provide the basis for decision-making, even though Part 2 remains relevant****. It does not follow from the statutory scheme that because Part 2 is open-textured, all or some of the planning documents that sit under it must be interpreted as being open-textured.*
>
> (emphasis added)

25. The Court was concerned that too often reference to Part 2 was used to balance the ostensibly-competing policy considerations inherent within it, bypassing clear and directive requirements in other planning documents. The Court went on to find that the objectives and policies of the NZCPS, "*while necessarily generally worded, are intended to give substance to the principles in Part 2 in relation to the coastal environment*", and failure to meet the environmental bottom lines in Policies 13(1)(a) and 15(a) of the NZCPS resulted in aspects of the private plan change failing.

26. The Court limited reference to Part 2 (including the purpose statement of the Act in s 5) to circumstances where the relevant planning instruments were uncertain, incomplete, or illegal, in what has become known as the "three caveats". Otherwise, those planning instruments and the statements within them (including any environmental bottom lines), were required to be brought to bear and complied with on any proposal, without reference to the broader factors in Part 2 to excuse any non-compliance.

R J Davidson Family Trust

27. It was only a matter of years before the same rationale applying to plan changes and plan reviews under *King Salmon* was picked up and applied to resource consents.

28. In *R J Davidson Family Trust v Marlborough District Council* [2016] NZEnvC 81, the Environment Court eschewed reliance on the overall broad judgment approach, and instead replaced it with a complicated calculus, relying upon the renewed focus on relevant planning instruments as a complete expression of Part 2 and the "three caveats" identified above.

29. That reasoning was ultimately overturned on appeal to the Court of Appeal, but in doing so, the Court has set down an alternative test which (in ordinary circumstances) has rendered the earlier "overall broad judgment" approach of limited use.

30. The Court considered two scenarios under the NZCPS.

31. The first was where a proposal was *"demonstrably in breach of one of the provisions of the NZCPS"*. The Court held that a consent authority would be justified, applying *King Salmon*, to take the view that separate recourse to Part 2 would not be required, as it would not provide further guidance not already provided by the NZCPS (at [71]). That was the case in *Davidson* on the facts before the Court – although contested in the Court below, the Environment Court's findings on the risk to King Shag habitat from the proposed mussel farm meant that the proposal could not satisfy the directive "avoid" requirement in Policy 15(1)(a) of the NZCPS, and therefore the appeal failed.

32. The Court held that the same logic would apply to other plans, especially those that had been competently prepared under the RMA, where in the face of a *"coherent set of policies designed*

to achieve clear environmental outcomes", reference to Part 2 (or a more broader judgment) "*would add nothing to the evaluative exercise"* (at [74] and [75]).

33. The second, however, was where a hypothetical proposal was affected by different policies within the NZCPS such that it was unclear whether consent should be granted or refused. In that case, the Court held "*the consent authority would be in a position where it had to exercise a judgment*". In that context, the Court could not see "*any reason why the consent authority should not consider [Part 2]*". Where reference to a competently prepared plan would not provide the necessary "*assurance, or when in doubt, it will be appropriate and necessary to do so*".

34. The Court did not elaborate as to what kind of judgment ought to be applied in those circumstances, but it is clear that the former approach, whereby the general balancing of directive (eg "avoid") with non-directive policy outcomes (eg "enable") to arrive at the grant of consent which occurred prior to *King Salmon*, is likely to no longer be appropriate.

Port Otago

35. If there was any doubt as to the current approach to plan-making, it was largely eradicated by the Court of Appeal in *Port Otago Ltd v Environmental Defence Society Inc* [2021] NZCA 638. In that decision, the majority of the Court[12] effectively answered the appeal in one paragraph:

> *[1] The New Zealand Coastal Policy Statement 2010 requires adverse effects in areas of outstanding natural character be "avoided". The essential question in this appeal is whether a proposed regional policy statement gives effect to that requirement by providing adverse effects in such areas be "avoided, remedied or mitigated"?*

36. The Court answered that question at [78] when it said that the answer to the question above "*might be thought obvious"*. It went on to say that "*a bottom line requiring adverse effects be "avoid[ed]" cannot be substituted with "avoid, remedy or mitigate"* (at [79]), and that correct application of the *King Salmon* principles *"compel that conclusion"* (at [87]). If, the Court held, the NZCPS now poses unworkable standards for essential infrastructure, *"the answer lies elsewhere"* (at [83]). This statement was likely to be aimed at legislative amendment, directed either at the RMA itself or the NZCPS.[13]

37. The decision in *Port Otago* is more notable for its identification of a "*regulatory mismatch*", arising out of difficulties in the way the NZCPS applies in the post-*King Salmon* world. The Court identified a number of those difficulties in [55] to [61]. The "*major difficulty"* inherent in a redirection towards an environmental bottom line approach is that Parliament did not directly modify the overall broad judgment approach taken in *NZ Rail* above, or suggest such modification was needed. The Court held that the NZCPS was drafted against the background of the *NZ Rail* decision, and that "*the expectation of those who drafted the NZCPS was that it would be construed and applied on the basis that an overall broad judgment would be taken".* Had the NZCPS been drafted in light of King Salmon, rather than *NZ Rail*, its content *"likely would have been quite different. For instance, it might be expected to have drawn less stark environmental bottom lines and provided for more nuance in balancing competing policy interests in the absence of a [NZ Rail]-based decision making framework"* (at [56]).

38. The Court also noted that the NZCPS has not been revisited in light of *King Salmon*, and that a direct consequence of the mismatch identified above is that it now has the *"practical effect of setting quasi-rules, both in [the NZCPS] and a subsidiary regional policy statement"*, despite the

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12 The minority judgment of Miller J took issue with some of the majority's reasoning, but not its overall conclusion.

13 Noting, however, Parliament and the Executive's reluctance to date to entertain any amendments to the NZCPS, or s 67 of the RMA.

function of those instruments being to set out objectives and policies (and, in the latter case, implementation methods) only (at [57]).

39. Other consequences of the mismatch included the overall broad judgment approach being "*clung to"* to get around the strictures imposed by the NZCPS in the post-*King Salmon* world; and requests by parties to set policy in mitigation of the rigour of *King Salmon's "enforcement of NZCPS policies as quasi-rules"* (at [58]).

40. The final point the Court made is that the *"core issue in applying King Salmon's approach to the NZCPS in the drafting of a regional policy statement…will be what the implementation of avoidance policies to preserve (or protect) the coastal environment from "inappropriate" use and development actually requires or prohibits. That ultimately depends on the cascade of objectives, policies and ultimately rules in the hierarchy of planning instruments"* (at [61], emphasis added). This highlights one of the difficulties involved in plan appeals at present as a result of *King Salmon*. Port Otago's concerns were described as *"amorphous and difficult to assess"*, in the absence of objectives, policies and rules implementing that regional direction (at [13]). The Court held that the appropriateness or otherwise of certain activities in certain areas were not *"matters that can or should be prejudged at this point"* (at [84]-[86]).

41. However, the point remains that:

    a. if objectives and policies at a regional or national level continue to be set at the current thresholds for environmental bottom lines established, for example, in the NZCPS; and

    b. those objectives and policies continue to be interpreted in the manner not intended pre-*King Salmon*; then

    c. those objectives and policies will continue to send strong signals which favour environmental protection over necessary or essential development.[14]

Transpower Ltd v Tauranga Environmental Protection Society

42. That approach has also now firmly permeated down to the consideration of resource consents, especially in the coastal context. The decision in *Transpower* is notable, not just for its treatment of the exercise of discretion by the Environment Court in weighing (or balancing) adverse cultural effects, but also for its reinforcement of the "regulatory mismatch" that has arisen in the post-*King Salmon* world.

43. In *Transpower*,[15] the Environment Court characterised both the regional and district plans as generally treating as desirable both the protection of outstanding natural landscapes and features, and the provision of network infrastructure. The Environment Court, faced with that potential conflict both within the district and regional plans but also between different national policy statements, reached a "*decision as to which outcome better promotes the sustainable management of natural and physical resources, as defined in s 5 RMA*" (at [270]). The High Court held that the judgment undertaken was *"effectively, and almost explicitly, the application of an overall broad judgment approach"*. As such, the Court held it was an error of law (at [89]).[16]

44. This had important flow-on consequences for the High Court's treatment of the relevant objectives and policies. The High Court held the Court below had erred in assessing those

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14 At the time of writing, Port Otago's appeal to the Supreme Court had been heard on 11 and 12 May 2022, with judgment reserved.

15 *Tauranga Environmental Protection Society Inc v Tauranga City Council* [2020] NZEnvC 43.

16 *Tauranga Environmental Protection Society Inc v Tauranga City Council* [2021] NZHC 1201, [2021] NZRMA 492.

objectives and policies by only having regard to them (at [87]).[17] The Court held that there was no conflict between the relevant national planning instruments, and instead they had been reconciled in the lower-order regional coastal plan through a series of environmental bottom lines, both in relation to natural and cultural heritage.

45. The High Court had, earlier in its decision, found that the Environment Court erred when it reached a different view on the cultural effects on Ngāti Hē to that of the hapū, where the "*considered, consistent and genuine view*" held by that hapū was that those effects would be significant (at [65]). The finding of significant adverse effects engaged environmental bottom lines in the regional coastal plan, which were required to be brought to bear directly on the application, without reference to an overall broad judgment.

46. Leave to appeal against the decision of the High Court was declined by the Court of Appeal.[18] In doing so, the Court noted that a number of the issues raised were addressed by the Court's decisions in *Port Otago* and *Davidson*. In considering the issues remitted by the High Court, the Environment Court *"will have to bear those authorities carefully in mind"* (at [10]).

47. It follows that there is now an entrenched bottom line approach, not only in relation to plan changes but also in relation to resource consents. The outcome of the Supreme Court's decisions in the *Port Otago* and *Royal Forest & Bird Protection Society* appeals may refine this theory, but until those decisions are released, it remains binding on local authorities and the Environment Court alike.

48. This case law has significant implications for the interpretation of the environmental limits and the outcomes proposed in the NBEA.

THE NBEA AS CURRENTLY DRAFTED

49. Section 12A of the NBEA as currently drafted states:

> **12A Purpose of environmental limits**
>
> (1) The only purpose for which environmental limits may be set is to **protect** either or both–
>
> (a) the **ecological integrity** of the natural environment:
>
> (b) human health.
>
> (2) All persons using, protecting, or enhancing the environment **must comply** with environmental limits (but see section 12E(7), which applies if an environmental limit is prescribed in conjunction with a transitional limit).
>
> (emphasis added)

50. The purpose clause in s 5(2) of the NBEA states that use of the environment "must comply with the environmental limits" under ss 12B and 12C.

51. Under s 12B(1) of the BEA, the national planning framework must prescribe environmental limits for air; indigenous biodiversity; coastal waters; estuaries; freshwater; and soil. The national

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17 Despite, one has to say, that being the statutory imperative. The Court held that the planning instruments are "more than "relevant" and the Court must do more than "have regard to them"" (at [87]), but did not say in the same breath what that something more actually is.

18 *Transpower Ltd v Tauranga City Council* [2022] NZCA 9.

planning framework may also prescribe environmental limits for any other aspect of the natural environment.[19]

52. Limits will take the form of the minimum biophysical state required;[20] or the maximum amount of harm or stress that may be permitted;[21] may be qualitative or quantitative;[22] set at different levels for different circumstances and locations;[23] and may be set in a way that integrates more than one of the aspects identified in the first sentence of paragraph 51 above.[24]

53. The term "ecological integrity" highlighted above is a defined term in the NBEA. It is exceptionally broad, and means:[25]

> the ability of an ecosystem to support and maintain—
>
> (a) its composition: the natural diversity of indigenous species, habitats, and communities that make up the ecosystem; and
>
> (b) its structure: the biotic and abiotic physical features of an ecosystem; and
>
> (c) its functions: the ecological and physical functions and processes of an ecosystem; and
>
> (d) its resilience to the adverse impacts of natural or human disturbances.

54. "Ecosystem" is separately defined to mean "a system of organisms interacting with their physical environment and with each other".[26]

First key concern – barrier to renewable energy from framing of environmental limits

55. The first of two key concerns held by the Group over the NBEA is in relation to the framing of s 12A, namely the language used: "to protect" and "must comply".

56. That is highly directive and mandatory language, in the words of the Supreme Court in *King Salmon*. The focus on protection above all else mimics the current approach to the interpretation of the NZCPS, post-*King Salmon*, whereby more enabling policies take a back-seat to those seeking to institute environmental bottom lines and other protection mechanisms.

57. Applying the line of case law above which has become firmly established in the post-*King Salmon* world, s 12A, any limits prescribed pursuant to it, and s 12B will be interpreted so as to give those sections and the terms within them their plain and ordinary meaning. The protection by way of a limit will be absolute.

58. On the current approach, there would also appear to be no opportunity for environmental offsets (which, as currently drafted, form part of the definition of mitigation) to be considered where an environmental limit cannot be met.

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19 NBEA, s 12B(2).
20 NBEA, s 12D(1)(a).
21 NBEA, s 12D(1)(b).
22 NBEA, s 12D(2)(a).
23 NBEA, s 12D(2)(b).
24 NBEA, s 12D(2)(c).
25 NBEA, s 3.
26 Ibid.

59. The significant risk, if this statutory wording is not amended or an alternative or exception provided for activities such as the generation, storage and transmission of renewable energy, is that the current "regulatory mismatch" identified in *Port Otago* will continue. This will result in the sort of situation seen in *Transpower*, where a proposal to move transmission lines from one location to another trips an environmental bottom line (in that case, relating to cultural effects) and creates a significant and insurmountable hurdle under the NBEA for obtaining approval.

60. The alternative approach, in order to accommodate the sorts of significant renewable energy projects that are required to meet demand in the coming decades, would be to set environmental limits at levels so low they are almost illusory, rather than having any meaningful application in terms of environmental protection. There are any number of good reasons why that approach would not be appropriate, as it would continue one of the key failings identified in the existing resource management system.

61. The setting of environmental limits at a "protect" and "must comply" level not only reinforces but makes even stronger the existing protection regime inherent within the NZCPS. As the Supreme Court made clear in *King Salmon*, and the Court of Appeal reiterated in *Port Otago*, the current system is only designed to prevent inappropriate use, subdivision and development. The fact that certain threshold criteria (eg to avoid adverse effects on areas of outstanding natural landscape) still make any such development in those areas extremely difficult remains. However, both Courts were at pains to identify that appropriateness or otherwise is something to be judged on a case-by-case basis, by reference to what is sought to be protected.

62. Here, there does not even appear to be any such "appropriateness" filter. Regardless of where the Supreme Court decision in *Port Otago* lands as to the application of limits and the extent of any such filter (or scope for exceptions) under the RMA, limits under the NBEA will be mandatory, and will apply across a range of areas (eg discharges to air and water, for example) where there has not always been the same degree of rigour applied to other areas in recent times (eg landscape and natural character). One of the key criteria which swayed the Environment Court in the *West Wind* decision, and in its interpretation of the NZCPS 1994 as it applied at the time,[27] was the appropriateness of the proposed wind farm in that location, no doubt due to the consistency of wind through Cook Strait and the site's proximity to National Grid infrastructure.

63. For the Group, the current framing of s 12A results in a "don't bother applying" scenario, where renewable electricity projects simply will not proceed beyond initial site selection because it is clear that an environmental limit will be tripped.

Environmental limits to protect ecological integrity

64. To put these concerns over the barrier to renewable energy from the framing of environmental limits in further context, the Group has sought an opinion from an expert ecologist, Dr Ian Boothroyd of the consultancy firm, Boffa Miskell. The opinion is attached as **Appendix 3**.

65. Dr Boothroyd is a leading ecologist, with over 25 years' experience in environmental management, monitoring, policy development and assessment, auditing, research and decision-making in the New Zealand environment. He has a PhD in Freshwater Biology from the University of Waikato, and is a Fellow of the Society of Biology, a Member of the Royal Society of New Zealand, and a Fellow of the Environmental Institute of Australia and New Zealand. Dr Boothroyd has significant experience in the assessment and review of ecological effects for development projects (including electricity generation activities), and is a co-author of a number

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[27] In addition to its reliance on the overall broad judgment approach to circumvent the effects on outstanding natural landscapes.

of national standards for freshwater and biodiversity management and monitoring in New Zealand.

66. Dr Boothroyd's opinion considers the meaning of the term "ecological integrity" as it is currently drafted and used in the NBEA, and focusses on how that term might be implemented through the national planning framework and plans promulgated under the NBEA.

67. While historical baselines of ecological states are important, Dr Boothroyd opines that ecological integrity is "*generally assessed by comparing the integrity of a site to extant, less modified or unmodified sites, whether for general guidance or a specific benchmark*", and that the focus of ecological integrity has been on biodiversity conservation and protection, and less on the use or management of the environmental resource in question (at p 6). He notes that, unless specifically provided for, stakeholders may give greater weight to the components that define ecological integrity (ie composition, structure, functions and resilience), which may lead to debate between them. The risk of lack of clarity, or ambiguity, in setting environmental limits for ecological integrity would ultimately be "*time-consuming at best and highly restrictive or prohibitive at worst for renewable energy projects"* (at p 6).

68. The key conclusions of the Boothroyd paper are at p 11-12, and are that:

    a. the concept of ecological integrity *"as stated (without qualifiers or exclusions)* ***does not allow for loss of [ecological integrity]****"* (emphasis added);

    b. the concept *"can provide for change of [ecological integrity], where the change is for the betterment of [ecological integrity]"* at a certain scale, but not (as noted above) loss; and

    c. *"the greatest risk from limit setting in terms of its potential to prevent any degree of change to [ecological integrity] [will occur] where ecosystem types and individual features with moderate to high [ecological integrity] will be afforded maximum protection at a more localised scale, or an ecosystem type is poorly represented within a region or district".*

69. Dr Boothroyd's opinion is that limits to protect areas of vegetation and habitat will likely be set at a narrative level, or through indicators reflecting the extent of feature within a specified boundary (eg a regional boundary, ecological district, or water catchment), and will adopt a precautionary approach. He doubts that it is feasible to prescribe sensible and meaningful descriptive or qualitative limits for "biodiversity, habitats and ecosystems" as proposed (at p 11). As Dr Boothroyd says, there is a risk that the NBEB imposes *"excessive constraints on activity due to broad, precautionary limits being applied to contrive conceptual environmental thresholds in the absence of robust data"*. At the other end of the spectrum, setting limits may encourage a "race to the bottom", where potential users seek priority before the limit is inevitably reached (as has occurred with water allocation across catchments in New Zealand) (at p 11). So whichever approach is taken to a limit to protect ecological integrity it would immediately or soon be a barrier likely to trip proposed renewable electricity projects.

70. Dr Boothroyd also says that the more granular and localised an assessment of ecological integrity is, the more likely it is that limits will be set at "*highly stringent*" levels (at p 4), compared to a regional or national-level assessment. If defined with a focus on "*species, ecosystem structure and environmental range*", and set at the species or ecosystem level, limits *"would necessarily be highly stringent to cover the geographic area and habitat availability"*. The same applies to limits to protect the ecological integrity of specific flora and fauna. Dr Boothroyd anticipates these would be more stringent still, especially where the presence and/or potential habitat of nationally or regionally threatened indigenous species is identified (at p 9).

71. Dr Boothroyd considers that, if protection of ecological integrity remains the overarching goal, any attempt to apply an effects management hierarchy (ie to remedy, or mitigate, or offset, or compensate – even if the latter two were available) is likely to be "*severely constrained"* (at p 13). The default position will continue to require adverse effects on ecological integrity to be avoided, with all of the difficulties that presents in a post-*King Salmon* world. Beyond avoidance, Dr Boothroyd sees a difficult path ahead for those seeking to establish that each component of ecological integrity (composition, structure, function and resilience) is being appropriately managed (at p 13).

72. Dr Boothroyd also identifies the risks with limit-setting in this space. Some components of ecological integrity, and the linkages between them, are less well known and understood than others. In Dr Boothroyd's opinion, limits for matters such as ecosystem types, biotic communities, species habitats and populations will be *"much more difficult to ascertain"* than existing numerical, contaminant-driven limits, and *"may fall back to loosely defined narrative limits""* (at p 12). Dr Boothroyd highlights the recent experience with the National Policy Statement for Freshwater Management ("**NPSFM**") as creating room for uncertainty and misinterpretation, and the risk that a *"repeat of this experience will cause delays and obstruct development at a considerable cost of time and effort"*.

73. Dr Boothroyd has used case studies provided by the Group to test how protection of ecological integrity might play out. In the Rotokawa example, the application of limits directed at the protection of ecological integrity would, in Dr Boothroyd's opinion, preclude even "very small" effects from occurring – preventing further adjustment (and implementation of adaptive management) for electricity generation.

74. The requirement to protect ecological integrity may also render nugatory the inclusion of target attributes for existing hydro schemes within the NPSFM that differ from limits set for the ecological integrity for freshwaters. This may have potential flow-on consequences for re-consenting, as developed further below.

75. Wind farms both onshore and offshore will face issues from such bottom line limits from potential loss of flora (onshore) and fauna (onshore and offshore). The Central Wind Farm case, which involved loss of 18 ha of vegetation, would be unlikely to have been approved without the ability to offset those losses elsewhere. Offshore wind farms are likely to face similar challenges to those currently faced by the aquaculture industry where they are in areas of habitat for indigenous fauna (such as the King Shag).

76. Finally, Dr Boothroyd has applied those same considerations to solar farms, and notes with particular concern some of the limits around use of natural wetlands which has developed through the NPSFM and National Environmental Standards for Freshwater ("**NESFW**"). The existence of wetlands (absent the existing carve out for "specified infrastructure" which includes electricity generation and transmission) might make land, which is otherwise wholly suitable for solar farm development, unable to meet the limits set for the protection of ecological integrity and therefore not consentable, or at least in part.

