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25 July 2025

Ministry for the Environment
Manatū mō te Taiao
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Phase 2 National Direction – Submission from Transpower New Zealand Ltd

Transpower appreciates the Ministry for the Environment's ongoing efforts in developing the Phase 2 National Direction, particularly as it relates to the electricity sector. We acknowledge and welcome the improvements officials have recommended within the proposed National Policy Statement for Electricity Networks (NPS-EN) and the National Environmental Standards for Electricity Network Activities (NES-ENA) documents. These represent positive steps towards a more enabling regulatory framework for electricity transmission, which is crucial for New Zealand's decarbonisation and electrification goals.

While the Phase 2 proposed documents are improved on the current national direction for electricity, they are not a complete solution for accelerating the electrification of New Zealand's economy. Our submissions detail critical areas where tensions between Section 6 (RMA) matters and national direction still exist. These unresolved tensions will continue to perpetuate uncertainty and hinder the pace and scale of electricity transmission development required to meet New Zealand's emission reduction targets. Given the Phase 2 national direction could exist and play a role in resource management decision-making for five years or more as Phase 3 policy is developed, passed into law and then implemented, it is imperative that these conflicts are definitively resolved within the national direction now.

Transpower is committed to enabling New Zealand's energy transition, as highlighted in our "*Te Kanapu*" initiative, which outlines the development of our future grid blueprint to power Aotearoa. Rapid expansion of renewable electricity generation and robust transmission infrastructure are essential to meet increasing demand and achieve our nation's climate change commitments. While we appreciate the progress made, we look forward to continuing our engagement with officials on Phase 3 of the reform programme, which we believe holds the key to truly unlocking the potential for New Zealand's electrification and securing a thriving, sustainable energy future for Aotearoa.

Yours sincerely

Raewyn Moss
EGM, Customer & External Affairs

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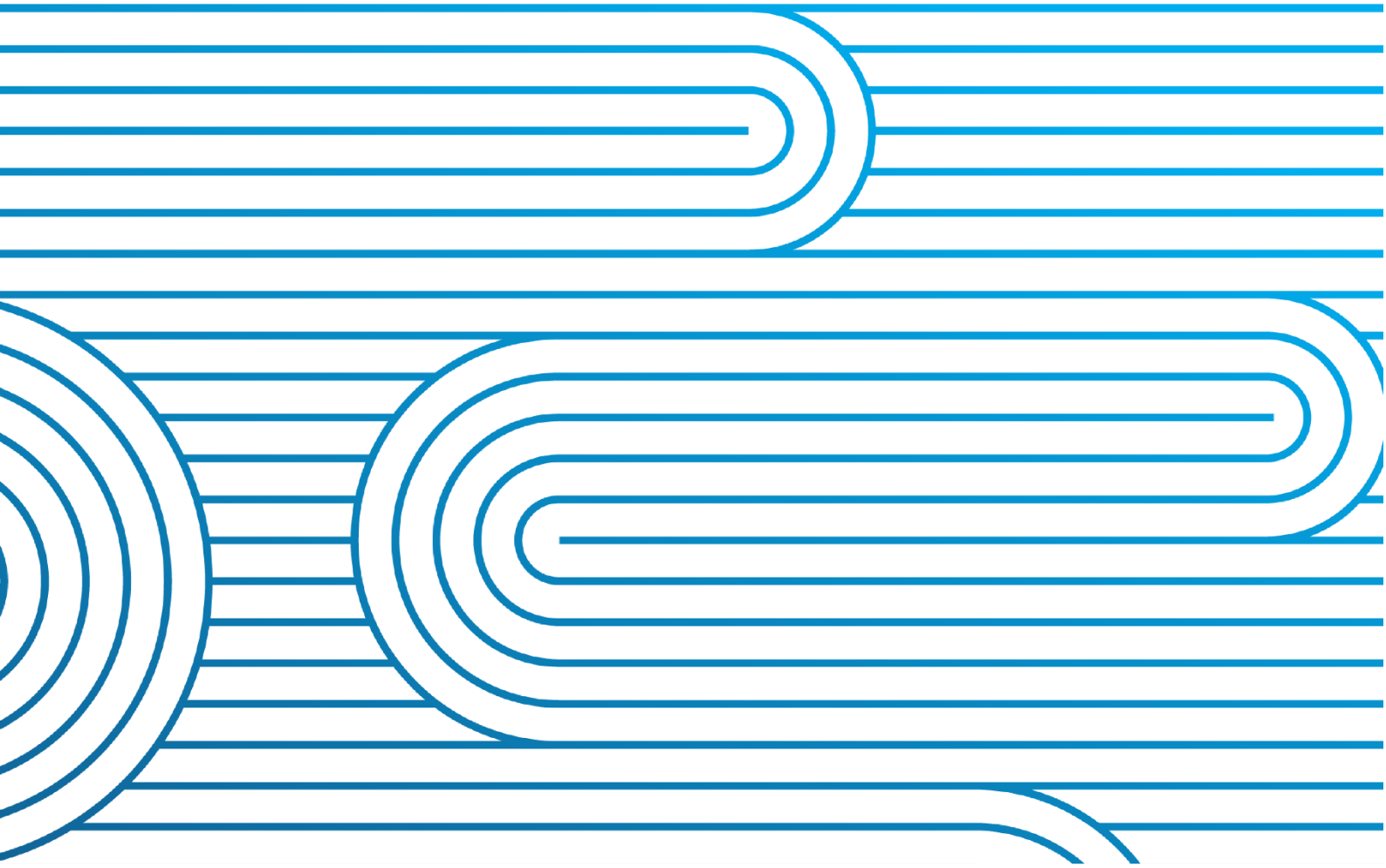
Submission by Transpower New Zealand Limited