The problem is not limited to new consents, and may extend to reconsenting

77. As noted above, the problem with requiring protection of the ecological integrity of the natural environment is not limited to new projects. Most, if not all hydro schemes in New Zealand will be subject to regional consents, with maximum terms of 35 years. Some of those schemes will require re-consenting in the near future and certainly within the lifetime of the NBEA. The recent introduction of Te Mana o te Wai as the guiding principle in the freshwater space will add further complexity to any reconsenting, as it introduces cultural indicators to the mix.

78. There is a developing line of case law that on a reconsenting application, the effects caused by the activities for which is renewal is sought are to be disregarded for the purposes of classifying the "environment" pursuant to s 104(1)(a) against which effects are assessed.[28] That is arguably subject to a caveat, as acknowledged by the Court in *Ngāti Rangi* and *Otago Fish & Game*, that a consent authority should not do so where it would be *"fanciful or unrealistic to assess the existing environment as though those structures authorised by the consent being renewed did not exist"*.[29]

79. For example, a hydro scheme may require resource consents for the erection and use of dam structures on a riverbed, and in relation to the take/damming of the water itself. At one level, it would be fanciful to suggest (either on a reconsenting of the structure or the take/damming itself) that the dam structure did not exist for the purpose of the existing environment, and that what did exist was the river, both upstream and downstream in its original (ie pre-dam) form.

80. However, on the other hand, it is clear from the *Ngāti Rangi* line of cases that the existing flow rate of water through the dam under the expired consent does not create a self-perpetuating entitlement to the same flow rate on any reconsenting.[30] As such, the hydro scheme may have to release more water, particularly if there is a need to improve ecological habitat (eg for koura, or other indigenous flora or fauna) downstream of the dam.

81. How a requirement to protect the ecological integrity of the natural environment surrounding that scheme, being a limit required by s 12A of the Bill, would be interpreted on any reconsenting, and how much a generator might have to part with in order to comply with that limit, is open to debate. But any requirement on the part of the generator to release more water more regularly through the dam may negatively impact on its ability to provide renewable electricity to meet demand.

Second key concern – the importance of language in the environmental outcomes in s 13A

82. The Supreme Court in *King Salmon* held that the way directional verbs (eg "avoid", "protect") are expressed in in statutory instruments under the RMA "matters".[31] Some policies may be expressed generally, leaving councils with considerable flexibility and scope for choice. Others are expressed in more specific and directive terms, such as Policies 13 and 15 of the NZCPS, which use the "avoid" direction.

83. The Court held that policies expressed in more directive terms will carry greater weight than those expressed in less directive terms.[32] Furthermore, a policy may be stated in such directive terms that the decision-maker has no option but to implement it. So, "avoid" is a stronger direction than "take account of". While there may be instances where policies "pull in different directions", where close attention is paid to the way policies are expressed and the conclusions that can be drawn from those differences in wording, such conflicts may be more apparent than real.

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28 *Ngāti Rangi Trust v Manawatu-Whanganui Regional Council* [2016] NZHC 2948 at [56]-[68]. See also *Aotearoa Water Action Inc v Canterbury Regional Council* [2018] NZHC 3240, [2019] NZRMA 316 at [43]; *Colley v Auckland Council* [2021] NZHC 2366 at [89]; and *Otago Fish & Game Council v Otago Regional Council* [2021] NZHC 3258 at [129]-[148].

29 *Ngāti Rangi*, above n 28 at [65], citing Derek Nolan (ed) *Environment and Resource Management Law* (5th ed, LexisNexis, Wellington, 2015) at 610; *Otago Fish & Game*, above n 28 at [135].

30 We acknowledge that there is another line of case law which, on reconsenting of significant hydro-generation projects in the Clutha River scheme, took the current state of the environment (ie including the schemes) as the reference point: see *Alexandra District Flood Action Society Inc & Ors v Otago Regional Council* C102/2005, 21 July 2005. The approach may depend on the size of the scheme and how fanciful or unrealistic it would be to consider the environment without its existence (including flow rates).

31 *King Salmon*, above n 11 at [127].

32 Ibid at [129].

84. The proposed wording of the environmental outcomes in s 13A in the NBEA repeats the errors of the past, by not couching the outcome relating to climate change in sufficiently directive terms.

85. Section 13A(a) and (b) require the "protection or, if degraded, restoration of" certain elements of the natural environment, and the "protection and restoration" of cultural values. Those are strongly directive terms: to "protect" and to "restore". The full wording of section 13(A)(a) and (b) is as follows:

> **13A Environmental outcomes**
>
> The national planning framework and all plans must provide for the following environmental outcomes:
>
> *Natural environment*
>
> (a) the protection or, if degraded, restoration of—
>
> (i) the health, mana, and mauri of air, freshwater, coastal waters, estuaries, soils, and indigenous biodiversity:
> (ii) outstanding natural features and outstanding natural landscapes:
> (iii) the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers, and their margins:
>
> *Cultural values*
>
> (b) in relation to cultural values—
>
> (i) protection and restoration of the relationship of iwi and hapū, and their tikanga and traditions, with their ancestral lands, water, sites, wāhi tapu, wāhi tūpuna, and other taonga:
> (ii) conservation of cultural heritage:

86. "Protection" has been previously held in *King Salmon* to support the implementation of environmental bottom lines (at [47]).

87. By comparison, the wording in s 13A(c) for climate change and natural hazards is far more general and therefore less directive. It provides:

> *Climate change and natural hazards*
>
> (c) in relation to climate change and natural hazards,—
>
> (i) reduced greenhouse gas emissions, including by low-emission urban form and increased utilisation of renewable energy:
>
> (ii) increased removal of greenhouse gases from the atmosphere:
>
> (iii) reduced risks arising from, and better resilience of the environment to, natural hazards and the effects of climate change:

88. Subsection (i) refers to "reducing greenhouse gas emissions, including by low-emission urban form and increased utilisation of renewable energy". When "protection" is placed alongside "reducing" greenhouse gas emissions, and "increased utilisation" of renewable energy, it is clear

which of the types of outcome is more directive and will, therefore, on a *King Salmon* approach, win out. A court is likely to find that there is no conflict between the outcome in (c) where a renewable energy project is proposed to be sited in an area that requires protection under (a) or (b). In the absence of more directive language for the climate change outcome, the protection paradigm will always prevail.

NEW ZEALAND'S CLIMATE CHANGE COMMITMENTS

89. Rather than providing a barrier through immutable environmental limits and a weak, less directive outcome for climate change, the NBEA can and should accommodate New Zealand's climate change law and policy, including its international commitments. Key features of that context are reviewed here.

United Nations Framework Convention on Climate Change

90. New Zealand is a party to the United Nations Framework Convention on Climate Change ("**UNFCCC**"). New Zealand signed the UNFCCC on 4 June 1992 and ratified it on 16 September 1993.

91. The objective of the UNFCCC is to achieve stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[33]

92. In order to achieve this objective, the UNFCCC provides that parties should take precautionary measures to anticipate, prevent or minimise the causes of climate change and mitigate its adverse effects.[34]

93. New Zealand is listed as an Annex I (developed) country under the UNFCCC. The UNFCCC requires Annex I countries to take the lead to reverse the long-term trends in anthropogenic emissions.[35]

Paris Agreement

94. On 12 December 2015 the parties to the UNFCCC adopted the Paris Agreement. New Zealand signed the Paris Agreement on 22 April 2016 (the date it opened for signature), and ratified it (along with 183 other countries) on 4 October 2016. The Paris Agreement came into force on 4 November 2016.

95. The central aim of the Paris Agreement is to "*strengthen the global response to the threat of climate change*" by:[36]

> Holding the increase in the global average temperature to well below 2˚C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5˚C above pre-industrial levels, recognising that this would significantly reduce the risks and impacts of climate change.

96. In order to achieve this goal, signatories to the Paris Agreement must "*aim to reach global peaking of greenhouse gas emissions as soon as possible*" and agree to "*undertake rapid reductions thereafter*".[37]

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33 UNFCCC, Article 2.
34 UNFCCC, Article 3.
35 UNFCCC, Article 4.
36 Paris Agreement, Article 2(1).
37 Paris Agreement, Article 4(1).

97. The Paris Agreement does not set binding targets for individual countries. Rather, it requires each party to submit to the UNFCCC secretariat a "nationally determined contribution" (or "**NDC**") to the global response to climate change that it intends to achieve. NDCs must be submitted every five years.[38]

98. New Zealand submitted its first NDC on 4 October 2016 when it ratified the Paris Agreement. That NDC was to reduce net greenhouse gas emissions to 30% below gross 2005 levels by 2030. New Zealand revised its NDC on 31 October 2021. The new NDC is to reduce net greenhouse gas emissions to 50% below gross 2005 levels by 2030.[39]

Zero Carbon Act

99. Parliament passed the Climate Change Response (Zero Carbon) Amendment Act 2019 ("**Zero Carbon Act**") on 7 November 2019, and it came into force on 14 November 2019.

100. The Zero Carbon Act made various amendments to the Climate Change Response Act 2002. Among other things, it:

    a. set a new domestic target for New Zealand to reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050;

    b. established a system of emissions budgets, to act as stepping stones towards long-term climate targets;

    c. required the Government to develop and implement policies for climate change adaptation and mitigation; and

    d. established the Climate Change Commission.

Declaration of climate emergency by Government and Parliament

101. On 2 December 2020 Parliament passed a Government motion declaring a climate emergency. The motion also:

    a. recognised the Intergovernmental Panel on Climate Change's ("**IPCC**") findings that in order to avoid global warming of more than 1.5°C global emissions would need to fall by around 45% from 2010 levels by 2030, reaching "net zero" by around 2050;

    b. recognised the advocacy of New Zealanders in calling for action to protect the environment and to reduce the impact of human activity on the climate;

    c. committed to reducing emissions to avoid a more than 1.5°C rise in global warming;

    d. recognised the devastating impact that volatile and extreme weather will have on New Zealand and the wellbeing of New Zealanders, including on primary industries, water availability and public health, through flooding, sea level rise and wildfire damage;

    e. noted that climate change is one of the greatest challenges of our time; and

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38 Paris Agreement, Article 4(9).

39 https://environment.govt.nz/what-government-is-doing/areas-of-work/climate-change/nationally-determined-contribution/.

f. committed to implementing the policies required to meet the targets in the Zero Carbon Act, and to increase support for striving towards 100% renewable electricity generation, and low carbon energy and transport systems.

Climate Change Commission advice to the Government

102. The Climate Change Commission published its draft advice to the Government on 31 January 2021. It provided its final advice to the Government on 31 May 2021, and published the advice on 9 June 2021.

103. The Climate Change Commission advice proposed the following for the upcoming emissions budget periods:

a. emissions budget 1 (2022-2025): 290 Mt CO2e[40] (being an average of 72.4 Mt CO2e per year);

b. emissions budget 2 (2026-2030): 312 Mt CO2e (being an average of 62.4 Mt CO2e per year); and

c. emissions budget 3 (2031-2035): 253 Mt CO2e (being an average of 50.64 Mt CO2e per year).

104. The Climate Change Commission's advice records that the proposed budgets equate to reducing net emissions by 2030 (against a 2019 baseline):

a. by 38% in respect of long-lived greenhouse gases; and

b. by 47% in respect of carbon dioxide.

Obligations to iwi

105. For completeness we note that it may be argued that the Crown has obligations owed specifically to Māori in the climate change context. Relevantly, the IPCC has recently noted in Assessment Report 6 that climate change is "*expected to exacerbate many of the social, economic and health inequalities faced by … Māori in New Zealand*".[41] The IPCC has clearly stated that for mitigation and adaptation frameworks to be effective, states must assess and understand the particular vulnerabilities of indigenous populations and work actively to address them.[42]

CLIMATE CHANGE – THE SCIENCE AS ACCEPTED BY NEW ZEALAND

106. Consenting delays/barriers for renewable energy projects will inevitably delay emissions cuts, affecting not just New Zealand's ability to meet its targets, but exacerbating harm from climate change. A review of the established science shows that this harm will be widespread and alarming.

107. The scientific consensus on the causes, impacts and future impacts, risks and options for mitigation of climate change are set out in reports of the IPCC. These reports represent the most accurate available scientific position on climate change, and are accepted by member states of the UNFCC, including New Zealand.

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40 The Climate Change Commission's emissions budgets are expressed in units of megatonnes of carbon dioxide equivalent ("**Mt CO2e**").

41 IPCC AR6 WGII Full report chapter 11.

42 *IPCC Climate Change 2022: Impacts, Adaptation and Vulnerability (February 2022)* at [11.4].

108. The IPCC is presently completing its sixth round of Assessment Reports ("**ARs**"). The ARs are large and detailed. A proper appreciation of the risks to New Zealand's (and the planet's) ecosystems and biodiversity requires reading at least the Summaries for Policymakers of those reports. A brief summary of key features of the most recent ARs is appended to this letter as **Appendix 2**. Points of particular relevance in this context are:

    a. The environmental price of ongoing emissions is enormous. For countless habitats and species, the risks are existential.

    b. The complexity of earth's systems make it impossible to predict exactly how those stresses will play out, but it is readily apparent that much life will not be able to live how and where it currently does. As one example, the soil moisture changes modelled by AR6's Working Group II show material changes in parts of the globe that are significant either to biodiversity or agriculture.

    c. Predicted widespread drought and crop failures, combined with coral reef and fisheries collapse, will result in widespread food shortages.

    a. Loss of food and water security will not only be local problems – they will result in unprecedented human migration and geopolitical stress. In an overpopulated planet this will stress those parts of the natural environment not yet directly affected by local climate changes.

    b. There is an increasingly serious risk of 'tipping points' being triggered that cause runaway heating from which the planet will not return for centuries.

    c. Some mitigation pathways are challenging to advance, and many of the pathways modelled involve the assumption that technology (eg carbon sequestration) will be developed in time for it to play a part.

    d. Deep and rapid cuts to emissions are needed to avoid environmental peril. As has been accepted by ratification,[43] New Zealand has to lead the way in making those cuts.

    e. Notably, renewable energy generation is identified as a mitigation pathway that is technically and socially viable now.[44]

RENEWABLE GENERATION'S ROLE IN NEW ZEALAND'S EMISSIONS REDUCTIONS

109. The Group has sought a report from Concept Consulting a specialist energy sector consulting entity. The report is attached as **Appendix 4.** Concept's report addresses:

    a. the nature and scale of renewable generation developments needed to meet New Zealand's emissions goals; and

    b. the potential consequences (economic and emissions) if renewable generation projects are stymied.

110. Concept has particular expertise in this area, having recently worked with the Climate Change Commission in the preparation of the Commission's report. Concept's climate change modelling of whole-of-economy decarbonisation pathways was the principal analysis used by the Climate Change Commission for setting its carbon budgets. That model has been used, along with other established models, in preparing Concept's report for the purpose of this opinion.

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43 UNFCCC, Article 4.

44 IPCC *Climate Change 2022: Mitigation of Climate Change* (AR6 WGIII, April 2022) at [E.1.1].

111. Concept's report:

    a. sets out the historic and predicted volume and mix of electricity generation combinations (see eg fig 1 and 2);

    b. concludes that "unprecedented levels" of renewable generation development will be required. This requires a tripling of development over the next 30 years compared to the past 30, or "the equivalent of one West Wind generation project every 5 months until 2050" – refer 4.1);

    c. identifies the risk, posed by the need for reconsenting of a number of existing renewable generation facilities, of even greater requirements for new greenfields projects. This risk is material, with more than 30% of existing renewable generation subject to reconsenting within the next five years alone (see 4.2);

    d. outlines the economic costs of NBEA-imposed barriers to renewable generation development (at 5). These include real costs associated with delays and/or the need to pursue more expensive developments. Increased generation costs follow. Those costs could amount to some NZD $9 billion over the next 20 years, with $1.9 billion in increased generation costs and $7 billion in cost increases faced by consumers;[45]

    e. recognises that generation projects are not readily substitutable. Because of scale, complexity and cost, development takes years (eg 10 years for a windfarm). If the NBEA resulted in material disruption to the pipeline of renewable projects, the result would be power cuts and/or additional fossil fuel generation to fill the gap (5.2); and

    f. notes that this would be likely to cause increased emissions in the balance of the economy. Because renewable electricity would not be available, fossil fuels would continue to fill the gap for transport, heating and process heat (5.2.1).

112. These issues are particularly serious given the importance of renewable energy to New Zealand's pathway to decarbonisation. It is a matter of public record that there are obstacles (political and economic) to materially reducing some major sources of New Zealand emissions, in particular agriculture, which means that renewable generation is a key area in which reductions are expected.

113. Further, the Climate Change Commission's recommended pathways rely heavily on increased renewable generation capacity. For example:

    a. migration to EVs as a core part of the transport solution;

    b. electrification of rail and trucking;

    c. prohibiting installation of new gas heating from 2025;

    d. electrification of rail is even more serious when viewed in the context of New Zealand's current plan for emissions reduction; and

    e. replacement of coal and gas for industrial process heat with electricity.

114. The Government's recently announced Emissions Reduction Plan includes multiple statements regarding the "*need to massively ramp up renewables*", "*move towards increase renewable electricity generation*", and to accelerate its development. The Government has chosen not to

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45 Refer appended paper (**Appendix 4**) prepared by Concept Consulting (see, in particular, sections 1 and 5).

tackle certain key emissions (including those from the agriculture sector). Public transport has not received the push some expected. Instead, the Plan confirms support for the move to EVs, including through the "Clean Car Upgrade" programme, while seeking to wind down fossil fuel generation. This approach relies, critically, on a swift increase in renewable energy production.

115. Unintended obstacles in the NBEA to delivery of renewable energy projects risks unravelling New Zealand's wider emissions reduction plan.

PROPOSED AMENDMENTS TO NBEA

Explanation of proposed solution – a policy pathway exception to limits and an amendment to outcome

116. To address the key concerns raised in this opinion about the likely constraints on renewable energy projects and transmission under the NBEA, with consequent serious consequences for the mitigation of climate change, we propose that there be several amendments made to the NBEA.

117. These are explained below and also set out in **Appendix 1**. They are intended to provide limited scope within the national planning framework for exceptions to be made to environmental limits solely relating to renewable energy generation, storage and transmission activities, and only where that is necessary to enable New Zealand to meet its international climate change mitigation commitments. An amendment to the outcome relating to climate change is also proposed.

118. It is noted that this approach would also be consistent with the majority view of the Environment Select Committee in its Final Report on the Inquiry on the NBEA at p 26, where it said:

> **Considering how exceptions to environmental limits could be accommodated**
>
> We suggest that consideration be given to whether the NBA should provide for situations where narrow exceptions to limits could be allowed or accommodated. A balance would need to be struck when defining any grounds for exceptions so that they do not become the norm; if limits are too flexible, it would undermine their effectiveness. The majority of us consider that any exception would need to be justified.

Section 10 – Purpose of national planning framework

119. An amendment is proposed to enable the national planning framework (as an express purpose of the instrument) to provide help in resolving conflicts, not only between or among environmental outcomes, but between or among environmental outcomes and environmental limits. The change would read:

> […]
>
> (b) Helping to resolve conflicts about environmental matters, including those between or among the environmental outcomes, or between or among the environmental outcomes and environmental limits; and […]

120. The short point being that for all of the reasons addressed in the body of this opinion, the express outcomes of the NBEA in relation to climate change mitigation will simply not be able to be secured or achieved, if environmental limits are immutable, because such limits will in all cases prevail over or defeat those outcomes, in the event of conflict. The national planning framework must enable such a conflict to be resolved.

Section 12A – Purpose of environmental limits

121. The first amendment proposed to section 12A is to make subsection 2, which would otherwise require all persons using, protecting or enhancing the environment to comply with environmental limits ie as a complete proposition (with no scope for exceptions of any kind), subject to proposed new subsection 3. The proposed amendment to s 12A(2) is shown below.

122. The new subsection 3 in turn would establish limited capacity for the Minister (in approving the national planning framework)[46] to provide for exceptions to environmental limits within that framework, but only provided **both** of the two tests set within the proposed provision are met, as follows:

> […]
>
> (2) Subject to subsection 3, all persons using, protecting or enhancing the environment must comply with environmental limits (~~*but see*~~ including any transitional limits set under **section 12E(7**), which applies ……[rest as drafted currently]
>
> (3) The national planning framework may only provide for exceptions to environmental limits where both of the following apply:
>
> (a) the exceptions relate to renewable energy generation, storage and transmission activities; and
>
> (b) the Minister is satisfied that such exceptions are necessary to enable New Zealand to meet its international obligations in relation to climate change mitigation, the Target set under s 5Q of the Climate Change Response Act 2002, or an Emissions Reduction Plan prepared under that Act.

123. The first test is that any such exceptions must exclusively relate to renewable energy generation, storage and transmission activities.

124. That is, the only capacity to provide for exceptions to environmental limits would be in relation to the truly international scale climate change mitigation imperative, and (to that end) with reference specifically to renewable energy generation, storage and transmission activities alone.

125. In that regard, reference to "energy" has been applied within this provision rather than electricity (the reference in the existing National Policy Statement for Renewable Electricity Generation 2011 ("**NPS-REG**"), to embrace renewable energy projects more generically, rather than those just involving electricity generation for transmission and distribution to other (including industrial) activities dependent on that energy source.

126. The second test is that the Minister must be *satisfied* that such exceptions are *necessary* to enable New Zealand to meet its domestic and international climate change mitigation obligations.

127. The word "satisfied" is deliberately employed, noting the Supreme Court's observation that the word "satisfied" is "*the strongest decisional verb used in the RMA",*[47] comprising a standard meaning "*to furnish with sufficient proof or information; to assure or set free from doubt or uncertainty*".

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46 Or more specifically, in recommending that if be made by the Governor-General by Order in Council under s 11.

47 *Discount Brands Ltd v Westfield (New Zealand) Ltd* [2005] NZSC 17, [2005] 2 NZLR 597 at [52].

128. The necessity threshold in turn provides a further degree of stringency to the proposed second test, which must also be met before any exceptions of this nature could be approved by the Minister.

129. It is noted that in considering these two tests, the Minister would be approaching the issue from a generic, New Zealand wide (rather than project specific) perspective.

130. In that way, this proposed provision would provide scope for exceptions, but not the exceptions themselves. Further, the concerns expressed in this opinion as to the potentially (and fatally) constraining effect of immutable environmental limits on renewable energy projects, would be able to be further tested and examined through a public Board of Inquiry process (or equivalent process) through which the national planning framework is proposed to be scrutinised.

131. The Minister would need to be "satisfied" (in terms of the necessity element of the test) after that rigorous process was complete, ie having regard to the recommendations of the Board of Inquiry, before any scope for exceptions to environmental limits for renewable energy generation, storage and transmission activities could be included within the framework.

Section 13A – Environmental Outcomes

132. An amendment is also proposed to the outcome in s 13A relating to climate change, for the reasons discussed earlier in this opinion. The proposed amendment is:

> […]
>
> (c) In relation to climate change and natural hazards, –
>
> (i) Provide for, secure and achieve reduced greenhouse gas emissions, including by low emission urban form and increased generation, storage, transmission and utilisation of renewable energy, sufficient to enable New Zealand to meet its international obligations in relation to climate change mitigation, the Target set under s 5Q of the Climate Change Response Act 2002, or an Emissions Reduction Plan prepared under that Act.

133. There are three aspects of the amendment to s 13A(c)(i) that warrant explanation.

134. The first is the deliberate employment of strong directional verbs ie "provide for, secure and achieve" in relation to reduced greenhouse gas emissions.

135. The reason for that is simple, but equally important.

136. As explained above, the Supreme Court found in *King Salmon,* the way directional verbs are expressed in statutory instruments "matters", in terms of the degree of prescription of conversely flexibility they afford.[48]

137. Going back to the issue of conflicts between or among outcomes and limits referred to earlier in this opinion, other outcomes proposed in the NBEA including as to the natural environment (indigenous biodiversity, outstanding natural features and landscapes, natural character of the coastal environment etc) employ the strongly directive verbs "protection" and "restoration".

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48 *King Salmon*, above n 11 at [127].

138. To provide sufficient certainty that the critically important outcome relating to climate change mitigation is afforded at least equivalent weight (in the event of conflict), equally strongly directive verbs need to be employed within the provision.

139. The outcome is also proposed to be amended to refer to not just utilisation, but generation, storage and transmission of renewable energy. It is of course these activities rather than 'utilisation' that are most important to enable New Zealand to meet its climate change mitigation obligations domestically and internationally.

140. Finally, the "target" or required end state needs to be expressed. It is simply inadequate that 'some' or 'any' reduction in greenhouse gases be secured as an outcome. The degree of reduction must be *sufficient for the purpose*.

141. To illustrate the point and by comparison, the outcomes expressed as to "*well functioning urban and rural areas"* employs the yardstick of "enough" development for housing to meet diverse and changing needs of people.

142. Just as with the outcome for housing, some yardstick or measure of the *degree* of GHG reduction sought as an express outcome of the NBEA, should or must be included.

Proposed National Planning Framework Drafting

143. The final aspect of the schedule in Appendix 1 is a proposed policy of the kind contemplated in providing for limited exceptions within the national planning framework, pursuant to proposed s 12A(3), as follows:

> **Limits Exception: Qualifying Policy for Renewable Energy generation, storage and transmission activities**
>
> Decision makers may approve the exceedance or departure from an environmental limit set under this framework for a renewable energy generation, storage and transmission activity, provided they are satisfied that all of the following apply:
>
> (a) the exceedance or departure would be reasonably necessary to achieve the environmental outcome expressed in s 13A(c)(i) of the Act; and
>
> (b) without the exceedance or departure, the renewable energy generation, storage or transmission activity would not be able to be approved, as proposed.
>
> For the avoidance of doubt, nothing in this Policy requires that the renewable energy generation, storage and transmission activity be approved by the decision maker, in its discretion and having regard to all relevant matters under the Act, following application of this Policy.

144. The following points are noted in relation to the proposed wording of this policy.

145. Firstly, the reference to "decision makers" is intended to embrace all persons exercising functions and powers under the new legislation, whether in respect of resource consent applications, notices of requirement for designations or plan changes relating to a renewable energy generation activity. That same wording is used and defined in that way in the current NPS-REG.

146. Second, and unlike proposed s 12A(3), this policy would of course be applied at project specific level.

147. The specific wording and intended operation of the policy are now explained in that context.

148. Of key importance, the two tests set under the policy are intended to operate in combination as a qualifying gateway. We return to this below.

149. The first qualifying test for any exception to be made under the policy is whether the exceedance or departure would be reasonably necessary to achieve the environmental outcome expressed in s 13A(c)(i) (as proposed to be amended, as explained above).

150. The language "reasonably necessary" has a strong pedigree in s 171 of the RMA and is well supported by an established body of case law, avoiding the need to relitigate the test, and providing greater certainty as to interpretation and application of this policy provision.

151. The second qualifying test that would need to be met is that the renewable generation, storage or transmission activity could not be approved (as proposed) without the exceedance or departure from the environmental limit being made.

152. The words "as proposed" are deliberately intended to ensure that decision makers do not attempt to "pick away" at the proposal at the gateway stage, for example with reference to a partial grant or refusal, or some modification to the project which may avoid the need for the exception to be approved.

153. Instead, given the crucial importance of New Zealand meeting its climate change requirements and targets, the renewable energy project as proposed would not be automatically ruled out for failing to comply with environmental limits. Rather, the project could then proceed to be assessed on its merits in terms of all its effects on the environment and in relation to the environmental outcomes in the NBEA and other statutory tests.

154. Were a proponent to pursue a renewable energy project that is too ambitious in scale, nature or effects, such that it fails the substantive tests for the type of proposal concerned[49] on the merits, the project then would need to be modified or risk being refused consent. On that basis there is no need for the decision maker to attempt to interrogate variations to the project, to arrive at something of lesser scale or impact, when considering and applying this policy.

155. Finally, the wording of the policy makes it clear that it is intended to operate as a qualifying gateway, as explained above.

156. That is, the fact that a proponent may be able to advance a renewable energy project through this policy, such that an exception to environmental limits which would otherwise apply *can* be approved, does not mean that the exception to the limits in question ultimately *will* be approved and consent granted when the project is assessed on its merits, with reference to the other relevant statutory tests which apply on their substantive terms. It could be approved as proposed, declined, or approved in a modified form.

157. While we have not attempted to draft it here, a similar exception will need to apply to any transitional limits (and/or transitional arrangements) that are put in place to cover the period between the enactment of the NBEA and the promulgation of the national planning framework.

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[49] Ie a resource consent, notice of requirement or plan change.

Conclusion

158. There is an urgent need to cut GHG emissions. Under the Paris Agreement New Zealand has proposed to reduce net GHG emissions to 50% below gross levels by 2030. Under the Zero Carbon Act a domestic target has been set to reduce net GHG emissions (except biogenic methane) to zero by 2050.

159. Renewable energy projects are key to GHG reductions to meet these commitments. For New Zealand, renewable energy is particularly critical because of the difficulties in addressing agricultural emissions and the country's intended reliance on electrification to replace fossil fuels in key areas.

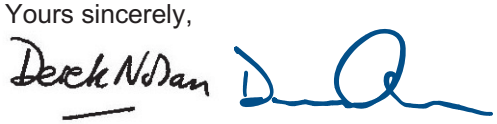
160. The level of renewable generation required is unprecedented. Concept Consulting reports that it requires a tripling of development over the next 30 years compared to the last 30, or the equivalent of one West Wind generation project every five months until 2050.

161. The NBEA, as currently framed, is likely to prevent or delay New Zealand achieving these cuts in GHGs and meeting our climate change commitments and targets. There is also the potential for New Zealand to incur major additional costs, assessed to be up to $9 billion.

162. This is because, in what might be described as an "own goal", the combination of immutable environmental limits combined with a weak, less directive environmental outcome for climate change, make it likely that a number of major renewable energy projects will not be able to be consented under the NBEA.

163. We propose that this be resolved by amending the NBEA to provide an exception to environmental limits for renewable energy generation, storage and transmission, to enable those that meet a gateway test to then be considered and assessed on their merits, and by amending the environmental outcome for climate change to put it on an equal, directive footing to other outcomes, in recognition of the critical importance to New Zealand of achieving our climate change obligations.

Yours sincerely,



Derek Nolan QC | Davey Salmon QC

APPENDIX 1 - SUGGESTED AMENDMENTS TO NATURAL AND BUILT ENVIRONMENTS ACT

Section 10 – Purpose of national planning framework

…

(b) Helping to resolve conflicts about environmental matters, including those between or among the environmental outcomes, or between or among the environmental outcomes and environmental limits; and

Section 12A – Purpose of Environmental Limits

…

(2) Subject to subsection 3, all persons using, protecting or enhancing the environment must comply with environmental limits (~~*but see*~~ including any transitional limits set under **section 12E(7**), which applies ……[rest as drafted currently]

(3) The national planning framework may only provide for exceptions to environmental limits where both of the following apply:

(a) the exceptions relate to renewable energy generation, storage and transmission activities; and

(b) the Minister is satisfied that such exceptions are necessary to enable New Zealand to meet its international obligations in relation to climate change mitigation, the Target set under s 5Q of the Climate Change Response Act 2002, or an Emissions Reduction Plan prepared under that Act.

Section 13A – Environmental Outcomes

…

(c) In relation to climate change and natural hazards, –

(ii) Provide for, secure and achieve reduced greenhouse gas emissions, including by low emission urban form and increased generation, storage, transmission and utilisation of renewable energy, sufficient to enable New Zealand to meet its international obligations in relation to climate change mitigation, the Target set under s 5Q of the Climate Change Response Act 2002, or an Emissions Reduction Plan prepared under that Act.

Proposed National Planning Framework Drafting

Exception to Environmental Limits for Climate Change Mitigation – proposed exceptions Policy pursuant to s 12 A(3).

Limits Exception: Qualifying Policy for Renewable Energy generation, storage and transmission activities

Decision makers may approve the exceedance or departure from an environmental limit set under this framework for a renewable energy generation, storage and transmission activity, provided they are satisfied that all of the following apply:

(a) the exceedance or departure would be reasonably necessary to achieve the environmental outcome expressed in s 13A(c)(i) of the Act; and

(b) without the exceedance or departure, the renewable energy generation, storage or transmission activity would not be able to be approved, as proposed.

For the avoidance of doubt, nothing in this Policy requires that the renewable energy generation, storage and transmission activity be approved by the decision maker, in its discretion and having regard to all relevant matters under the Act, following application of this Policy.

Note

A similar Limits Exception to the policy recommended above should apply to any transitional limits (and/or transitional arrangements) that are put in place to cover the period between the enactment of the NBEA and the promulgation of the national planning framework.

APPENDIX 2 – CURRENT SCIENCE AS ACCEPTED BY NEW ZEALAND

1. The IPCC's first Assessment Report (**AR**) was completed in 1990, and the fifth in 2014. In 2018, the IPCC published a Special Report on the impacts of global warming of 1.5°C above pre-industrial levels compared to other levels, and potential emissions reductions pathways consistent with keeping warming to 1.5°C, in 2018.[50] It identified material risks to natural and human systems from a 1.5°C increase, but concluded that risks increased significantly towards 2°C.[51] The IPCC concluded that the planet was on track to reach 1.5°C between 2030 and 2052.[52] It calculated that to limit warming to 1.5°C with no or limited overshoot, global net anthropogenic CO_2 emissions would need to decline 45% below 2010 levels by 2030 and reach net zero around 2050. Deep reductions in non-CO_2 emissions would also be required.[53] Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (high confidence). These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options.[54]

2. In the years since the 1.5°C Special Report global emissions have not been reduced as needed, and the scientific picture has worsened. The IPCC is presently in the process of publishing its sixth assessment report (**AR6**), with three of the four reports now published. In August 2021, the IPCC Working Group I published its report *Climate Change 2021: The Physical Science Basis*.[55] The conclusions of the Working Group included:

    a. the evidence for human-induced climate change is unequivocal. It is already affecting many weather and climate extremes in every region across the globe. Evidence of observed changes in extremes such as heatwaves, heavy precipitation, droughts, and tropical cyclones and, in particular, their attribution to human influence, has strengthened since AR5;[56]

    b. global surface temperature will continue to increase until at least mid-century under *all* emissions scenarios considered. Global warming of 1.5°C and 2°C will be exceeded this century unless deep reductions in CO_2 and other greenhouse gas emissions occur in the coming decades;[57]

    c. many changes in the climate system become larger in direct relation to increasing global warming. They include increases in the frequency and intensity of hot extremes, marine heatwaves, heavy precipitation, and, in some regions, agricultural and ecological droughts; an increase in the proportion of intense tropical cyclones; and reductions in Arctic sea ice, snow cover and permafrost;[58] and

    d. many changes due to past and future greenhouse gas emissions are irreversible for centuries to millennia, especially changes in the ocean, ice sheets and global sea level.[59]

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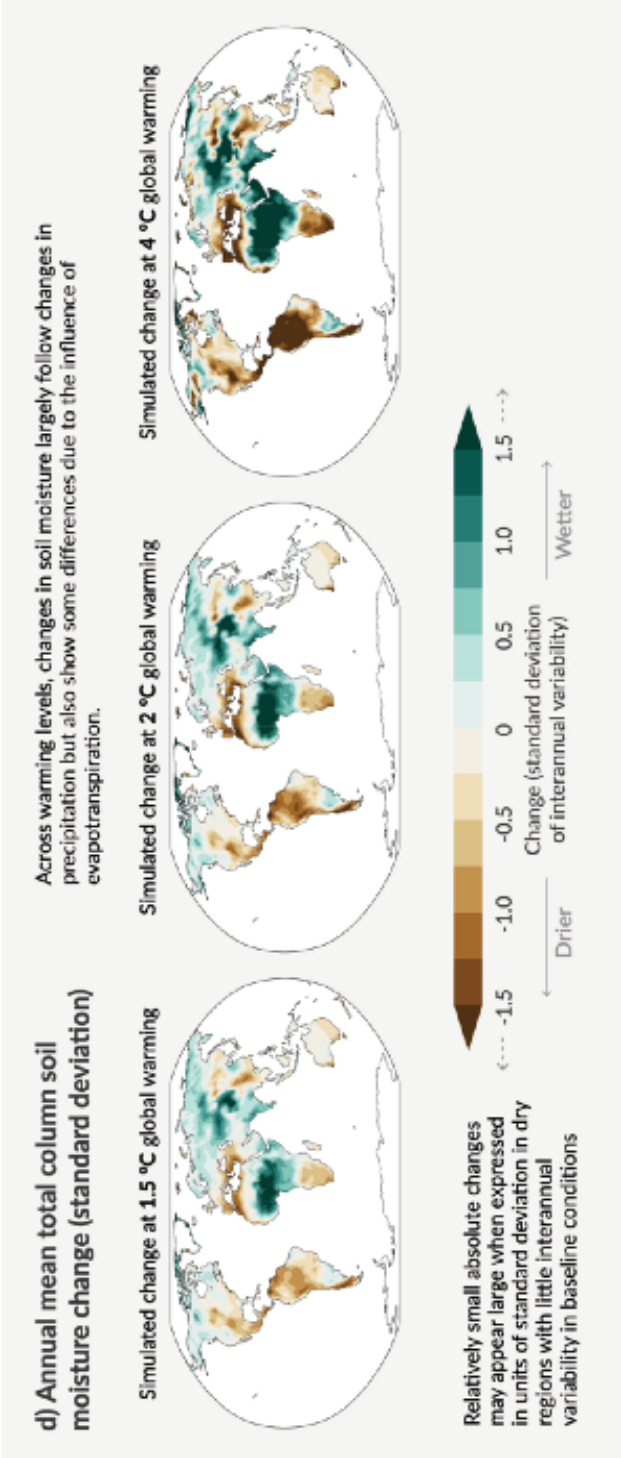
50 IPCC *Global Warming of 1.5°C* (SR1.5, 2018).
51 At [A.3].
52 At [A.1].
53 At [C.1].
54 At [C.2].
55 IPCC *Climate Change 2021: The Physical Science Basis.*
56 At [A.3].
57 IPCC *Global Warming of 1.5°C* (SR1.5, 2018)

e. The Working Group modelled temperature, rainfall and soil moisture changes for various pathways which demonstrate that climate changes will differ from region to region. For example, soil moisture is predicted to reduce significantly in a number of high population regions which has obvious implications for biodiversity, for food and water security, and therefore geopolitical stability:



3. In February 2022 IPCC Working Group II published its report *Climate Change 2022: Impacts, Adaptation and Vulnerability*.[60] The key conclusions of the Working Group included that:

    a. Widespread, pervasive impacts to ecosystems, people, settlements, and infrastructure have resulted from observed increases in the frequency and intensity of climate and weather extremes, including hot extremes on land and in the ocean, heavy precipitation events, drought and fire.[61]

    b. Vulnerability of ecosystems and people to climate change differs substantially among and within regions, driven by patterns of intersecting socio-economic development, unsustainable ocean and land use, inequity, marginalisation, historical and ongoing patterns of inequity such as colonialism and governance.[62]

    c. Global warming, reaching 1.5°C in the near-term, would cause unavoidable increases in multiple climate hazards and present multiple risks to ecosystems and humans. The level of risk will depend on concurrent near-term trends in vulnerability, exposure, level of socioeconomic development and adaptation. Near-term actions that limit global warming to close to 1.5°C would substantially reduce projected losses and damages related to climate change in human systems and ecosystems, compared to higher warming levels, but cannot eliminate them all.[63]

    d. Beyond 2040 and depending on the level of global warming, climate change will lead to numerous risks to natural and human systems. For 127 identified key risks, assessed mid- and long-term impacts are up to multiple times higher than currently observed. The magnitude and rate of climate change and associated risks depend strongly on near-term mitigation and adaptation actions, and projected adverse impacts and related losses and damages escalate with every increment of global warming.[64]

    e. Climate change impacts and risks are becoming increasingly complex and more difficult to manage. Multiple climate hazards will occur simultaneously, and multiple climatic and non-climatic risks will interact, resulting in compounding overall risk and risks cascading across sectors and regions.[65]

    f. If global warming transiently exceeds 1.5°C in the coming decades or later (overshoot), then many human and natural systems will face additional severe risks, compared to remaining below 1.5°C. Depending on the magnitude and duration of overshoot, some impacts will cause release of additional GHGs and some will be irreversible, even if global warming is reduced.[66]

    g. There are feasible and effective adaptation options which can reduce risks to people and nature. The feasibility of implementing adaptation options in the near-term differs across sectors and regions. The effectiveness of adaptation to reduce climate risk is documented for specific contexts, sectors and regions and will decrease with increasing warming. Integrated, multi-sectoral solutions that address social inequities,

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60 *Adaptation and Vulnerability* (AR6 WGII, February 2022) at [C.1].
60 At [C.2].
61 At [B.1.1].
62 At [B.1.7].
63 At [B.3].
64 At [B.4].
65 At [B.5].
66 At [B.6].

differentiate responses based on climate risk and cut across systems, increase the feasibility and effectiveness of adaptation in multiple sectors.[67]

4. On 4 April 2022 IPCC Working Group III published its report *Climate Change 2022: Mitigation of Climate Change*.[68] The key conclusions of the Working Group included that:

   a. Total net anthropogenic GHG emissions have continued to rise[69] and are likely to be higher than nationally determined contributions.[70]

   b. Without a strengthening of policies beyond those that are implemented by the end of 2020, GHG emissions are projected to rise beyond 2025, leading to a median global warming of 3.2 [2.2 to 3.5] °C by 2100.[71]

   c. All pathways that limit warming to 1.5 or even 2°C involve "*rapid and deep and in most cases immediate GHG emission reductions in all sectors*".[72]

   d. Some mitigation pathways are challenging to advance, and many of the pathways modelled involve the assumption that technology (eg carbon sequestration) will be developed in time for it to play a part. Notably, renewable electricity generation is identified as a mitigation pathway that is technically and socially viable now.[73]

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67 At [C.2].
68 IPCC *Climate Change 2022: Mitigation of Climate Change* (AR6 WGIII, April 2022).
69 At [B.1].
70 At [B.6].
71 At [C.1].
72 At [C.3].
73 At [E.1.1].

APPENDIX 3 – BOOTHROYD REPORT ON ECOLOGICAL INTEGRITY

Discussion Paper prepared by Boffa Miskell Limited for the Electricity Sector Environment Group

June 2022

Introduction and purpose

A major criticism of the Resource Management Act (1991) RMA is that it has not adequately protected the natural environment. One reason is that national and local RM policy and plans have not always set controls that are strong and comprehensive enough, such as environmental bottom lines. The current Government is proposing a reform of the RMA and the establishment of the Natural and Built Environment Act (currently proposed as the Natural and Built Environment Bill or NBEB).

The proposed reform is supported by the Electricity Sector but with caution regarding specific points of concern and consideration of NBEB. Amongst these concerns is the potential for biophysical limits set as part of the new legislation to severely curtail new electricity generation and stall existing renewable electricity generation.

In this paper we consider the proposal within the NBEB to set **environmental limits** to protect either or both **ecological integrity** and **human health**[1]. In particular we focus on the meaning of 'ecological integrity' as defined in NBEB and how it might be implemented through environmental limits setting to protect ecological integrity, and the implications of this for renewable energy projects that would necessarily have at least some impacts on ecological systems and resources.

Natural and Built Environment

Background

The Parliamentary paper (PP-NBEB) on the exposure draft of the NBEB sets out the reasons and purpose of the Bill[2]. The understanding that the RMA has not delivered on desired environmental or development outcomes, nor have RMA decisions consistently given effect to the principles of Te Tiriti o Waitangi/the Treaty of Waitangi (Te Tiriti/the Treaty) underpins the desire and need for environmental legislative reform[3].