Proposed provisions – Amendments to National Environmental Standards for Telecommunication Facilities

National direction consultation – Package 1: Infrastructure and development

25 July 2025



Proposed provisions – Amendments to National Environmental Standards for Telecommunication Facilities

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1.0 Introduction

Introduction to Transpower New Zealand Limited

Transpower is the backbone of New Zealand's electricity system and is a key enabler of our energy future. As the owner and operator of the nation's 11,000 km high-voltage electricity transmission network – our National Grid – we are responsible for getting power to every home, business, and industry from Kaikohe to Tiwai Point. This extensive, interconnected system, supported by almost 200 substations and a sophisticated telecommunications network, is more than just infrastructure: it's a strategic national asset. Figure 1 is a schematic of the electricity industry in New Zealand, with the National Grid assets being represented as 'Transmission' and 'Substations'.

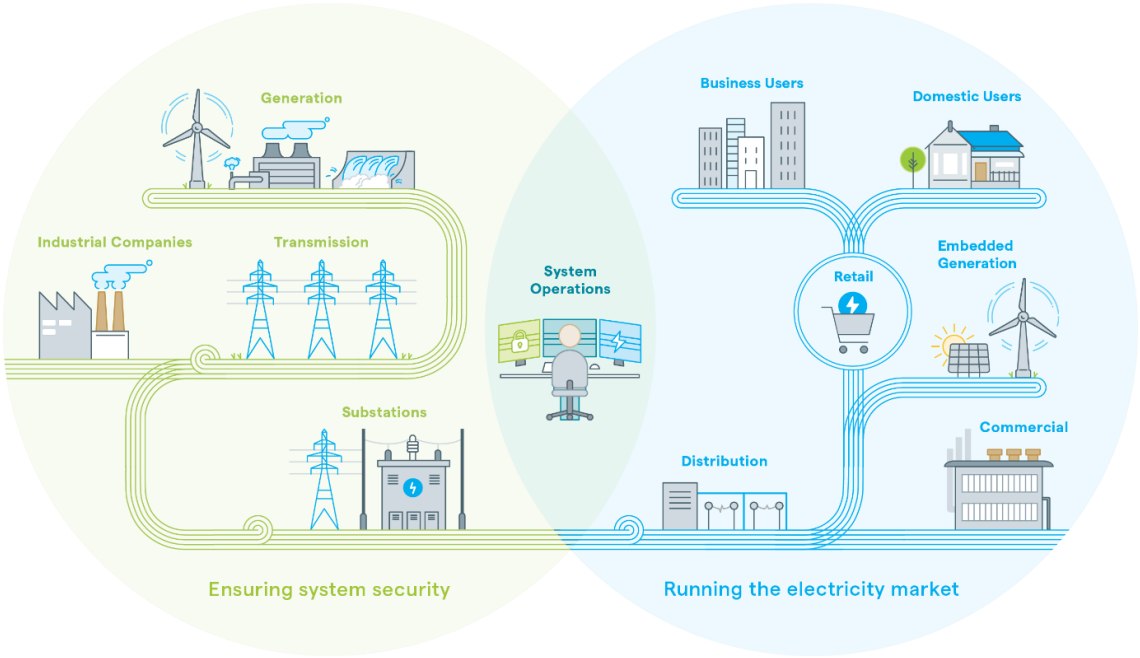

Figure 1: Electricity industry in New Zealand.

Operating such a vast and linear network presents unique challenges. The Grid must often traverse sensitive environments, connecting energy generators to towns and major industries. While route flexibility can be limited, Transpower is committed to developing and maintaining this vital asset sustainably.

Crucially, the National Grid is at the heart of New Zealand's climate response. Our nation's ambition to achieve climate change objectives hinges on the rapid electrification of the economy, a shift that will see electricity demand more than double by 2050. This transformation demands a resilient and reliable electricity system, making Transpower's role more critical than ever.

To meet this unprecedented demand, we face a significant undertaking: strengthening the National Grid to support massive growth in renewable generation. This includes an estimated 60-70 new Grid connections over the next 15 years, alongside 10-20 major core Grid upgrades by 2035. These are not minor adjustments; they are foundational projects essential for New Zealand's social, economic, and environmental wellbeing for decades to come.

The National Environmental Standards for Telecommunication Facilities (NES-TF) is relevant to Transpower given the range of telecommunication assets associated with the electricity transmission network ('ETN'). Transpower owns the third largest fibre network in New Zealand. Other telecommunication assets which form part of the National Grid include antennas attached to lines, poles, datacentres and substations, communication towers and substations, and a range of fibre cables and earth