The PP-NBEB confirms that Aotearoa New Zealand needs a resource management (RM) system that transforms New Zealand's relationship with the environment and to better enable development and infrastructure[4]. The design of the new RM system aims to learn from the past and produce better results.

The proposed NBA is expected to include a mandatory requirement for the Minister for the Environment to set **environmental limits** for aspects of the natural environment, to protect either or both **ecological integrity** and **human health**[5]. These limits will be framed as a minimum acceptable state of an aspect of the environment, or a maximum amount of harm that can be caused to that state[6].

[1] S7(1), NBEB
[2] PP-NBEB Report of the Environment Committee dated November 2021.
[3] PP-NBEB (2021), para 2, page 4.
[4] PP-NBEB (2021), para 3, page 4.
[5] S7(1), NBEB
[6] PP-NBEB (2021), para 33, page 10.

Environmental limits

Environmental limits are the proposed mechanism for protection of 'ecological integrity' in the PP-NBEB. The PP-NBEB explains that environmental limits will make a key contribution to protecting the ecological integrity of the listed matters and human health. As proposed, environmental limits may be formulated as either:

- the minimum biophysical state of the natural environment (or a specified part of that environment); or
- the maximum amount of harm or stress that may be permitted on the natural environment (or specified part of that environment).

The NBEB will require mandatory limits for air, biodiversity (including habitat and ecosystems), coastal waters, estuaries, freshwater and soil[7]. We note that there will be discretion to prescribe limits for other natural environment matters outside of those listed.

The PP-NBEB goes on to state that environmental limits will need a degree of sophistication drawing on a range of knowledge sources (including mātauranga Māori), some of which may have imperfect data or are not easy to quantify. The NBEB will therefore be expected to provide for limits to be qualitative (descriptive) as well as quantitative (set using quantified numbers). Limits will take a precautionary approach (in other words incomplete or uncertain data should not be a barrier to setting limits)[8]. The final PP-NBEB noted that the detail or format of limits may resemble some of the content in the National Policy Statement for Freshwater Management 2020, or the ambient air quality standards set out in the Resource Management (National Environmental Standards for Air Quality) Regulations 2004[9]. The PP-NBEB goes on to say that the limits should focus on maintaining or restoring the current state of the environment (rather than the methods to do so[10]).

We note the use of the term 'maintaining or restoring the current state of the environment' in this final parliamentary report. The use of this terminology suggests a stringency in the environmental limits that will prevent loss of ecological integrity.

Ecological integrity (EI)

The NBEB provides the following definition of ecological integrity:

> **ecological integrity means the ability of an ecosystem to support and maintain —**
>
> (a) its composition: the natural diversity of indigenous species, habitats, and communities that make up the ecosystem; and
>
> (b) its structure: the biotic and abiotic physical features of an ecosystem; and
>
> (c) its functions: the ecological and physical functions and processes of an ecosystem; and
>
> (d) its resilience to the adverse impacts of natural or human disturbances.
>
> **ecosystem** means a system of organisms interacting with their physical environment and with each other

We note that the definition and NBEB is silent on the question of any hierarchy to the components of EI. We would expect that no hierarchy exists and that all four components will be given equal weighting in an assessment. We suggest that equal weighting may not be achievable for the measurement of each of these components (i.e., some components will be easier to measure/assess than others).

The NBEB also provides for environmental outcomes including (but not limited to):

[7] PP-NBEB, page24
[8] PP-NBEB (2021), para 111, page 21.
[9] PP-NBEB, page 27
[10] Ibid.

ecological integrity is protected, restored, or improved; and

areas of **significant** indigenous vegetation and **significant** habitats of indigenous fauna are protected, restored, or improved.

National Policy Statement for Indigenous Biodiversity: Exposure draft

It is worth noting the recent release of the exposure draft of the National Policy Statement for Indigenous Biodiversity (NPS-IB) in relation to the meaning and implementation of EI as set out in the NBEB. It is not our intention to provide an in-depth review of the NPS-IB, but we do comment on specific cross-overs between the NPS-IB and the meaning and purpose of EI as set out in the NBEB where relevant in our current paper.

What is Ecological Integrity?

Background and History of EI

The concept of EI is not new and was in use as early as 1949[11] but was first enshrined in legislation in Canada under the Water Pollution Control Act Amendments of 1972 and the Parks Canada Act of 1988 with a requirement to 'restore and maintain 'biotic integrity'. This led to significant debate about the meaning and practical application of the concept (Wurtzebach and Schultz 2016). Since the late 1990s, practical and measurable approaches to ecological integrity in the context of resource conservation have been grounded in the scientific foundations of conservation biology and community ecology. The EI concept is now used widely internationally but with often differing underlying intent. EI has also been criticised on the grounds that it is too vague and rhetorical to be useful in a practical operational sense (Larkin 1996; Manuel-Navarrete et al. 2004), although in NZ McGlone et al. (2020) argue that this is not the case. We return to this matter later in our paper.

The EI concept is now in widespread use, at a range of scales ranging from selected ecosystems, such as forests, where provision of economic services is also an important factor (Ghazoul et al. 2015), to national parks e.g., Canada National Parks Act (2000) where preservation of biodiversity is the over-riding aim, and as a high-level goal for a whole nation as in the New Zealand Environmental Reporting Act (2015).

Definitions of ecological integrity

Several definitions of EI have been put forward over several decades. We have provided a précis of the most commonly used and quoted in Appendix 1. It is not our intention to comment or review all of these definitions. Rather we comment on the commonalities and disparities between them, and what that might mean for the proposed definition as set out the in NBEB.

Amongst the earliest definitions, Karr & Dudley (1981) defined biological integrity as

> *.....the capability of supporting and maintaining a balanced, integrated, adaptive community of organisms.*

Karr (1996) later amended this to:

> *'...the ability to support and maintain a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organisation expected in the natural habitat of a region".*

In revising this definition Karr draws attention to the underlying message that: biology acts over a variety of scales; biology includes items one can count plus the processes that generate and maintain them; and biology is embedded in dynamic evolutionary and biogeographic concepts.

[11] Leopold (1949) stated "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise"

Parrish et al. (2003) expand on Karr's definition to add that an ecological system or species has integrity or is viable when its dominant ecological characteristics (e.g., elements of composition, structure, function, and ecological processes) occur within their natural ranges of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human disruptions.

Schallenberg (2011) crystallised this further with a review of 18 definitions that revealed four main components that arose from most of the definitions that could be related to conservation of natural heritage: nativeness, pristineness, diversity, and resilience or adaptability.

Several iterations of EI have attempted to include more sociological factors such as intactness, wildness, and beauty (Andreasen et al. 2001). In part this emerged from an argument that as the original EI concept centred on the concept of 'naturalness', others have suggested that ecological integrity can and should be understood outside the context of whether or not humans are present in the system", especially at locations with a long history of human occupancy. This concept has relevance when incorporating mauri and where humans are seen as an integral part of the system (McGlone et al. 2020).

Rohwer and Marris (2021) challenge the use of EI in conservation biology and restoration ecology and go on to state that the concept of EI often includes the idea that the influence of humans, in particular, destroys integrity. Ecosystems with integrity are said to be "natural" (Noss, 2000) or "minimally influenced" by humans (Karr, 1996; Karr, 2000).

In conclusion, the various definitions of EI fall into two broad categories, those focused more on the composition and structure (the species present – what is present and is it what should be present) and those focused more on function and resilience (how it works and sustains itself). The NBEB combines these into a single definition of EI which makes it more difficult to determine what might be needed to sustain and protect EI.

We discuss measurement of EI below, but we note that in our current practice of assessments for resource management purposes, much is inferred from an assessment of what is present (composition and structure). This point is also discussed further below.

New Zealand definitions of EI

In conservation

In determining a biodiversity inventory and monitoring programme, Lee et al. (2005) suggested that the primary national outcome of conservation management at the highest level is to maintain ecological integrity. This was defined as:

> *.....the full potential of indigenous biotic and abiotic features, and natural processes, functioning in sustainable communities, habitats, and landscapes.*

This responds to Karr (1996) and encompasses all levels and components of biodiversity, and can be assessed at multiple scales, up to and including the whole of New Zealand. Lee et al. (2005) go on to state that at its simplest interpretation, ecosystems have ecological integrity when all the indigenous plants and animals typical of a region are present, together with the key major ecosystem processes that sustain functional relationships between all these components. At larger scales, ecological integrity would be achieved when ecosystems occupy their full environmental range, thus emphasising the species and structure component of EI.

Ecological integrity framed in this way, with a focus on species, ecosystem structure and environmental range, could have major implications for environmental limit setting. Limits for the protection of ecosystems to protect the EI of a species or ecosystem would necessarily be highly stringent to cover the geographic area and habitat availability.

In legislation

While the concept of EI is not widely used or referred to in NZ legislation, the NZ New Zealand Environmental Reporting Act 2015[12] provides a definition of EI as adopted from Lee et al. (2005) (see above):

> *'.....the full potential of indigenous biotic and abiotic features and natural processes, functioning in sustainable communities, habitats, and landscapes'*

We note that the NBEB definition of EI differs from that in the recent exposure draft of the proposed NPS-IB which defines EI as:[13]

> **ecological integrity means the extent to which an ecosystem is able to support and maintain its:**
>
> (a) composition (being its natural diversity of indigenous species, habitats, and communities); and
>
> (b) structure (being its biotic and abiotic physical features); and
>
> (c) functions (being its ecological and physical processes

Notably absent from this definition is the requirement for resilience to adverse impacts of natural or human disturbance. However, we acknowledge the inclusion of 'the resilience and adaptability of ecosystems' as part of the fundamental concept of maintenance of indigenous biodiversity as set out in the NPS-IB[14].

In practice

Our experience of the use of ecological integrity in practice is that in many cases, the use of assessments of ecological values (the commonly used term and unit of assessment) typically, but not always, incorporates the attributes of composition, structure and function of the biotic environment. That is, ecological integrity as set out in the NBEB definition is already applied in practice. Perhaps unfortunately, these attributes may not be specifically referred to in assessments so it can be difficult to ascertain their application.

Nevertheless, this approach aligns with the view of McGlone et al. (2020) whereby the values are formed as a constructed view from a range of information sources. In other approaches, comparing component communities of species (composition and structure) against a set of metrics that distinguish an impacted, degraded, or depauperate state from a relatively unimpaired, complete, and functioning state is used to assist decision-making around ecosystem values and priorities for effects management.

Is EI about a pristine environment?

Karr (1993) considered that 'integrity' implies an unimpaired condition or quality or state of being complete or undivided, i.e., it implies a comparison with some original pristine condition. In the definitions of EI outlined in Appendix 1, most refer to EI requiring a comparison with a reference condition (not necessarily a pristine condition) or satisfying that the EI is within the natural range of variation of the attributes considered.

Schallenberg et al. (2011) comment that pristineness is a concept strongly linked to a reference state and requires knowledge of the natural state of an ecosystem. A reference site is a location (or a series of locations) that forms the benchmark that other conditions are assessed against. Schallenberg et al. (2011) consider that assessing pristineness as a component of EI relates to a wide array of structural, functional and physico-chemical elements, but is not necessarily dependent on indigenous biota constituting structural and functional elements. We comment on historical

[12] Legislation that mandates regular national environmental reporting.
[13] Section 1.6, Page 7, National Policy Statement for Indigenous Biodiversity. Exposure draft dated June 2022.
[14] Section 1.5(3), Page 6, Ibid.

baseline condition below as a measure of pristineness.

Our view is that pristineness (as in original unaltered state) is not likely to be a component of EI and would be an unobtainable goal in many ecosystems. However, a measure of pristineness (as in a reference condition) is likely to play a role in assessing EI (c.f., the reference condition outlined above). For example, in freshwater streams, an Index of Biotic Integrity (IBI) is a mix of measured metrics of a state of an ecosystem, and how close or far those metrics are from the same metrics assessed from a reference (or pristine) condition. This strikes us as a sensible application of pristineness for measuring EI (particularly as to the structure and composition elements) , but if environmental limits are set to establish pristineness as the goal of EI, then we consider that would be a severe constraint on the ability for renewable energy projects to gain resource consent.

Different weightings in measuring EI

Schallenberg et al. (2011) went on to express that different interest groups often have quite disparate perceptions of how to weight diverse ecological characteristics to achieve a robust measure of EI. We see this as a critical feature of the potential interpretation of meaning of ecological integrity. What we mean by this is that, unless specifically provided for in the limits, different jurisdictions and stakeholders may give greater weight to different attributes that define EI (c.f., expressly rely on just one or more but not all of composition, structure, functions and resilience). For example, conservation groups may give greater focus on species and composition, while Councils are likely to take a broader view across all four attributes of EI, whilst Fish and Game may give more weight to functionality and resilience of ecosystems supporting trout and salmon populations.

The risk of lack of clarity or ambiguous environmental limits for EI would be time-consuming at best and highly restrictive or prohibitive at worst for renewable energy projects.

Historical baselines

We draw attention to a mindset and approach where interpretations of ecological integrity seek comparison to a re-constituted exactness of what might have been present in pre-human, or in NZ's case, pre-European colonisation. The role of historical baselines in assessments of ecological integrity is undoubtably important but the extent of application in resource management and conservation practice is questionable. While historical baselines may play a role (such as establishing the extent of biophysical or ecosystems that once existed, or the former presence of a species or community in areas from which they are no longer found), EI is generally and more practically assessed by comparing the integrity of a site to extant, less modified or unmodified sites, whether for general guidance or a specific benchmark (McGlone et al. 2020).

In establishing the NZ biodiversity inventory and monitoring framework, McGlone et al. (2020) comment that they have employed EI to describe a generalised ecological state but not any particular past state. They view it as an ideal constructed from a range of information sources including historical data, present occurrences, species and community models, climatic and soil data sets etc. The underpinning concept is that nothing important is missing, and ecosystem function is unimpaired. Thus, while the historic template is not neglected, EI is generally assessed by comparing the integrity of a site to extant, less modified or unmodified sites, whether for general guidance or a specific benchmark. They go on to conclude that:

> With EI as the overarching goal, it addresses the concerns about biodiversity conservation being unduly focussed on the unattainable ideal of restoring a long-gone past. EI reflects an ideal state and one that is of course informed by history, but also by EH, the potential of the constituent species in the biota and the reality of current ecosystem dynamics. They acknowledge that their concept of EI will develop over time but it will form a readily understood and quantified goal.

While the focus on the more extant version of benchmark is helpful, the concept of a generalised ecological state is less helpful and lends itself open to re-interpretation and re-visioning of what it

means at any point in time. We also question the 'readily understood and quantified' conclusion and suggest that it is likely to be something only achieved without considerable a cost and time effort.

Conservation and resource management

In concluding from the above sections, it is evident from the above that the focus of EI has been on biodiversity conservation and protection or its equivalent, and less on the use and management of the environmental resource. In NZ, Lee et al. (2005) and McGlone et al. (2020) both focus EI on biodiversity conservation and the monitoring of inventories to demonstrate EI.

Ecological integrity and ecological health – are they the same thing?

Ecosystem health (EH) was originally formulated by Karr (1991) in that a biological system can be considered healthy when its inherent potential is realised, its condition is stable, it's capacity for self-repair when perturbed is preserved, and minimal external support for management is needed. In 1996, Karr refined this such that EH describes the goal for the condition of a site that is cultivated for use (crops, urbanisation, tree harvesting). Fundamentally EH describes the basic physical and biological state of an ecosystem in relation to its ability to support services. McGlone et al. (2020) express the view that:

> Much of the New Zealand landscape, urban, rural and wild alike, is, by this definition, ecologically healthy: plants, fish, mammals, birds and invertebrates are abundant in self-sustaining communities; ecosystem services are maintained; citizens extract wealth and enjoyment.

Thus, EI and EH are not the same thing. The distinction between EI and EH is that an ecosystem may have high EH (functioning and provisioning well) but a low EI (low composition of natural indigenous species or low representation of the ecosystem type). McGlone et al. (2020) argue that the reverse cannot be true. That is, if an ecosystem has high EI with a high degree of measurement of integrity for each of the components (composition, function, structure and resilience) then by definition it must have high EH.

Although the distinction expressed by McGlone et al. (2020) is valid, we consider this view overly simplistic. For example, a river system may have high EI for all components but have a low EH if proliferations of filamentous algae (or Didymo) occur.

A question of scale?

An ecosystem unit may be a single species population, a community of species, a patch of vegetation, a series of habitats across a landscape, right though to a nationwide or even global scale.

Karr (1996) and McGlone et al. (2020) both point to the application of EI at different scales, noting that EI is scale sensitive. McGlone et al. (2020) illustrate the question of scale as follows:

- At small spatial scales (signifying extent, as in reefs, dunes, peat bogs, ponds, reaches of rivers or forest fragments) it is improbable that every species that could be there, is there, as chance plays an important role. All that is necessary for good EI at small scales is that the indigenous biota typical of a region dominates sustainable, healthy ecosystems. If trophic representation, structural elements, absence of exotic dominants, and physicochemical indicators score well, EI is maintained.
- At larger the spatial scale, the more important absences become. Ecological integrity at a regional level must be regarded as impaired if species that should be present are sparse or totally absent.

We note that these examples focus on the 'composition' or biodiversity component of EI, but similar expressions of scale have been applied to whole ecosystems. For example, Holdaway et al. (2012) suggest that a regional approach is also appropriate for the assessment of naturally rare

ecosystems, such as thermal springs, or sand dunes. On the other hand, the global extinction of species or the complete loss of indigenous ecosystems from distinctive land environments need to be assessed at a national scale. In contrast, EH is not scale sensitive: ecosystems can suffer poor ecological health at all scales. Disturbed areas subject to nutrient enrichment, drainage, soil contamination, or soil loss may never recover their original EI status or take a long time to do so (McGlone et al. 2020).

Schallenberg et al. (2011) argued that for freshwater ecosystems, and when considering biogeochemical matters, the most appropriate spatial scale for delineating freshwater ecosystems is the catchment scale, including both surface water and interconnected terrestrial and groundwater habitats. They go on to comment that aquatic habitats within the ecosystem are themselves influenced by drivers at a hierarchy of spatial scales with environmental drivers operating from the catchment scale to the scale of individual substrate particles.

So what does the question of scale mean for EI in NZ? First there is a question of jurisdictional responsibilities whereby Regional Councils have a regional perspective and Districts/Cities focus on a reduced local scale (and unitary authorities with both). The current RMA also largely provides for District/City councils to provide for land use (terrestrial) environmental matters while regions provide for broader cross-boundary resources such as water (fresh and marine), groundwater and air. It is not clear how the enforcement of environmental limits for the protection of EI will work across the different jurisdictions and community desires.

On a more technical note, we consider that the use of 'Ecological Districts' is likely to provide a helpful foundation for establishing EI. McEwan (1987) quotes from Park et al. (1983) in defining Ecological Districts (ED) as:

> *'Ecological district is a local part of New Zealand where topographical, geological, climatic, soil and biological features, including the broad cultural pattern, produce a characteristic landscape and range of biological communities.'*

Ecological regions can be defined as (Park et al. 1983):

> *'An aggregation of adjacent ecological districts with very closely related characteristics together form an ecological region. In some cases, a single very distinctive ecological district is given the status of ecological region to emphasise its uniqueness.'*

In an assessment of the ecological integrity of forests in the Auckland region, notably with a forest conservation focus resulting from forest loss and impairment[15], the Auckland Council (Griffiths et al. 2021) concluded that:

> *'Ultimately, forest conservation needs to take a landscape approach; multi-partner initiatives such as the Northwest Wildlink provide a good example, by maximising the ecological value of and benefit to small and large forest patches.'*

The message here is that the success of ecological integrity at a larger scale reflects ecological value at smaller scales that can be achieved through improved linkages. We expect this approach to be fundamental to the application of meaning of ecological integrity by regulators.

For example, a renewable energy project may require the removal of an entire patch of vegetation in the landscape. That patch may have an established level of ecological integrity and/or it may contribute to the ecological integrity of an ecosystem type or species population within the broader landscape (for example a bird or bat species). In this circumstance the patch of vegetation, especially if assessed as high EI and ecosystem type, will likely attract a higher level of protection at several scales (local [as a patch in its own right], landscape [linkage across the landscape for mobile species] and possibly regional [ecosystem/vegetation type with low representation regionally or even nationally]. Even if the patch is assessed as low EI in its own right, it may still qualify as high at a regional scale, if that ecosystem type is poorly represented in that region. In both these circumstances the case for protection is likely to be strong, and the ability to remove or change that patch is therefore likely to be very difficult.

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[15] 'At a regional scale, the ecological integrity of Auckland's forests is strongly impaired by the absence or reduced extent of many forest and scrub ecosystem types, the absence of many native bird species, the widespread abundance of pest animal species and the frequency of weed incursions (Griffiths et al. 2021).

In contrast, it is also possible that a patch of vegetation with high EI may be able to sustain some partial loss and still retain high EI in the remainder of the patch, and whilst retaining geographic extent (the reduced patch remains where it stands) the overall area of that ecosystem is reduced.

The exposure draft of the NPS-IB makes specific reference and provisions for significant natural areas (SNAs)[16] and specified highly mobile fauna[17]. We highlight these provisions as they require a regional (highly mobile fauna) and district scale (SNAs) identification of specific areas. For SNAs we note that the NPS-IB provides[18]:

> Local authorities must make or change their policy statements and plans to include objectives, policies, and methods that require that the following adverse effects on SNAs of any new subdivision, use, or development are avoided:
>
> (a) loss of ecosystem representation and extent:
>
> (b) disruption to sequences, mosaics, or ecosystem function:
>
> (c) fragmentation of SNAs or the or loss of buffers or connections within an SNA:
>
> (d) a reduction in the function of the SNA as a buffer or connection to other important habitats or ecosystems:
>
> (e) a reduction in the population size or occupancy of Threatened, At Risk (Declining) species that use an SNA for any part of their life cycle

For specified highly mobile fauna[19]:

> Local authorities must include objectives, policies, or methods in their policy statements and plans for managing the adverse effects of new subdivision, use, and development on highly mobile fauna areas, in order to maintain viable populations of specified highly mobile fauna across their natural range

We highlight these provisions as these emphasise the question of scale and reference the representativeness, connectivity, habitats and presence of threatened (At Risk) species (the latter within SNAs).