wires. Of particular note are the Cook Strait telecommunication cables and the Optical Ground Wire cables that are located within earth wires and extend across the network from substation to substation. Given the ETN contains telecommunication assets, there is some overlap between the NES-TF and the National Environmental Standards for Electricity Transmission Activities 2009 ('NES-ETA'), and any proposed changes to the two environmental standards will have ongoing relevance for Transpower.

2.0 Submission Overview

Transpower acknowledges the release of the Phase 2 national direction documents within the broader context of the ongoing Resource Management (RM) system reform. We understand these Phase 2 documents, including the proposed amendments to the National Environmental Standards for Telecommunications Facilities (NES-TF), serve as an interim measure. We recognise that Phase 3 of the RM reform will introduce entirely new legislation to replace the RMA – the Planning Act and the Natural Environment Act – each with its own comprehensive suite of national direction. However, Transpower is also cognisant of the recent messaging from officials that the Phase 2 changes may have relevance for up to five years until the new RMA Phase 3 framework is fully implemented.

Noting Transpower's confined use and interaction with the NES-TF, in principle Transpower is supportive of the proposed changes to the NES in so far as it applies to the ETN, acknowledging that other users of the NES may have broader concerns. In particular, Transpower supports the new state of emergency provisions.

Notwithstanding our high-level support, we seek clarification and resolution of the uncertainty on how the NES-TF and NES-ENA apply to different parts of Transpower's telecommunications network. Resolution of this uncertainty is likely to require amendments to both the NES-TF and NES-ENA. In particular clarification is sought as to which NES manages Optical Ground Wires ('OPGW'). Transpower has requested wording that it would support to address the issues raised and would welcome discussion with officials on the requested wording.

Amendments requested through this submission are provided throughout this submission (shown as blue text).

To assist officials in understanding the relief sought in the Transpower submissions on the various national direction instruments, Appendix A provides a summary of the submissions and amendments requested.

Discussion Document Questions		Transpower Response
51.	Do the proposed provisions sufficiently enable the roll-out or upgrade of telecommunication facilities to meet the connectivity needs of New Zealanders?	Transpower is generally supportive of the proposed provisions in so far as they relate to the ETN, noting four matters of relevance are raised.