In summary, the question of scale is important for ecosystems, both for assessing EI as well as setting environmental limits for protection of EI. Even areas of low intrinsic EI may be part of a broader scale resource with overall high EI, depending on the scale applied and the linkages across that ecological landscape.

Ecosystems and Habitat Scale

In our discussion above we have largely focused on the regional scale across broad landscapes for EI. Here we consider the habitat scale and how environmental limits might be applied in these environments. We emphasise that EI is applied to ecosystems that of course are habitats for fauna and flora. We would envisage that such habitats would be mapped and identified, much like significant natural areas (SNAs) are in regional plans; or perhaps as a range or geographic area of habitats for mobile fauna (e.g., birds and bats).

Where environmental limits are provided to protect the EI of habitats for specific flora or fauna we would expect that the limits would be more stringent, as they are likely to be targeted at a specific purpose. At this scale, the presence and/or potential habitat for nationally or regionally threatened indigenous species is likely to play an even greater part of the environmental limits.

Except where regional variations (or exceptions) apply, we expect that if and as scale of application gets more local and arguably smaller, the environmental limits are likely to get increasingly more stringent and possibly even site-specific.

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[16] Subpart 2, sections 3.8 to 3.17, pages 17-23, NPS-IB Exposure Draft dated June 2022.
[17] Subpart 3, section 3.20, pages 25-26, Ibid.
[18] Subpart 2, section 3.10(2), page 19, Ibid.
[19] Subpart 3, section 3.20, pages 25-26, Ibid.

National vs Regional Environmental Limits

The final PP-NBEB states that 'Due to the importance of environmental limits, we consider that the Minister should be required to set environmental limits for the six mandatory topics[20] rather than solely allowing delegation of those decisions to planning committees when they formulate NBE plans. We note that the National Planning Framework (NPF) could set different limits for different circumstances or localities in order to recognise regional variances. We (PP-NBEB) propose that the Minister be able to retain the ability, through the NPF, to direct National and Built Environment Plans (NBE) plans to set further limits on the mandatory topics or for any other matters that accord with the purpose of limits.'

We also note that the final NBEB also provides that environmental limits could be applied to a specified part of NZ, not just nationally[21].

This ability to have national limits, limits for certain locations but not elsewhere, or regional variations, all adds to uncertainty. It might benefit existing or possible new sites for renewable energy, by not including such locations or having reduced limits, or regional variations could possibly end up being more stringent than national limits and prevent renewable energy projects.

Our reading of the recently released exposure draft of the NPS-IB suggests that while criteria and principles are laid out in the NPS-IB, environmental limits are likely to be set through the NPF and regional and district plans.

Measurement and monitoring of EI

If the NBEB provides for the protection of ecological integrity, then what are the fundamental components of an assessment and how are these used to formulate a decision about limit setting to protect ecological integrity? This question was posed by Innes et al. (2000) and has since been responded to by the likes of Carignan & Villard (2002), Brown & Williams (2016) and Wurtzebach & Schultz (2016). Schallenberg et al. (2011) comment that while there seems to be consensus on the characteristics of ecosystems with extremely high integrity (e.g., remote national parks) and extremely low integrity (e.g., areas with severe pollution), EI should define a measurable continuum. In practice this is likely to be similar to our current measurement of ecological values (very low, low, moderate, high and very high), or some comparative assessment against a benchmark extant condition (e.g., very poor, poor, fair, good, excellent by comparison).

The literature has generated a variety of strategies and tools for EI measurement, including (after Innis et al. 2000):

- inventories that generate comprehensive lists of attributes,
- classifications that generate groups based on co-occurring attributes,
- indicators that are attributes that respond in a known way to disturbance,
- assessments or evaluations that compare attributes or indicators in relation to criteria specified for a certain class (see Figure 1).

New Zealand examples

- In 2004, DOC set out a Biodiversity Assessment Framework (BAF; Lee et al. 2005). The working group at the time adopted EI as the most appropriate high-level goal for NZ conservation (in light of international and national obligations). Accordingly, EI has become the overarching goal of the BAF (McGlone et al. 2020). The BAF identified the following national outcome objectives intended to give a comprehensive overview of the state of EI in NZ:
    - Maintaining ecosystem processes.

[20] Air; Biodiversity, habitats and ecosystems; coastal waters; estuaries; freshwater; and soil.
[21] Final PP-NBEB, page 26.

- Limiting environmental contaminants.
- Reducing spread and dominance of exotic species.
- Preventing declines and extinctions.
- Maintaining ecosystem composition.
- Ensuring ecosystem representation.
- Adapting to climate change.
- Human use and interaction with natural heritage.

- Auckland Council (Griffiths et al. 2021) have assessed ecological integrity of forests in the Auckland region focusing through analysis of following:
  - Ecosystem representation – are the full range of ecosystems in the region being maintained and how are they structured within the landscape?
  - Species occupancy – are the species present that should be there?
  - Indigenous dominance – are the key natural ecological processes being maintained by native biota?
- The Fish Index of Biotic Integrity (IBI), a measure of how intact the native fish community is within a stream reach, has been adapted to New Zealand and uses the expected species richness as a metric based on known attributes of each species.
- Bellingham et al. (2016) set out the Regional Council Terrestrial Biodiversity Monitoring Framework. This framework is designed as part of 'a national, standardised, biodiversity monitoring programme, focusing on the assessment of biodiversity outcomes, to meet regional council statutory, planning and operational requirements for sustaining terrestrial indigenous biodiversity'. The report details a list of 18 terrestrial biodiversity indicators (listed in Appendix 2 of our paper), that give some indication of the components that could be formed into environmental limits for terrestrial ecosystems, habitats and species populations.

In summary, the various tools and metrics currently available are generally geared towards suites of attributes that are collectively used to judge or infer a state of ecological integrity as an emergent property. However, few tools have been developed to provide a reliable index of EI (freshwater habitat assessments and standards are the notable exception).

Role of environmental limits

The PP-NBEB provides for the development of environmental limits for the purpose of protecting ecological integrity. As previously noted, the NBA will include a mandatory requirement for the Minister for the Environment to set environmental limits for aspects of the natural environment, to protect its ecological integrity and human health. Limits are expressed as either a "minimum biophysical state" of the natural environment (or a specified part of that environment); or "maximum amount of harm or stress".

While the PP-NBEB acknowledges that the task for setting many of these environmental limits is constrained by measurement limitations or incomplete/ uncertain data, the proposed solution is to develop qualitative (descriptive) limits where necessary and take a precautionary approach. However, environmental limits are, by definition, clearly defined thresholds. We doubt that it is feasible to prescribe sensible and meaningful limits for "biodiversity, habitats and ecosystems" as the NBEB proposes to do.

We consider that there is a risk of poorly conceived limits leading to perverse outcomes, such as a "race to the bottom" where the relevant attribute is above the applicable limit that has been set, or excessive constraints on activity due to broad, precautionary limits being applied to contrive conceptual environmental thresholds in the absence of robust data.

Recent experience with the NPS-FM (2020) has highlighted the uncertainties and misinterpretations

that can occur from a poorly worded or ambiguous definition (including limits or exclusions). There is a risk that a repeat of this experience will cause delays and obstruct developments at a considerable cost of time and effort.

Given the significance of scale to how EI is considered and evaluated, a one size fits all approach risks creating considerable uncertainty and inequity over the form and relative stringency of limits imposed across regions, districts and nationally.

Limits are often highly aspirational and intended to be achieved over time (for example, as with targets under the NPSFM, and the 'limits' that have been set in Te Ture Whaimana o Te Awa o Waikato, for improving the health and wellbeing of the Waikato River). It is possible that expectations run high such that compliance with the higher limits for EI is required earlier than anticipated.

The final report on the PP-NBEB sets out some possible examples of environmental limits[22], although we note that these are largely numerical, contaminant-derived limits (e.g., maximum depths of sediment, maximum concentrations of nitrogen). For the most part these limits are readily derived from existing literature and already form regulatory thresholds. The report has avoided the more troublesome task of suggesting limits for ecosystem types, biotic communities, species habitats, species populations and other attributes of EI. Limits for these attributes will be much more difficult to ascertain and may fall back to loosely defined narrative limits.

We note that there is potential for environmental limits to drive positive environmental outcomes by establishing targets for improvement. For example, the proposed NPSIB has the following implementation requirements:

> *For urban and rural areas, if the assessment indicates an area has less than 10 per cent indigenous vegetation cover, the regional council must include in its regional policy statement a target (expressed as a percentage figure within a specified time) for increasing indigenous vegetation cover in the area.*
>
> *For any urban or rural area where the assessment indicates the area already has 10 per cent or more indigenous vegetation cover, the regional council may include in its regional policy statement targets (expressed as a percentage figure within a specified time) for increasing indigenous vegetation cover in the area.*

Such targets may provide an opportunity for incorporating "net environmental benefit" policy with respect to increasing the EI of specific ecosystem types, which could be achieved by way of an Effects Management approach.

Does the concept of protecting EI allow for loss of some "ecology"?

A key concern for the renewable energy sector operating at a broad landscape scale is - can change, alteration or loss of EI be accommodated within the definition and purpose of EI as set out in the NBEB? The same matter is of importance today in our current assessment of ecological values so the issue is not new, but will it change with the application of EI and the purpose of 'protecting' as it is currently written, the NBEB?

As we have concluded above, given that the establishment of the concept of EI is largely a protectionist/conservation measure, our immediate conclusion is **no**, the concept as stated (without qualifiers or exclusions) does not allow for loss of EI.

However, as EI is measured or assessed against a reference or ideal state (not necessarily a pristine state) we consider that it can provide for change of EI, where the change is for the betterment of EI (i.e., movement towards an improved or enhanced overall EI state). We acknowledge that this returns to the question of scale that EI is assessed against (i.e., local, regional, national). We note that, although policy interpretations are strengthening, our current practice under the RMA also provides for that approach, where the loss or modification of an ecological feature of low or degraded ecological values can be remedied or offset with an

[22] Final Report of PP-NBEB, page 27.

enhancement or new plantings to provide for an overall improvement in the ecological district (or catchment, region depending on the scale applied).

In other words, the concept of protection of EI of an ecosystem type or species population may allow for loss at a location if the broader EI of those same ecosystem type or species population is protected and improved within the region.

We see the greatest risk from limit setting in terms of its potential to prevent any degree of change to EI occurring where ecosystem types and individual features with moderate to high EI will be afforded maximum protection at a more localised scale, or an ecosystem type is poorly represented within a region or district.

Considering EI in the Effects Management Hierarchy

Except where an activity is prohibited, the current practice of assessing ecological impacts has largely focused on determining the ecological values within the footprint (or zone of influence) of a project, and as needed, consideration of application of the effects management hierarchy (EIANZ 2018). The effects management hierarchy outlines the order of priority for ecological impact management as:

- Avoid effects.
- Remedy effects.
- Mitigate effects[23].
- Offset the residual effects.
- Compensate effects that cannot be met by the above.
- And any supporting actions.

We consider that beyond avoidance, the ability to apply the effects management hierarchy to EI is likely to be severely constrained if the protection of EI is the overarching goal. Even if a consenting pathway were available for application of effects management to EI, it is likely to be much more deterministic of each of the components of EI. By that we mean that in addressing each step of the effects management hierarchy, how each component of EI is managed (composition, structure, function and resilience) may need to be explained. In the case of offsetting and compensating specific calculations may be required for each component to demonstrate the 'no net loss' or 'net gain' required to fulfil the principles of offsetting. We don't expect that to be an easy or simple exercise.

We note that the exposure draft of the NPS-IB provides for the use of the effects management hierarchy for maintaining indigenous biodiversity outside of SNAs[24].

Is it possible to provide an offset for loss of EI?

The provision of biodiversity offsets and environmental compensation for the loss of (residual) ecological values is well represented across power generation (and other industry sector) projects. Examples from the dossier of case studies that have biodiversity offsets as examples of environmental outcomes include Wairakei Geothermal Plant (Case Study 18) and Hauauru Ma Raki Wind Farm (Case Study 19).

Biodiversity offsetting is not always favoured by agencies or decision-makers, and there is much confusion over the terminology and implementation. We question whether EI-based limits would allow offsetting. Where loss of EI is prevented, we would not expect a biodiversity offset to be an acceptable outcome.

[23] We note that the effects management hierarchy detailed in the NPS-FM (and in the draft NPS_IB) does not include a step for mitigation.

[24] Subpart 3, section 3.16, page 23, NPS-IB Exposure Draft.

Scenario testing

Here we set out some examples to test how the meaning of EI would be considered in decision-making. We have drawn on the example case studies put together by the Electricity Sector Group and our own experience of applications for resource consents for renewable energy projects. These are

Rotokawa Geothermal System (Case Study 2)

Significant geothermal features (SGF's) are afforded various levels of protection in the Waikato through the Waikato Regional Policy Statement and Regional Plan (dependent upon the classification of the geothermal system). The concern for geothermal energy projects is that the application of environmental limits for the protection of EI could preclude even the 'very small' effects that can occur (e.g., at Rotokawa) and therefore preventing future adjustment (and implementation of adaptive management) for power generation.

As discussed above, we are mindful of distinguishing between the establishment of environmental limits for protection of loss of EI and assessing the 'effects' of an activity on EI. As we have suggested above, depending on how the limits are established, we do not consider that applying limits will necessarily rule out provision for an 'effect' occurring on the EI of a feature (as opposed to loss of a feature) and where there is provision for some management and/or offset or compensation for the effect elsewhere beyond the feature. This might be best observed where the environmental limits are set as a 'maximum amount of harm or stress' (noting such limits are less likely as discussed above).

Where environmental limits are established for a 'maximum amount of harm or stress that may be permitted on the natural environment', then presumably this is not an 'effect', it is the allowed limit. This may be particularly helpful where adaptive management is the practice, as seems to be the case for geothermal systems.

Central Wind Farm (Case 10)

In this case, the permanent covenanting of two areas of native forest (combined contiguous 36 ha of forest) for the loss of 18 ha of native vegetation clearance, as well as adaptive fauna management, was deemed acceptable mitigation for the effects of the wind farm by the Environment Court. Depending on the ecosystem type and potential habitat, under the proposal for the protection of EI, the loss of vegetation in the Central Wind Farm is unlikely to be acceptable. The proposed fauna monitoring and management of fauna is likely to be acceptable arguably with some maximum harm limits and within an adaptive management framework or compensation (as suggested).

Hydro Power Generation

Hydro power development has been a source of power generation for many decades in New Zealand. Accordingly, there are many hydro dams in existence subject to re-consenting, as well as potential new hydro dams. The NPS-FM makes provisions for five hydro-electricity generation schemes largely set around target attributes of the National Objectives Framework (NOF)[25]. Environmental limits set for the protection of EI of freshwaters may still limit or impede consenting ability, or the development of new hydro schemes. As discussed above, the final report of the PP-NBEB, sets out examples of potential environmental limits, and we note that these examples are largely contaminant-derived numerical limits for freshwaters.

We note that the environmental limits set out in the NOF are established for the protection of ecosystem health and not ecological integrity. It can be argued that in this instance they refer to the same outcome (i.e., EH = EI), but it is also highly probable that further limits may be placed on freshwater ecosystems for the protection of ecological integrity (and inclusive of composition,

[25] NPS-FM, section 3.31.

structure, function and resilience). Notwithstanding national or regional exclusions, where such an approach is undertaken, there may be greater stringency applied to freshwater ecosystems.

Solar Farms

In recent times, there has been much interest in the development of solar farms in New Zealand. Our understanding of the requirements for a solar farm is for largely flat open land (amongst other requirements). Our experience is that the locations for solar farms are generally sought amongst open, and consequently, highly modified farmland. It seems that, for the most part, in these modified landscapes, the development of solar farms can avoid loss of natural features, and loss of EI may be less of an issue.

Nevertheless, our experience is that these proposed solar farm developments run up against the NPS-FM and NESF, notably regulations around natural wetlands. We have seen how the lay out of the solar panel arrays have been re-configured to avoid wetland features and drainage of wetlands. We have discussed above how environmental limits may be established for wetlands, that may impact on the ability to develop and operate a solar farm. Other environmental limits may be set for bird populations and other fauna that utilise wetlands and/or other features at the location, especially those solar farms close to the coast or close to significant wetlands.

Offshore Wind Farms

Recently there has been interest in the development of offshore wind farms, much like have been developed overseas. It is early days for offshore wind farms in New Zealand but amongst ecological issues arising, they include the potential impact of these wind turbines on seabird populations (more than a third of the 80 or so species of seabirds that breed in New Zealand are endemic or found nowhere else). If environmental limits were set for the protection of the ecological integrity of seabird populations (or specific species) and their habitats (including feeding grounds, migratory routes, breeding grounds), then it may result in an inability to develop, or at least optimise wind farm design. A ‘maximum amount of harm or stress’ may be acceptable but that may present a high risk to development, and may amount to extensive, and perhaps difficult to do, modelling and monitoring.

Concluding comments

In summary, we acknowledge the serious issue of biodiversity and climate change crises that exists and that environmental limits for the protection of ecological integrity of ecosystems are necessary and need to be meaningful in their implementation.

Nevertheless, we find that :

- EI is derived from a protectionist/conservation background.
- Protection of EI will mean that loss of specific features (e.g., patches of bush, streams, species habitat) is unlikely to be permitted.
- Effects to EI of a feature, habitat, species population may be permitted within the extent of limits.
- Changes to the EI of ecological features, habitats and/or species populations may be permitted where extent is not diminished and/or EI is enhanced.
- For freshwater and marine, environmental limits for the protection of EI will largely be informed by numerical contaminant limits and well understood and tested biological metrics.
- Environmental limits to protect EI of areas of vegetation and habitat, and species populations are likely to be narrative, or indicators reflecting extent of feature within a specified boundary (e.g., regional boundary, ecological district, water catchment).
- The smaller the scale and the more local the specific ecosystem that more stringent limits may apply.

The concept of "protecting Ecological Integrity" is not fundamentally at odds with, or especially different from, the current ecological assessment approach we apply to in the context of the RMA. Key differences in the NBEB compared to the status quo are an explicit intent to provide stronger environmental protections than the RMA offers, with the use of environmental limits as a key mechanism. We note that the NBEB also aims to "better enable development and infrastructure", but the PP-NBEB does not address how potential conflicts between environmental limits and the enabling function of the legislation are to be resolved.

At issue is a proposal to set absolute bottom lines for environmental limits based on loosely defined concepts, to protect ecological integrity (another loosely defined concept). This seems to leave scope for the chosen limit to be arbitrary and overly stringent.

The concept of a generalised ecological state lays itself open to re-interpretation and re-visioning of what it means at any point in time. We also question the conclusion that EI will ultimately be "readily understood and quantified" and suggest that this is unlikely to be achieved without considerable time and cost.

We are concerned that the NBEB envisages environmental limits that will enable resource use by anticipating some degradation, provided ecosystem composition, processes and functions are not compromised. However, this concept does not appear to allow for opportunities to remedy or mitigate effects and assumes that ecosystems typically have some capacity to absorb degrading impacts, with no recognition that at least some EI attributes of most ecosystems are already diminished to a greater or lesser extent. We need policy instruments that promote ecosystem recovery, rather than entrenching the status quo.

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Appendix 1: Selection of definitions of Ecological Integrity

Original Reference	Ecological Integrity Definition	Primary Context	Further Referenced By
Leopold 1949	"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise"		Andersen et al. 2001
Karr and Dudley 1981	"The capability of supporting and maintaining a balanced, integrated, adaptive community of organisms having a species composition, diversity, and functional organization comparable to that of natural habitat of the region." "A system possessing integrity can withstand, and recover from, most perturbations imposed by natural environmental processes, as well as many major disruptions induced by man."	Regulation of freshwater systems through the U.S. Clean Water Act	Andersen et al. 2001; Carignan and Villard 2002; Carter et al. 2019; McGlone et al. 2020
Campbell 2000	"Ecological Integrity is defined as an emergent property of ecosystems operating at maximum power that can be quantified using validated Energy Systems models ... a condition of ecosystems that is fully developed when the network of components and processes is complete and functioning optimally (i.e., whole)"	Integration of environment, conservation, and health in a sustainable development context, shared mutual self-interest, and biophilia	
Canada National Parks Act 2000	"A condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes."	Management of national parks	Carter et al. 2019
Miller 2000; Ullanowicz 2000	Four key attributes: "(1) System health … the continued successful functioning of the community, (2) the capacity to withstand stress, (3) an undiminished 'optimum capacity' for the greatest possible ongoing development options, and (4) the continued ability for ongoing change and development, unconstrained by human interruptions."	Integration of environment, conservation, and health in a sustainable development context, shared mutual self-interest, and biophilia	Carter et al. 2019
Andersen et al. 2001	"Ecological integrity encompasses ecosystem health, biodiversity, stability, naturalness, wildness, and beauty. As more narrowly defined, but more easily measurable, it encompasses chemical, physical, and biological integrity…A comprehensive index must consider the components of ecological integrity. Composition, structure, and function are equally important attributes of ecosystems''	Integration of environment, conservation, and health in a sustainable development context, shared mutual self-interest, and biophilia	Brown and Williams 2016; McGlone et al. 2020
Parrish et al. 2003	"Ecological integrity is the ability of an ecological system to support and maintain a community of organisms that has species composition, diversity, and functional organization comparable to those of natural habitats within a region"	Management of protected areas	Unnasch et al. 2009, p. 2; NatureServe 2012; Carter et al. 2019

Lee et al. 2005	"…at larger scales, ecological integrity is achieved when ecosystems occupy their full environmental range."	Management of protected areas	New Zealand Environmental Reporting Act 2015; McGlone et al. 2020
Unnasch et al. 2009	the concept of ecological integrity serves as a proxy for biological diversity, in that ecological integrity is said to be ''the ability of an ecological system to support and maintain a community of organisms that has species composition, diversity, and functional organization comparable to those of natural habitats…''	Management of national parks	Brown and Williams 2016
Tierney et al. 2009	"Ecological integrity is a measure of the composition, structure, and function of an ecosystem in relation to the system's natural or historical range of variation, as well as perturbations caused by natural or anthropogenic agents of change''	Integration of environment, conservation, and health in a sustainable development context, shared mutual self-interest, and biophilia	Brown and Williams 2016
Faber-Langendoen et al. 2012, p. 7	''Ecological integrity [assessment] can be defined as 'an assessment of the structure, composition, and function of an ecosystem, as compared to reference ecosystems operating within the bounds of natural or historic disturbance regimes'"	Integration of environment, conservation, and health in a sustainable development context, shared mutual self-interest, and biophilia	Brown and Williams 2016
New Zealand Environmental Reporting Act 2015	"..the full potential of indigenous biotic and abiotic features and natural processes, functioning in sustainable communities, habitats, and landscapes"	Management of multiple-use lands	McGlone et al. 2020
Carter et al. 2019	"The extent to which the composition, structure, and function of an ecosystem fall within their natural range of variation."	Management of multiple-use lands	

Appendix 2: Terrestrial biodiversity indicators proposed for the Regional Council Terrestrial Biodiversity Monitoring Framework

Indicator	Title
M1	Land under indigenous vegetation
M2	Vegetation structure and composition
M3	Avian representation
M5	Vulnerable ecosystems
M6	Number of new naturalisations
M7	Distribution and abundance of weeds and animal pests
M8	Change in area under intensive landuse
M9	Habitat and vegetation loss
M11	Change in temperature and precipitation
M12	Change in protection of naturally uncommon ecosystems
M13	Threatened species habitat: number and status of threatened species impacted by consents
M14	Vegetation consents compliance
M15	Indigenous ecosystems released form vertebrate pests
M16	Change in the abundance of indigenous plants and animals susceptible to introduced herbivores and carnivores
M17	Extent of indigenous vegetation in water catchment
M18	Area and type of legal biodiversity protection
M19	Contribution of initiatives to (i) species translocations and (ii) habitat restoration
M20	Community contribution to weed and animal pest control and reductions

APPENDIX 4 – REPORT BY CONCEPT CONSULTING

Renewable generation development implications of decarbonisation through electrification

1 Executive summary

New Zealand will need to develop renewable generation at an unprecedented rate to meet its decarbonisation objectives. Approximately 1,250 GWh of new renewable generation will be required on average each year until 2050. By comparison, an average of 380 GWh of new renewable generation was commissioned annually in the 30 years to 2020. Furthermore, the future development rate will need to be even higher if existing renewable stations' operating capabilities are reduced when current resource consents expire.

There are potentially significant economic and emissions consequences if the Natural and Built Environments Act (NBEA) creates a more restrictive consenting regime for development of new renewable generation. The extent of impact would obviously depend upon the final legislation. Given the present uncertainties, we have used scenario-based analysis to estimate the system-wide impacts if new restrictions apply to renewable generation development.

This analysis indicates that changes to the consenting regime could potentially increase the cost of developing new renewable generation by up to almost $1.9 billion over 20 years. Any such cost increase would represent a genuine economic loss for the nation. This is because additional resources would need to be applied to developing new renewable generation, reducing the resource available for other things of value to New Zealanders, such as provision of health care and education services.

It is also important to consider the effect on electricity consumers if the cost of new renewable generation is pushed upward. Our analysis indicates the extra cost to consumers would be up to $7.5 billion over 20 years. This amount is larger than the economic cost to the nation (discussed above) because consumers would ultimately pay more for power from *existing* generation sources,[1] as well as higher prices for power from *new* generation.

If the transition to the NBEA were to temporarily disrupt the development of new renewable generation, it may also create a one-off initial increase in both generation costs/prices paid by consumers and in greenhouse gas emissions. To avoid power cuts, the generation deficit caused by such disruption would need to be filled by additional fossil-fuelled generation. This could have electricity price impacts for consumers up to almost $2 billion. The associated increase in emissions ranges from 1.0 $MtCO_2$ to 9.2 $MtCO_2$.

There are some electricity sector uncertainties that could affect these potential outcomes. Most of these uncertainties either are unlikely to affect the analysis or may require an even faster growth in renewable generation (with the exception of the potential closure of the Tiwai smelter, which would result in a slower initial rate of required renewable development).

2 Purpose

This paper presents projections of the likely nature and scale of renewable generation development necessary to meet New Zealand's decarbonisation objectives.

It also sets out the potential economic and emissions consequences if it were to become more difficult to obtain consents for renewable generation.

[1] Higher prices charged for power from *existing* generation will cause a transfer of wealth from consumers to owners of generation, and will generally net to zero from a national economic perspective.

3 Our projections for new generation are in the mainstream

In developing this analysis, we have built upon the models utilised for similar past exercises. These include:

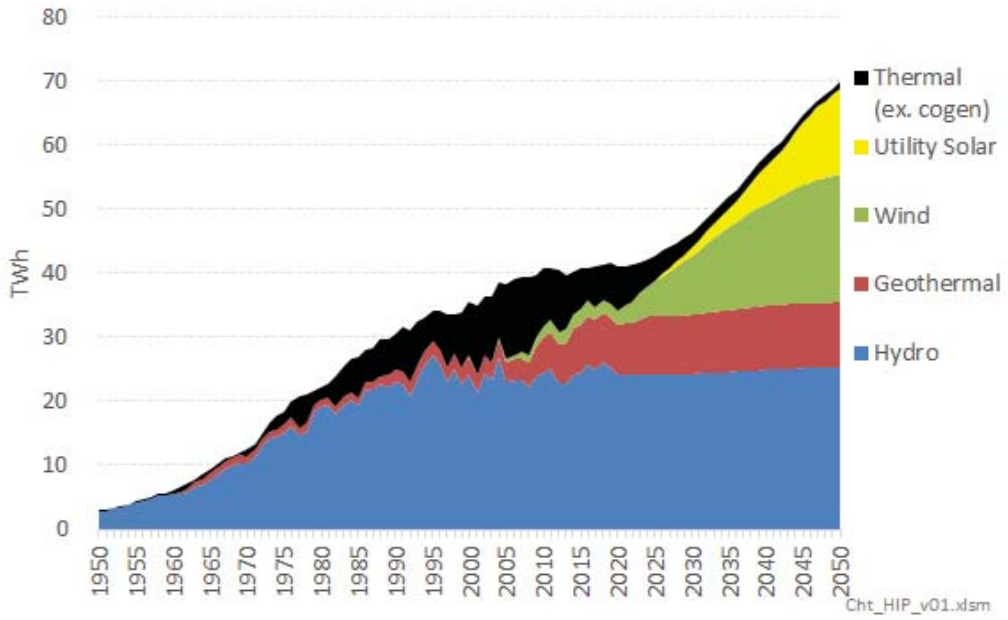
- Climate change modelling of sectoral and whole-of-economy decarbonisation pathways to 2050 and beyond. Our modelling was the principal analysis used by the Climate Change Commission for setting its carbon budgets, and prior to that was the main toolset used by the Productivity Commission for its Low Emissions Economy inquiry. We also developed the Ministry for the Environment's Marginal Abatement Cost Curve analyses, examining the likely costs of abatement for all the key emitting sectors of the New Zealand economy.
- Electricity sector modelling and analysis on issues and options for achieving 100% renewable electricity supply. We have provided advice to the Market Development Advisory Group of the Electricity Authority.

As shown in Appendix A, the renewable generation development projections in this report are very similar to those produced recently by Transpower and by the Electricity Authority's Market Development Advisory Group.

4 Central projection of new generation requirements

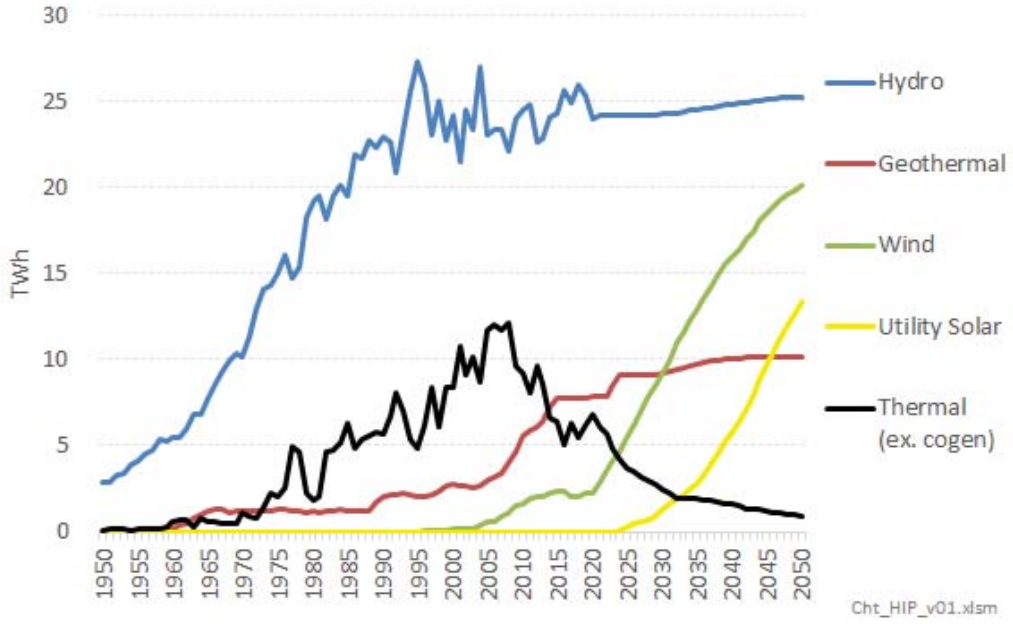
Figure 1 and Figure 2 show our central projection of the total electricity generation needed to meet New Zealand's decarbonisation goals. The projections from 2022 assume average hydro, wind and solar conditions in each year. In practice, the actual power generation from each source will vary each year due to weather effects (e.g. rainfall into hydro lakes) as it has in the past and shown by the 'wiggles' prior to 2020. However, while the annual contributions will fluctuate due to weather effects, the upward trend is the key point and is the issue of relevance for this report.

Figure 1: Central projection of generation levels



Source: Concept analysis

Figure 2: Central projection of generation levels (by type)



Source: Concept analysis

These projections assume significant uptake of roof-top solar photo voltaic (PV) panels by households and businesses, with their associated generation rising from approximately 200 GWh/year in 2020 to almost 1,000 GWh/year by 2050.[2] This projected increase in consumer self-supply will lower the rate at which grid-connected generation needs to grow. However, this moderating effect is expected to be limited. First, the cost of power generated from roof-top panels is typically two or three times higher than from solar farms.[3] This is largely because relative to roof-top PV, solar farms benefit from greater scale economies and achieve higher conversion efficiencies as their panels typically track the sun's movement each day.

On the other hand, roof-top solar could allow reduced grid investment costs, which may offset its other cost disadvantages. However, this factor is not expected to apply in New Zealand because our electricity demand peaks in the winter when solar generation is at its lowest. This means other renewable generation sources would be needed to bolster supply in winter, and hence there is generally limited grid cost savings from installing roof-top solar.[4] In short, while rising roof-top solar is expected to make a meaningful supply contribution, it is not a substitute for development of larger scale (and lower cost) renewable generation connected to the grid.[5]

[2] This projection is based on the relative costs to consumers of roof-top solar versus the alternatives. It is possible that consumer decisions will also be motivated by non-price factors which could lead to higher uptake. However, for the reasons noted in the main text, even if uptake is much higher, it will not obviate the need to develop grid-connected renewable generation at a scale and pace that is much greater than in the past.

[3] For example, see www.nrel.gov/docs/fy22osti/81325.pdf.

[4] Exceptions can apply in some remote locations, where grid costs are high and solar panels plus batteries offer a lowest cost alternative.

[5] Similar points have been made by the Parliamentary Commissioner for the Environment. For example, see "Low-emissions economy: Issues paper Submission to the Productivity Commission", Parliamentary Commissioner for the Environment, October 2017

4.1 Unprecedented levels of renewable generation development will be required

The charts above show actual generation from 1950 through to 2020 as well as projected levels through to 2050. The charts clearly show that New Zealand will need to develop renewable generation at an unprecedented rate to meet the projected requirements to 2050. It equates to developing approximately 1,250 GWh of new renewable generation on average every year.[6] Indeed, the required pace of development until 2050 is more three times that achieved in the 30 years up to 2020.[7]

Putting the challenge in more tangible terms, New Zealand will need to build the equivalent of one West Wind generation project *every 5 months* until 2050. For readers unfamiliar with that project, it is currently New Zealand's second largest operating wind farm with 142 MW capacity. It was commissioned in 2009 and the 62 wind generator turbines can be seen when flying in or out of Wellington as shown below.

Figure 3: West Wind windfarm near Wellington

Source: Meridian Energy

4.2 New generation requirements may be even greater than projected

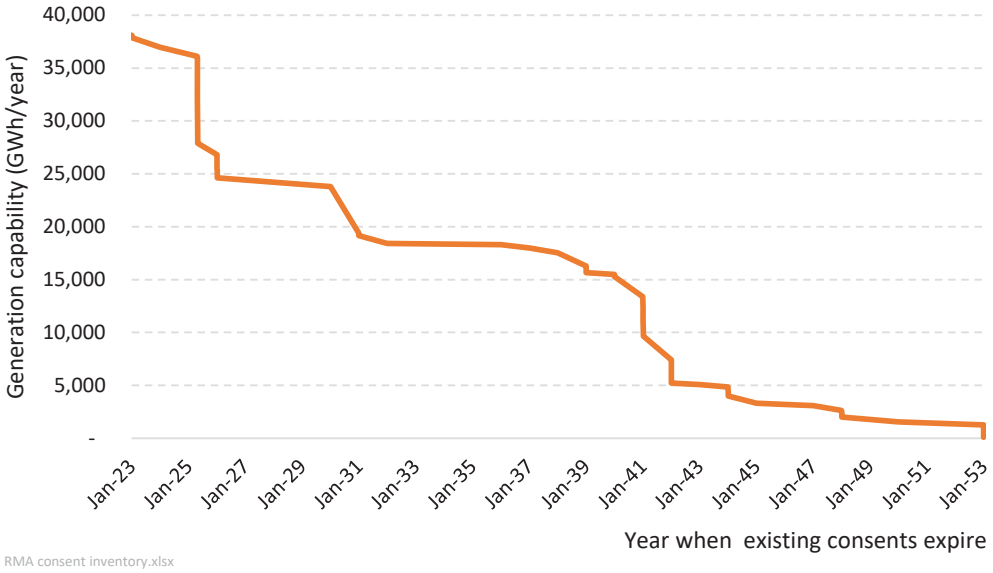
The projections discussed above assume that all existing renewable stations will retain their current generation capabilities after their current resource consents expire – i.e. that their operating capabilities will not be reduced when their consents are renewed or when new consents are obtained under the NBEA. If that doesn't eventuate, the required future scale-up in renewable development would be even greater than shown in Figure 1.

The significance of the reconsenting issue is illustrated by Figure 4. This chart shows the volume of existing renewable generation that can be produced each year based on existing consents. The curve decays downwards over time as existing consents expire.

[6] This estimate includes the replacement of pre-existing wind and solar farms as they come to the end of their economic lives.

[7] The rate of new renewable development averaged 380 GWh per year in the 30 years to 2020. For completeness, some new fossil-fuelled generation was also developed in that period. We note that aside from their emissions, fossil-fuelled plants typically have a relatively modest footprints compared to renewable projects (limited land area, fewer visual effects etc).

Figure 4: Renewable generation capability based on existing consents



Source: Concept estimates based on public data sources

The chart shows that over 30% of existing renewable generation is subject to reconsenting within the next five years, and over 50% within the next ten years. If new consents reduce the generation capability of these stations, that will directly add to the development requirement from new renewable sources.

5 Natural and Built Environments Act and renewable development

We have been asked about the economic and emissions implications if the NBEA were to hinder the development of renewable generation projects. In broad terms, we have identified two potential consequences:

1) Ongoing increase in generation costs and prices for consumers – this would occur if the effect of the NBEA is to divert development from lower-cost to higher-cost projects.

2) One-off initial increase in greenhouse gas emissions and generation costs and prices paid by consumers. This would occur if the new environmental requirements in the NBEA temporarily disrupt the development of new renewable generation.

The following sections discuss these issues in more detail.

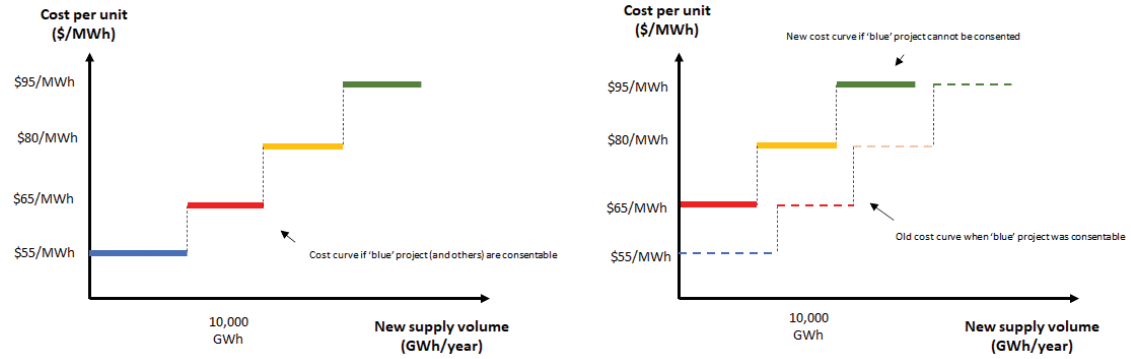
5.1 Ongoing impact of more restrictive consenting environment on national economic costs and on consumers

5.1.1 Conceptual framework for assessing impacts

To assess the potential longer-term effect of a more restrictive consenting environment on generation costs, it is useful to apply a simplified model of New Zealand's electricity development choices. As noted in section 4, New Zealand faces an unprecedented need to develop new generation.

Each prospective new project has a cost level and annual generation output. Ranking the projects from the lowest cost to the most expensive and graphing cost/volume data will produce a cost stack in the form shown on the left-hand portion of Figure 5.

Figure 5: Illustrative cost stack



Source: Illustrative data

In this illustrative example, there is a tranche of relatively cheap power available from the blue project ($55/MWh), with progressively more expensive power available from the red, yellow and green projects. If an additional (say) 10,000 GWh/year of supply was needed by 2030, this could be met from development of the blue and red projects with costs of $55/MWh and $65/MWh respectively.

Now we consider the effect if new environment requirements made it impossible for some projects to obtain consents. This is illustrated on the right-hand portion of the Figure 5. In this example, the blue project is removed but other project costs and volumes are unchanged. Removing this blue project results in a new cost stack. To satisfy the need for an additional 10,000 GWh of supply, the red and yellow projects are needed, with costs of $65/MWh and $80/MWh respectively. Thus, in this example, costs have increased because the relatively more expensive yellow project ($80/MWh) has needed to be developed to replace the loss of the cheaper blue project ($55/MWh) which is no longer able to be consented.

The framework shows the effect of *blocking projects* due to new environmental requirements, but it assumes that the costs for remaining projects are unchanged. That assumption is probably unrealistic because a more restrictive consenting framework is likely to alter the nature of consents that are granted, as well as making it harder to obtain consents. In practice, we think generation costs will be higher due to the combined effect of *blocking* some otherwise viable projects (i.e. the cost stack moving to the left), and of a *direct increase* in cost per unit of output for remaining projects (i.e. the cost stack moving upwards).

Economic costs

The framework described above provides the basis for calculating the *economic cost* impact if a more restrictive consenting regime makes development of renewable generation harder and more expensive. Any such change will mean that more resources need to be devoted to building new generation. The value of those extra resources is the economic cost incurred by New Zealand. This is because an increase in the cost of building new generation will reduce the national resources available for other things of value to New Zealanders, such as provision of health care and education services.