3.0 Application of the NES-TF and NES-ENA

Transpower operates a telecommunications network that uses overhead and underground optical fibre lines and cables augmented by microwave radio to provide communications between all Transpower's substations and sites nationwide.

Transpower's Telecommunications Activities:

Below is a summary of the assets and Transpower's understanding of the applicable NESs:

- New underground fibre - regulated by the NES-TF.
- Fibre attached to existing lines - regulated by the NES-TF.
- Earth wires - regulated by the NESETA.
- OPGW – unclear in that it could be regulated by either the NES-TF, the NESETA, both or neither where it relates to existing assets.
- Fibre/OPGW attached to new lines - regulated by the district plan (designations/consents). These are not subject to the NESETA as they are not associated with existing lines.
- Comms towers / antennas at substations - regulated by either the NES-TF or designations (noting the applicability of the designation depends on the framing of s43D of the RMA in the new legislative framework). Substations are not regulated by the NESETA.
- Antennas attached to existing lines - regulated by the NESETA (although, this could be clearer that our line structures weren't a pole for the purpose of the NES-TF).
- Antennas attached to poles / comms towers outside substations – regulated by the NESETA.

- Antennas at data centres – assume regulated by the NES-TF (antennas attached to buildings). Data centres are not regulated by the NESETA.

Of note in the above list are OPGW. Within the ETN context, OPGW are a cable installed as the earth-wire on overhead lines, where it serves a dual function—earth grounding from an electrical perspective and communication via embedded optical fibres from a telecommunication perspective. It is not typically used for underground applications, as OPGW is specifically designed to be strung on towers. The inclusion of optical fibres within the OPGW cable allows for high-speed, reliable data transmission over long distances, enabling communication within and between substations for grid monitoring and control, and for other telecommunication purposes. For underground installations, if fibre connectivity is required to replicate OPGW's communications function, Transpower would instead use ducted optical-fibre cables. These are purpose-built for underground use, involve a different construction and installation method, and are considerably more expensive than OPGW. For that reason, Transpower would typically not adopt the underground approach, especially for existing lines.

Application of the Proposed NES-ENA

Under the proposed NES-ENA, the telecommunications network falls within the definition of 'ancillary electricity network activities'. Earth wires[1] and overhead telecommunication cables[2] are addressed in Regulations 7 and 9. Regulation 21 permits installing or modifying a telecommunications device (for example an antenna) [3] on an existing transmission line support structure, with no applicable standards. It is not clear what (if any) regulations provide for OPGW.

Application of the Proposed NES-TF

The NES-TF provides for telecommunication facilities such as cabinets, poles and antennas, building mounted antennas and telecommunication lines. Telecommunication lines are defined as:

[1] **earth-wire**—

(a) means a protective wire that provides a path to ground for electrical current from a fault or lightning strike; and

(b) includes an earth-wire that contains optic fibres; and

(c) includes any hardware associated with the wire

[2] **telecommunication cable**—

(a) means a wire or cable used for telecommunication; and

(b) includes any hardware associated with the wire or cable

[3] **telecommunication device—**

a) means a device (for example, an antenna) that—

(i) facilitates the operation of a transmission line or distribution line; and

(ii) receives or transmits telecommunication signals; and

b) includes any hardware associated with the device; but

c) does not include a telecommunication cable.

"a wire, or conductor of any other kind (including a fibre optic cable), referred to in paragraph (a) of the definition of line in section 5 of the Telecommunications Act 2001".

Paragraph (a) of the definition of line under the Telecommunications Act 2001 is as follows:

a. *Means a wire or a conductor of any other kind (including a fibre optic cable) used or intended to be used for the transmission or reception of signs, signals, impulses, writing, images, sounds, instruction, information, or intelligence or any nature by means of any electromagnetic system;*

Sub part 4 of the NES-TF regulates telecommunication lines (which as defined includes fibre optic cables). While Regulation 43 relates to underground lines, the provision and application to OPGW for above ground cables is less clear.