Consumer costs

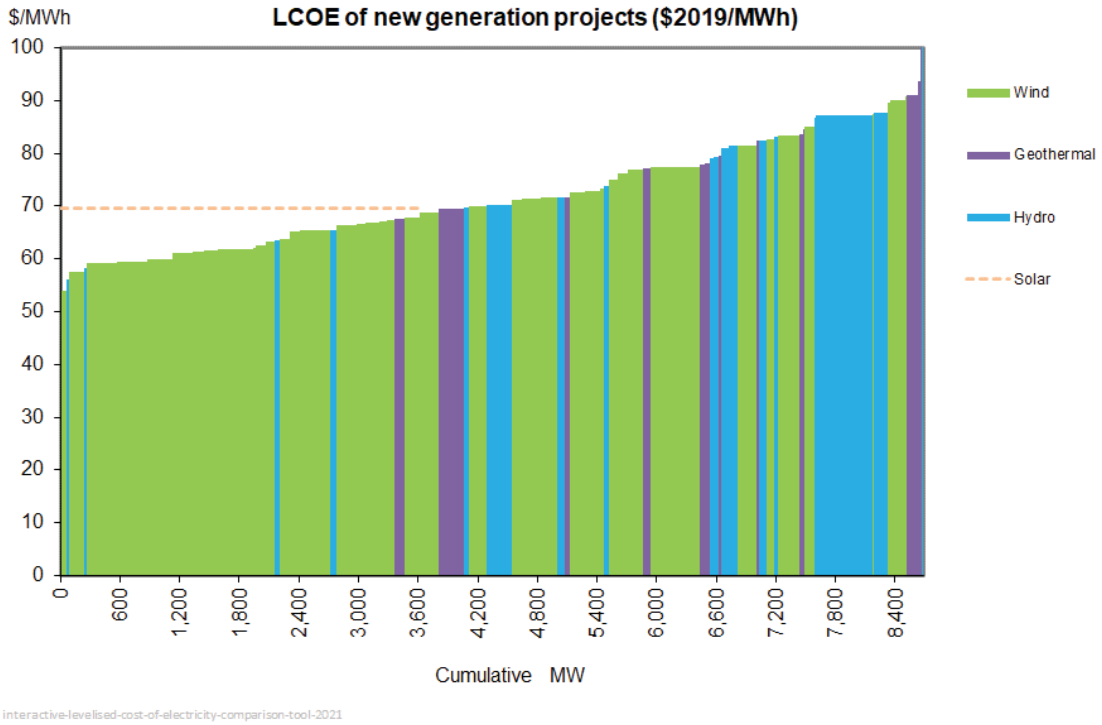
Another measure of relevance is the cost impact for consumers. This can differ from economic costs which measure the impact for the nation as a whole. In some industries (electricity included) an increase in the cost of building new supply will affect the prices paid for new and existing sources

of supply. As we discuss later, this can mean that there are sizeable differences between economic impacts and effects for consumers.[8]

5.1.2 Applying the framework to New Zealand's generation cost stack

The Ministry of Business, Innovation and Employment publishes generation cost stack estimates from time to time. Figure 6 shows the information available in April 2022 (noting the estimates were likely finalised in 2020/2021). We note that the projects are at varying stages of maturity in terms of site selection, resource consents, transmission connection capacity etc. Some projects are shovel ready, whereas others require significant preparatory work before they could be developed.

Figure 6: MBIE estimated cost stack for new renewable generation (2021)[9]



Source: Ministry of Business, Innovation and Employment

MBIE states that the data shown are "illustrative only and are derived from using default assumptions". While this health warning should be borne in mind, we consider that the stack nonetheless provides a reasonable guide to the expected costs of potential future generation projects. This judgement is based on a comparison of the data with other (less comprehensive) public sources and with our own internal analysis. Furthermore, while other sources may have individual projects at higher or lower costs, they all present a picture with an upward sloping cost curve. We also note that

[8] Changes in the prices charged for supply from *existing* sources can cause a transfer of wealth between consumers and suppliers, but will generally net to zero from a national economic perspective, and hence are not classified as an economic cost.

[9] Source: https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-modelling/interactive-levelised-cost-of-electricity-comparison-tool/ downloaded 4 April 2022. A different version of the chart appears on the MBIE website. This version has been extracted from MBIE's spreadsheet and shows a fuller range on the x-axis and only renewable generation sources.

despite the caveat above, MBIE itself uses generation stack information in its energy and climate modelling.

MBIE's stack does not include individual solar farm projects due to information limitations it faced. In practice we expect solar projects will make up a significant proportion of new generation build over the next 20-30 years. Having said that, solar projects can be expected to vary in their costs to reflect differences in solar levels, infrastructure requirements, etc. for each development. Put another way, had individual solar projects been included in MBIE's cost stack, we expect the same overall picture would remain – with an upward sloping stack reflecting projects with differing costs, albeit with a less steep gradient.

On the other hand, MBIE's stack includes some projects which appear may never be built. In some cases this is because consented projects may no longer represent the most efficient new investment, as they may not be consented for the optimal location or latest technology, so may be put on hold, possibly indefinitely, even in the existing consenting environment. The Castle Hill wind farm, for example, is consented for 860MW of wind generation, but has not been constructed despite the consent requiring construction to begin by 2023. If the consented projects that are unlikely to proceed for location, technology or similar reasons are removed from the cost stack, the gradient becomes steeper.

In summary, the MBIE cost stack represents one snapshot of possible developments based on information available in 2020/2021. The picture will continue to evolve, but the crucial point is that we expect the cost of electricity from different projects will vary, and this leads to an upward sloping cost stack.

5.1.3 National economic cost impact

Turning to the issue of the NBEA, we note that MBIE's stack was prepared based on existing environmental laws. If the NBEA creates a more restrictive consenting environment, that would be expected to block development of some projects and raise costs for others. Whether this would be the case (and if so, the extent of any such effects) will obviously depend upon the final form of legislation. Given the present uncertainties, we have used a scenario-based approach to seek to assess the broad magnitude of potential impacts of a more restrictive consenting environment.

Dealing first with blocking of potential developments, we have considered three scenarios which are intended to represent the broad range of plausible outcomes that could occur if the consenting environment becomes materially more restrictive (having said that, more extreme outcomes cannot be ruled out). At the more benign end of the spectrum, we have assumed that 90% of projects in the existing stack can proceed, and only 1-in-10 are 'deleted' due to the effect of revised environmental requirements.

At the other end of the spectrum we have assumed every 3rd project in the stack is deleted. Although this latter scenario may seem unrealistic at first sight, it is important to realise that onshore wind generation projects make up a very large proportion of the stack. If a change in environmental requirements were to make that type of project materially harder to develop, that could conceivably knock out many of the wind generation projects in the existing stack. We have also considered an intermediate scenario where 1 in 5 projects in the existing stack are deleted.

In relation to projects that can proceed, we have assumed that new environmental requirements increase the unit cost of generation by 2.5%, 5% or 10%. Clearly, these are generic assumptions and are not based on specific information about individual projects or new environmental requirements. Having said that, our observation is environmental requirements have a very tangible effect on project costs. For example, in relation to wind farm developments, environmental considerations can dictate where developments are located, with flow on effects to civil construction and infrastructure costs.

Environmental issues can also strongly influence development at a site, for example requiring the use of less efficient equipment such as turbines with lower hub heights, or reducing the number of turbines in the wind farm, thus shrinking the base over which the fixed costs of a project must be spread. For completeness, we note that direct consenting costs themselves make up a relatively small proportion of the cost of energy infrastructure projects (2.6% on average).[10] While a more restrictive consenting regime may also increase these costs, we expect the indirect impacts noted above would pose the more significant cost risk.

The combined effect of the various scenarios on new generation costs is shown in Table 1. For example, the circled column shows the effect if every 5th project in the stack cannot proceed and costs for remaining projects were to be raised by 5%. In that scenario, the cumulative increase in generation costs is estimated to be $232 million over the next 10 years, $470 million over 15 years, and so on. The two blue-shaded columns either side of circled area show the corresponding cost estimates for scenarios where costs for viable projects are raised by 2.5% and 10% respectively (and tighter consenting arrangements mean every 5th project cannot proceed).

The estimates assume that generation development occurs at the rate needed to achieve the decarbonisation goals discussed in the previous section, and are expressed in present value terms in 2022 dollars based on application of a 5% discount rate.[11]

This analysis indicates that changes to the consenting regime could potentially increase the cost of developing new renewable generation by up to $1.9 billion over 20 years. Any such cost increase would represent a genuine economic loss for the nation. This is because additional resources would need to be applied to developing new renewable generation, reducing the resource available for other things of value to New Zealanders, such as provision of health care and education services.

Table 1: Estimated potential increase in electricity generation costs (economic costs)

National cost increase $m (2022 dollars)	Assumed rate at which projects are blocked from existing stack								
	Every 10th project			Every 5th project			Every 3rd project		
% direct cost increase	2.5%	5.0%	10.0%	2.5%	5.0%	10.0%	2.5%	5.0%	10.0%
10 years	$ 94	$ 178	$ 347	$ 147	$ 232	$ 404	$ 241	$ 329	$ 505
15 years	$ 190	$ 352	$ 676	$ 305	$ 470	$ 799	$ 552	$ 722	$ 1,064
20 years	$ 328	$ 578	$ 1,078	$ 536	$ 791	$ 1,301	$ 1,064	$ 1,332	$ 1,868

cost stack charts.xlsx

Source: Concept estimates

Key observations from the table are:

- New environmental rules could have a modest or substantial effect on generation costs over the next 20 years, depending on their specific requirements. At the more modest end of the spectrum, the cost could be around $0.3 billion – but at the other end of the spectrum it could plausibly exceed $1.8 billion.
- In a mid-case scenario that assumes every 5th project in the existing stack is blocked under new requirements and that costs for other projects increase by 5%, the total cost increase over the next 20 years is around $0.8billion.
- In short, there is real potential for new environmental requirements to materially raise the cost of new electricity generation.

[10] "The cost of consenting infrastructure projects in New Zealand", Sapere, July 2021

[11] This is the rate recommended by the New Zealand Treasury for use in cost benefit analyses for energy projects.

5.1.4 New consents for existing generation

As discussed in section 4.2, the above modelling does not consider any potential decrease in the operating capabilities of existing generation plant as their prevailing consents expire and must be reconsented. Such a decrease could occur under the existing consenting environment, but a more restrictive consenting environment could reduce operating capabilities even more.

The effect of any reduction in existing generation capability on generation costs is twofold. Firstly, it would require even more renewable investment to be developed to make up the shortfall in existing generation output. This would come at a higher cost per MWh as generation from further along the cost stack would be required. Secondly, to the extent that existing flexible hydro generation is reduced, further investment would be required to replace the hydro generation's role in 'firming' generation from intermittent renewables. In effect, this would shift the cost stack upwards for wind and solar projects as the cost of 'firming' their intermittent generation becomes more expensive. For example, hydro generation in the stack cannot be replaced just by solar generation, but would need to be replaced by solar generation with batteries, which would have a higher levelised cost of electricity.

5.1.5 Effect on electricity costs for New Zealand consumers

Table 1 contains estimates of the increased cost New Zealand *as a whole* could potentially face if new environmental requirements made it more difficult to obtain consents, i.e. the national economic cost.

The potential costs faced *by consumers* would be even larger than those estimates. This is because an increase in new generation costs will affect prices for power from existing sources, as well as from new projects. By analogy, if the cost of building new houses were to (inexplicably but permanently) double from tomorrow, that will ultimately lift the prices of all houses in New Zealand. The impact for new houses will be immediate, whereas for existing houses it would take time as owners of existing houses recognise that the cost of building new houses has increased and therefore demand a higher price when they sell – but eventually the entire housing market would adjust.

By the same logic, an increase in the cost of building new generation is expected to ultimately affect the prices paid for all electricity generation. The flow-through process would not be immediate because most consumers purchase their electricity on term contracts and these reprice progressively over time. However, we would expect all electricity sales to ultimately be affected by an increase in generation costs.

Table 2 shows the estimated potential increase in costs faced by consumers using the same scenario assumptions as Table 1. For this analysis we have assumed that higher costs flow through to electricity prices after three years.

For example, the circled column shows the effect for consumers if every 5th project in the stack cannot proceed and costs for remaining projects were to be raised by 5%. In that scenario, the cumulative increase in costs for consumers is estimated to be $1,120 million over the next 10 years, $1,986 million over 15 years, and so on. The two blue-shaded columns either side of circled area show the corresponding cost estimates for scenarios where costs for viable projects are raised by 2.5% and 10% respectively (and tighter consenting arrangements mean every 5th project cannot proceed).

As with Table 1, the estimates assume that generation development occurs at the rate needed to achieve the decarbonisation goals discussed in the previous section, and are expressed in present value terms in 2022 dollars based on application of a 5% discount rate.[12]

[12] This is the rate recommended by the New Zealand Treasury for use in cost benefit analyses for energy projects.

As can be seen, the potential impacts on electricity consumers are even more significant than the national economic costs. In this case, the consumer cost impacts over 20 years range up to $7.5 billion.

Table 2: Estimated potential increase in costs for power consumers (consumer costs)

Impact on consumers $m (2022 dollars)	Assumed rate at which projects are blocked from existing stack								
	Every 10th project			Every 5th project			Every 3rd project		
% direct cost increase	2.5%	5.0%	10.0%	2.5%	5.0%	10.0%	2.5%	5.0%	10.0%
10 years	$ 441	$ 840	$ 1,638	$ 714	$ 1,120	$ 1,931	$ 1,208	$ 1,626	$ 2,461
15 years	$ 816	$ 1,490	$ 2,838	$ 1,300	$ 1,986	$ 3,358	$ 2,483	$ 3,197	$ 4,627
20 years	$ 1,409	$ 2,343	$ 4,212	$ 2,257	$ 3,211	$ 5,121	$ 4,490	$ 5,500	$ 7,518

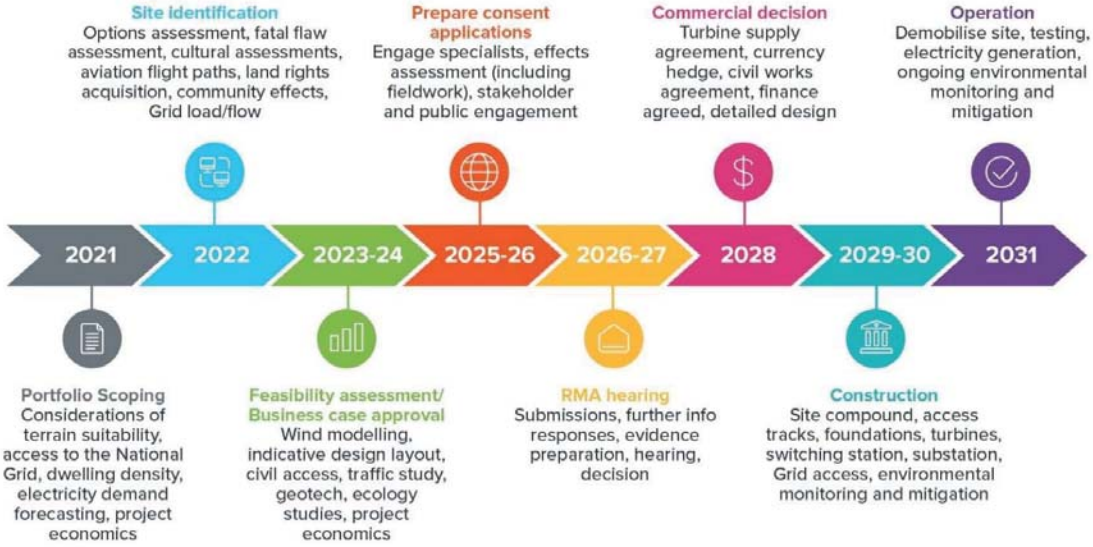
cost stack charts.xlsx

Source: Concept estimates

5.2 Potential one-off impact of restrictive consenting environment on emissions and electricity prices

The preceding section assumes that if a prospective new generation project is rendered non-viable by a more restrictive consenting environment, another project will seamlessly substitute for it (albeit with higher costs). While this assumption may hold in the long-run,[13] it is clearly unrealistic in the short-term. This is because developing new generation projects takes time and resources cannot be instantaneously switched from pursuing one project to another. As shown in Figure 7, the Infrastructure Commission estimates that ten years will typically elapse between initial scoping of a wind farm and its operation. While some other technology types (e.g. solar farms) are faster to develop, they still require years from scoping to operation.

Figure 7: Development timeframe for a windfarm under Resource Management Act[14]



Source: Te Waihanga – Infrastructure Commission

[13] Arguably, even if new environmental laws were to make it impossible to consent any new grid connected generation, some substitutes would emerge, such as local solar power with batteries and/or diesel generators – with much higher cost for consumers.

[14] See www.tewaihanga.govt.nz/assets/Uploads/Te-Waihanga-Natural-and-Built-Environments-Bill-submission-to-Environment-Select-Committee.pdf, downloaded 4 April 2022.

If new rules under the NBEA were to require a reorientation of development effort, that would disrupt the existing pipeline of renewable generation projects. As a result, a deficit would emerge between the actual level of renewable generation and the level needed to achieve decarbonisation goals. To avoid power cuts, the generation deficit would need to be filled by additional fossil-fuelled generation. The deficit could last for some years as it would take time to reorient development effort and resources. Furthermore, during the catch-up period there would be a need to develop renewable projects at an even faster rate than projected in section 4 in order to clear the backlog. This catch up would be especially challenging if the catch-up coincided with a period when global supply chains for power generation equipment are stretched and there are shortages of skilled contractors to work on large infrastructure projects.

To assess the potential scale of the impacts, we have again used a scenario-based approach. We considered three scenarios:

1. Minor disruption – renewable development falls behind the required level leading to 12 months of market disruption.
2. Moderate disruption – renewable development falls behind the required level leading to 24 months of market disruption.
3. Significant disruption – renewable development falls behind the required level leading to 36 months of market disruption.

Our modelling framework assumes the temporary shortfall in renewable generation development is principally made up from increased usage of existing gas-fired open-cycle gas turbine (OCGT) 'peakers'.

As well as estimating the increased emissions from these fossil generators, we have also estimated the expected increase in wholesale market electricity prices. Such electricity price effects would arise from these higher operating-cost stations setting the wholesale electricity price for a greater amount of time. We have assumed a cost of carbon of \$100/tCO_2 and a gas price of \$10/GJ. If the price of gas or carbon were higher or lower, the corresponding price impact of a shortfall in renewable generation would also be higher or lower.

It is also possible that the shortfall in renewable generation couldn't entirely be met by increased fossil generation. If this occurs, there would be a need to call upon demand curtailment at times of extreme capacity scarcity – e.g. periods of high demand coinciding with periods of low renewable output. For each scenario we have run a sensitivity where a small proportion (approx. 0.1% in energy terms) of the renewable generation shortfall is made up by demand curtailment. The high cost of demand curtailment (we have assumed \$1,000/MWh) will further increase electricity prices at such times.

5.2.1 Higher emissions due to slower electrification

In addition to the direct emissions impact from higher levels of fossil generation, an increase in electricity prices is also likely to result in increased 'indirect' emissions for the rest of the economy. This is because electrification has been identified as one of the key means of decarbonising significant parts of our economy, particularly transport, space and water heating, and industrial process heat.

An increase in electricity prices will hinder the move away from fossil fuels to electricity. We have undertaken analysis using our 'ENZ' whole-of-economy model of the likely scale of effect that higher electricity prices would have on the extent of electrification.

The results of the analysis are summarised in Table 3. These are expressed in present value terms in 2022 dollars, using a 5% discount rate.

Table 3: Modelled effect of scenarios for transitional shortfalls in renewable generation

Scenario	1		2		3	
Demand curtailment sensitivity	No curtail	W. curtail	No curtail	W. curtail	No curtail	W. curtail
Years to get into shortfall	1		2		3	
Electricity price impact						
Price increase due to shortfall ($/MWh)	7.7	12.0	15.5	24.0	30.9	48.0
Price impact to consumers ($bn)	0.0	0.1	0.3	0.4	1.2	1.9
Economic cost ($bn)	0.0	0.0	0.1	0.1	0.3	0.3
Increased emissions impact (MtCO2)						
Fossil generation	0.1	0.1	0.4	0.4	1.3	1.3
Rest-of-economy	0.9	1.2	2.5	3.5	5.7	7.9
Total	1.0	1.3	2.9	3.9	7.0	9.2

NBEA_Misc_Analysis_04.xlsm

Source: Concept estimates

As can be seen, if the new rules under the NBEA were to disrupt the development of renewable generation, the cost and emissions consequences could be substantial.

- Electricity price impacts for consumers vary depending on the duration of market disruption, and range from zero (one year disruption with no demand curtailment required) through to $1.9 billion (a three year disruption and assuming some demand curtailment is required in addition to higher cost thermal generation).
- The associated increases in emissions range from 1.0 $MtCO_2$ through to 9.2 $MtCO_2$, with the greatest emission impacts arising from higher electricity prices frustrating electrification of the rest of the economy.[15] These emissions increases equate to 3% and 23%, respectively, of New Zealand's 2019 emissions from all industrial, commercial, and residential energy-related and industrial process-related activities.

6 Uncertainties

The observations set out above are based on forward looking analysis. Naturally, this analysis is subject to various uncertainties. This section briefly discusses the key areas of uncertainty in the electricity sector and how they are likely to impact on the analysis and observations. As noted earlier, there is a separate uncertainty related to the effect of the NBEA on the ability to obtain consents for new and existing renewable generation projects.

6.1 100% renewables policy

Our central projection has a small volume of gas-fired thermal generation retained on the system to provide infrequent back-up for renewables, plus some gas-fired cogeneration also retained. Both such outcomes are driven by the underlying economics given the projected carbon prices and costs of renewable technologies.

[15] The increased emissions from fossil generation occur during the period of the shortfall in renewable generation. The increased rest-of-economy emissions occur over a much longer period of time. This is because higher electricity prices for a few years will reduce the rate of switching from fossil to electric 'appliances' (vehicles, boilers, etc.) for situations where consumers need to make an appliance choice – predominantly when the existing appliance has reached its end of life. These frustrated fuel switching decisions have a long-term effect as the 'fossil capital' will have a relatively long subsequent life. The increased rest-of-economy emissions shown in Table 3 are summed from 2025 (which is when this effect is assumed to occur) to 2050.

It is possible that government policy may require all fossil plant to retire by a certain date in the future – e.g. 2030. If this were to be the case, significantly more renewable generation would need to be built in each given year, all other factors being equal. In directional terms, we believe that would reinforce the observations set out above because the renewable development requirement would be even greater than set out in section 4.

6.2 Large-scale pumped hydro storage

Significant effort is being applied to determine whether large-scale pumped hydro storage such as Project Onslow should be developed as part of New Zealand's future electricity system.

The projections in section 4 do not assume the development of pumped hydro storage. However, if pumped hydro storage had been included, we do not expect the results of the analysis to be materially affected. This is because our central case assumes a small amount of fossil-fuelled thermal generation remains available to provide a back-up for intermittent renewables (as discussed in section 6.1 above). Had pumped storage been available, it would largely substitute for the back-up thermal. In both cases the amount of additional new renewable generation would be much the same. Hence, the overall observations in this paper are not materially affected by the presence or absence of pumped hydro storage.

6.3 Rate of demand growth due to electrification

The rate of electricity demand growth due to electrification will be affected by a range of uncertainties, such as the extent of electric vehicle rebates, battery technology improvements and wider government policy. If the rate of electrification is slower than projected, that would reduce the required rate of renewable development, and vice versa.

Having said that, our broad sense is that there is growing international and domestic concern about climate changes. As a result, we consider the renewable growth projections in section 4 are more likely to be understated that overstated.

6.4 Tiwai smelter

Our central projection assumes the Tiwai Point aluminium smelter will continue to operate due to its relative competitiveness compared to other international sources of aluminium in a carbon-constrained world.

However, the smelter's electricity purchase contract with Meridian is currently due to expire at the end of 2024. It is therefore possible that the smelter could exit at the end of 2024. Were this to be the case, approximately 5TWh of annual demand would be lost. This would hasten the exit of remaining thermals and reduce the need for renewable generation. However, aside from a slower initial rate of required renewable development, the effect is modest in the overall scheme of things. If the Tiwai smelter closes, that would reduce the new renewable generation requirement by 2050 from around 33 TWh to 28 TWh.

6.5 Relative costs of solar, wind, and geothermal generation

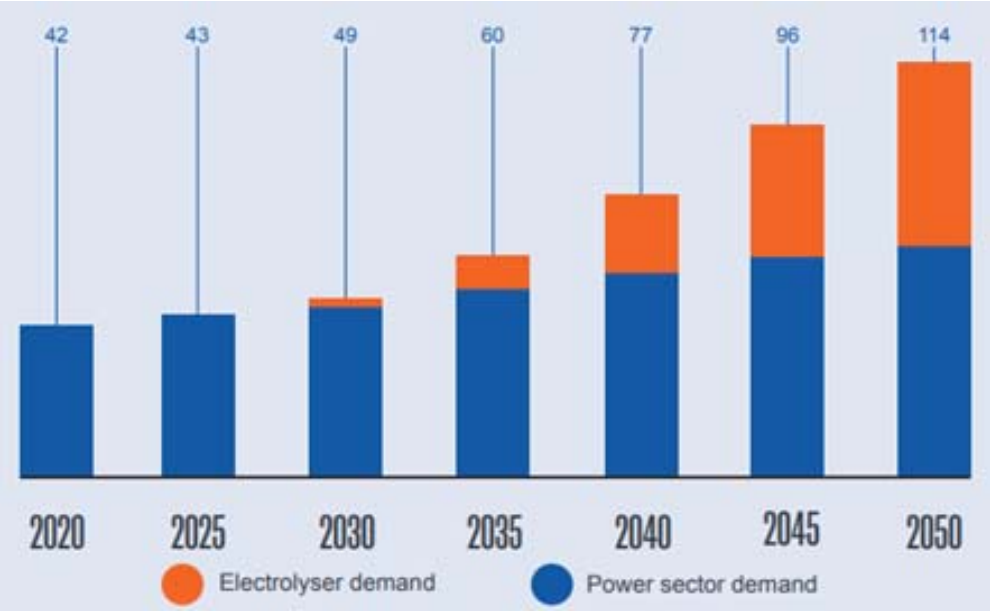
The projected mix of solar, wind, and geothermal generation in section 4 reflects assumptions regarding the current and future costs of these technologies. Actual costs for these technologies could be higher or lower than assumed in the analysis. However, the observations from this paper are unlikely to be materially affected by changes to costs assumptions, unless the cost stack was to become much flatter (i.e. the cheapest technology had large volumes of supply available at constant or near constant cost). We have no reason to believe that the cost stack will flat or close to flat.

6.6 Hydrogen

Green hydrogen has received a lot of focus in New Zealand and overseas as a potential option for decarbonising economies. However, it is important to note that hydrogen is not an energy *source*, but instead an intermediate medium for carrying and storing energy.

Green hydrogen is made by using electrolysers powered by renewable energy. Because the energy losses involved in producing, storing, transporting and using green hydrogen are many times greater than the energy losses from direct electric options, the amount of renewable energy needed to power a 'hydrogen economy' is much greater than the amount of renewable energy needed to power a 'direct electric' economy. Figure 8 from the Firstgas study illustrates the scale of additional demand needed to power electrolysers.

Figure 8: Firstgas projections of electricity demand in a hydrogen future (TWh)[16]



In short, if a hydrogen-based energy system were to emerge in New Zealand, that would require renewable generation to be developed at a rate that is even higher than that set out in section 4. That in turn would reinforce the observations set out in this paper.

6.7 Investment risk

As discussed above, if a more restrictive consenting environment makes certain renewable generation developments unfeasible, these will have to be replaced with other more expensive 'substitute' generation developments. However, the investors in this substitute generation would face the risk that the consenting environment may relax in the future, making lower cost renewable projects feasible again. Such relaxation could then undercut the already constructed substitute generation. To address this, investors in such substitute generation may demand a premium on their investment return, which could translate to higher generation costs and energy prices for consumers. The potential cost and price impacts discussed earlier do not include any allowance for this effect.

[16] "Bringing zero carbon gas to Aotearoa", Firstgas, March 2021

7 Conclusion

New Zealand's decarbonisation goals require an unprecedented increase in renewable electricity generation development due to electrification. If the NBEA creates a more restrictive consenting environment, that could have adverse effects on renewable generation development on both an initial and ongoing basis. The possible consequences of generation failing to keep up with increasing demand are serious in terms of economic harm and greenhouse gas emissions.

Appendix A. Comparison with other parties' projections

Our projections are broadly consistent with those undertaken by other parties. For example, the overall level of generation required and the broad mix between different renewable technologies is similar to that in Transpower's 'Accelerated electrification' scenario[17] (as illustrated in Figure 9 and Figure 10, below)

Figure 9: Transpower's generation projection for their 'Accelerated Electrification' scenario (TWh)

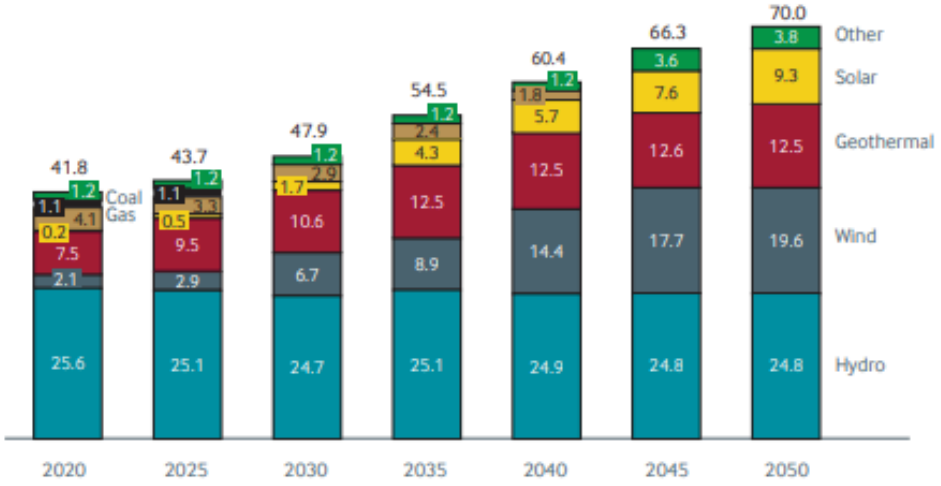
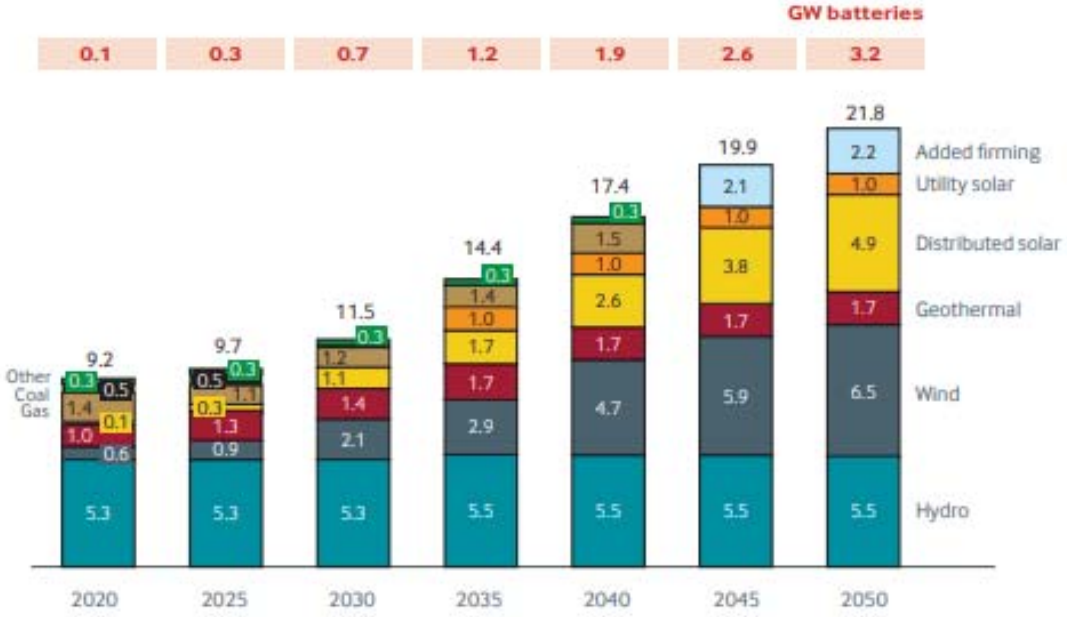


Figure 10: Transpower's generation capacity projection for their 'Accelerated Electrification' scenario (GW)

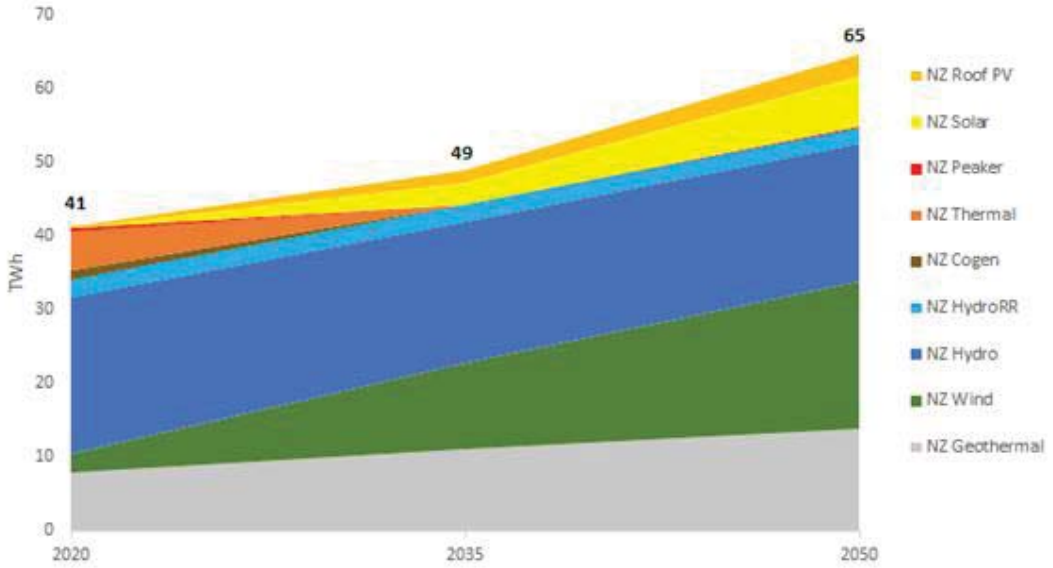


[17] https://www.transpower.co.nz/about-us/transmission-tomorrow and https://www.transpower.co.nz/sites/default/files/publications/resources/TP%20Whakamana%20i%20Te%20Mauri%20Hiko.pdf

Another set of projections have recently been published by the Electricity Authority's Market Development Advisory Group (MDAG). This work projected the level and type of generation required to meet projected demand in two snapshot years: 2035 and 2050.

Figure 11 below indicates that the MDAG projection is approximately 5 TWh lower than our Central projection. However, the MDAG scenario assumed that the Tiwai aluminium smelter would exit at the end of 2024, whereas our Central case assumes that Tiwai will continue. When this is accounted for, the two projections are fairly close, including the broad mix of technologies that are likely to be developed.

Figure 11: MDAG's Reference Case generation projection (TWh/yr)[18]



[18] "*Price discovery under 100% renewable electricity supply – Issues discussion paper*", Market Development Advisory Group, February 2022

DEREK NOLAN KC

DAVEY SALMON KC

15 February 2023

Electricity Sector Environment Group
C/- Contact Energy Ltd, Genesis Energy Ltd, Manawa Energy Ltd, Mercury Energy Ltd, Meridian Energy Ltd and the NZ Wind Energy Association

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POTENTIAL IMPACT OF NBEA ON CONSENTING OF RENEWABLE ENERGY PROJECTS AND CONSEQUENCES FOR NZ'S CLIMATE CHANGE OBLIGATIONS

1. On 10 June 2022 we provided an opinion for New Zealand's principal electricity generators (the "**Electricity Sector Environment Group**" or "**Group**") on the potential impact of the Natural and Built Environments Act ("**NBEA**") on the consenting (and reconsenting) of renewable energy projects.

2. The opinion noted that its is beyond debate that there is an urgent need to cut greenhouse gas ("**GHG**") emissions. New Zealand has accepted the IPCC science and, pursuant to the Paris Agreement, has submitted an NDC[1] to reduce net GHG emissions to 50% below gross 2005 levels by 2030. We advised in our opinion that for New Zealand, renewable energy projects are key to early GHG reduction to meet these commitments. This is particularly critical because of the difficulty in addressing agricultural emissions and the country's intended reliance on electrification to replace fossil fuels in key areas.

3. This important role of renewable energy projects has not changed since our opinion issued last June. There has been no real progress since then in regulating key emissions. Agricultural emissions remain outside the ETS and the He Waka Eke Noa proposals seem unlikely to result in any material reduction.[2] The ETS remains ineffective, not least because of suppressed carbon credit prices and an excessive stockpile.[3] As a result, New Zealand's NDC remains aspirational rather than likely. Rollout of new renewable energy projects and the re-consenting of existing renewable energy facilities are essential to decarbonising industry and transport.

4. Nor has our opinion changed that the NBEA (in June an Exposure Draft and now a Bill introduced into Parliament) will be a barrier to the approval of renewable energy projects.

5. We acknowledge the effort made by the drafting team on the NBEA to address in the Bill two key concerns raised in our opinion.

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[1] Nationally Determined Contribution.
[2] https://www.newsroom.co.nz/farm-plan-still-cuts-emissions-by-just-1-percent
[3] On 28 November 2022 Cabinet rejected the advice of the Climate Change Commission and the Climate Change Minster to allow the price of carbon credits to rise (and reduce the availability of extra credits inflating the stockpile). See:
- https://www.stuff.co.nz/environment/climate-news/300766688/government-baulks-at-raising-carbon-price-as-cost-of-living-bites
- https://environment.govt.nz/assets/publications/cab-22-min-0533-minute.pdf
- https://environment.govt.nz/assets/publications/nz-ets-settings-2022-cabinet-paper_redacted.pdf

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6. First, we advised that the environmental outcome sought in the NBEA relating to a reduction in GHG emissions was not sufficiently directive, nor was there any target or required end state specified. The revised wording in what is now s5 of the Bill is improved but it still does not go far enough. The detailed submissions on the Bill prepared by the Group explain this concern and set out amended wording which addresses the point.

7. Second, we advised in our June 2022 opinion that there is a need to ensure that exceptions to proposed environmental limits can be considered for renewable energy activities where that is necessary to meet New Zealand's climate change obligations. The Bill has now introduced detailed provisions for exemptions, which is an improvement over the Exposure Draft which had no such regime. However there are numerous difficulties with the exemption provisions which must be resolved to make the process workable. These are also detailed in the Group's submissions on the Bill.

8. We support the submissions lodged by the Group to avoid what we described in our June opinion as "an own goal" were the NBEA to prevent renewable energy projects required for climate change mitigation.

Yours sincerely,

Derek Nolan KC | Davey Salmon KC

Appendix C

[Delete ss 44 to 46, and replace with the following]

44 Strategic direction on management of adverse effects

(1) The national planning framework must include strategic direction on how decision makers are to manage adverse effects, including—

(a) through application of the effects management framework; and

(b) the allowance of exemptions to an environmental limit, or to the effects management framework .

(2) For the purpose of subsection (1)—

(a) Effects management framework has the meaning as set out in section 61.

(b) Exemptions to environmental limits and the effects management framework may only be set for the types of activities and within the limitations set out in section 66.

(c) Before allowing any exemption to an environmental limit under the NPF, regard must be had to the considerations in section 67.

(3) Any person may request an exemption to an environmental limit through a submission on the national planning framework notified under Schedule 6.

(4) The Minister may, upon the request of a regional planning committee, or of the Minster's own volition, allow an exemption at any other time, through a change to the national planning framework under Schedule 6.

[Amend sections 61 -63 as set out below]

61 Effects management framework

The **effects management framework** is a means of managing adverse effects as follows:

(a) adverse effects must be avoided wherever practicable:

(b) any adverse effects that cannot be avoided must be minimised wherever practicable:

(c) any adverse effects that cannot be avoided or minimised must be remedied wherever practicable:

(d) any more than minor remaining adverse effects that cannot be avoided, minimised, or remedied must be offset wherever practicable:

(e) if more than minor adverse effects remain after applying the requirements, in that order, of **paragraphs (a) to (d)**, the activity cannot proceed unless compensation is provided by enhancing the relevant aspect of the environment.

62 When effects management framework applies

(1) The effects management framework applies to adverse effects on significant biodiversity areas and specified cultural heritage.

(2) The framework does not apply to adverse effects on other resources unless the national planning framework directs that the framework apply.

(3) The national planning framework or a plan may require—

(a) a more stringent management of any particular adverse effect on significant biodiversity areas or specified cultural heritage; or

(b) less stringent management of any particular adverse effect other than one on significant biodiversity areas or specified cultural heritage.

[Sections 63 and 64 are to be retained and section 65 is to be retained with amendment and moved below section 67]

[Amend sections 66 -67 as set out below]

66 Limits to exemptions

(1) ~~Exemptions applying under section 64 may be made only~~ Exemptions to environmental limits and the effects management framework may only be made for the following types of activities:

(a) activities required to deal with a very high risk to public health or safety:

(b) activities for the purpose of maintaining or restoring a significant biodiversity area:

(c) the customary use of indigenous biodiversity carried out in accordance with tikanga:

(d) activities on Māori land or on other land required to facilitate the activities on Māori land:

(e) activities undertaken for the purpose of managing Te Urewera under the Te Urewera Act 2014:

(f) activities with effects on significant biodiversity areas within areas of geothermal activity:

(g) activities in a place identified as a significant biodiversity area solely because of the presence of a plant species listed as threatened or declining in the New Zealand Threat Classification System, unless the species is rare within the region or ecological area:

(h) activities lawfully established immediately before the commencement of **section 62(1)** (whichever is applicable):

(i) subdivision:

(j) activities that will contribute to an outcome described in **section 5(b)**:

(k) defence facilities operated by the New Zealand Defence Force to meet its obligations under the Defence Act 1990:

(l) activities managed under other legislation, as long as the responsible Minister is satisfied that the other legislation provides an appropriate level of protection:

(m) the lines and associated equipment used or owned by Transpower to convey electricity and for associated activities, including access tracks and maintenance activities:

(n) infrastructure operated by a lifeline utility operator as defined in the Civil Defences and Emergency Management Act 2002 and any directly associated activity:

(o) activities that will provide nationally significant benefits that outweigh any adverse effects of the activity:

(p) in the case of a specified cultural heritage place, activities required to ensure that the place and its cultural heritage values endure:

(q) activities of the Crown on conservation land and waters that are not inconsistent with any applicable conservation planning document:

(r) activities carried out by the customary marine title holder in the relevant customary marine title area.

(2) In **subsection (1)(g),** the **New Zealand Threat Classification System** means the system maintained by the Department of Conservation for—

(a) assessing the risk of extinction of New Zealand species; and

(b) classifying the species according to that risk.

(3) The responsible Minister must not direct an exemption if the Minister thinks, after considering the matters set out in **section 50(2)**,—

(a) that the current state of ecological integrity in the area where the exemption would apply is unacceptably degraded; or

(b) that an exemption would lead to a significant and irreversible loss of ecological integrity.

67 Considerations that apply to grant of exemptions

(1) In deciding whether to allow an exemption through the national planning framework, the responsible Minister must,—

(a) in determining whether an activity will provide benefits that are nationally significant for the purpose of s 66(1)(o), have regard to **section 329(3)**; and

(b) before specifying an exemption, consider—

(i) whether the exemption will promote one or more system outcomes and the purpose of the Act; and

(ii) the principles set out in **section 6** (other than those set out in **section 6(1)(b), (c), and (d)**; and

(iii) the relative cost of granting or declining to specify an exemption for an activity; and

(iv) any alternatives to specifying an exemption that would achieve the objective of the proposed exemption; and

(v) whether the activity involved must be located, for functional or operational reasons, in the particular place giving rise to the need for the exemption, or there are reasonably practicable alternative locations for the activity which would mean it could proceed without needing the exemption; and

(vi) any other matter the Minister considers relevant.

~~(2) An exemption provided for under section 564 must be designed to diminish the harm that will be caused to a place to the greatest extent compatible with enabling the activity to proceed.~~

~~685~~ Assessment of alternatives

(1) The national planning framework may specify what is required for an assessment of alternative locations, for the purpose of s 67(1)(b)(iv) including limiting the scope of assessment to—

(a) sites within a specified region or district; or

(b) sites within a specified distance of a particular place of national importance; or

(c) sites with other specified attributes.

(2) If an assessment for an activity is completed during the preparation of the national planning framework or a plan, and complies with requirements imposed under **subsection (1)**, a further assessment cannot be required under any rule applying to the activity.