In addition, Regulation 42 in the NES-TF provides for aerial telecommunications lines along the same route as an existing telecommunication or power line (includes diameter of not more than 30 mm and other conditions) – which overlaps with provision for overhead telecommunication cables attached to an existing transmission line in the NESETA. The NES-TF provides for dish and panel antennas subject to conditions and it is noted that rod shaped antennas are permitted without any restrictions.

Transpower considers neither the NES-ENA nor the NES-TF provide for an underground OPGW, and it is unclear if an overhead OPGW attached to an existing transmission line support structure is provided by the NES-ENA.

Transpower requests that OPGW lines be a permitted activity subject to no standards. As outlined below, it is requested OPGW associated with transmission lines be regulated under the NES-ENA.

4.0 Transpower's Primary Issues and Requested Relief

Noting Transpower's confined use and interaction with the NES-TF, in principle Transpower is supportive of the proposed changes to the NES-TF in so far as they apply to the ETN. Notwithstanding its general support (and bearing in mind the very limited application of the NES-TF to the ETN), Transpower has identified four matters of relevance.

Support for emergency provisions

Transpower supports the new emergency provisions, including the definition D4 for "*Temporary telecommunication facility*", proposed "*New Regulated Activity 1: Temporary telecommunication facility*", and the provision of temporary Telecommunication facilities within areas subject to Regulations 44-52. These provisions will be of particular relevance to Transpower in instances where cables or fibre are washed out in storm events.

Relationship to Designations

Transpower's broader concerns with Section 43D of the RMA is that it stipulates an NES prevails over a designation (in certain instances). Specific to the NES-TF, an example is where an antenna at a substation (which is not regulated by the NES-ENA) may be provided for under a designation, but the height exceeds a regulation in the NES-TF and consent would therefore be required under the NES-TF. The current framing of Section 43D means the NES-TF would prevail over the designation.

To address the issue, Transpower would support, as part of Phase 3, an amendment to the primary legislation that Section 43D (or equivalent) does not apply if the NES-ENA/NES-TF (or any other relevant NES for that matter) provides a more permissive consenting pathway.

Regulation of Optical Ground Wires

Transpower has concerns (and to a degree a lack of clarity) as to how Optical Ground Wires ('OPGW') are regulated in the respective NESs. Potentially both, or neither, NES applies. While Regulation 7 of the NES-ENA (and NES-ETA) regulate earth wires or overhead telecommunications cables, there is no reference to OPGW. Similarly, while Subpart 4 of the NES-TF regulates telecommunication lines, is it not clear if it includes OPGWs.

Transpower supports the approach to regulate OPGWs (on existing lines) under the NES-ENA. This would be more effective given the OPGWs are primarily used and associated with the ETN and Transpower is presently managing the lines under the NES-ETA.

In order to provide clarity and certainty, Transpower request the following amendment to the definition of Earth-wire within the NES-ENA, as follows:

> *earth-wire—*
>
> *(a) means a protective wire that provides a path to ground for electrical current from a fault or lightning strike; and*
>
> *(b) includes an earth-wire that contains optic fibres; ~~and~~*
>
> *(c) includes any hardware associated with the wire; and*
>
> *(d) includes an Optical Ground Wire (OPGW).*

Amendment to the definition would clarify the application of Regulations 7 and 9 of the NES-ENA.

In order to provide clarity on the application of the NES-ENA as opposed to the NPS-TF, clarification is also requested within Regulation 4 of the NES-ENA as follows:

> *The National Environmental Standards for Telecommunications Facilities (2016) do not apply in relation to Optical Ground Wires ('OPGW'). Instead OPGW are subject to Regulations 7 and 9 of this NES.*

Transpower notes that the above requested amendments are also included within the submission on the NES-ENA.

In relation to OPGW on new lines, given the NES-ENA is not applicable (as it only applies to existing ETN assets), Transpower needs to be able to rely on a designation (as opposed to being subject to the NES-TF). Transpower requests clarification within the NES-TF that it does not apply to OPGW on new lines (nor to existing). Instead, the NES-ENA would apply to existing lines, and the district plan (designation or consent) would apply for new lines. Potential draft wording is as follows:

> *This (NES-TF) NES does not apply to Optical Ground Wires ('OPGW') associated with the electricity transmission network.*

Leniency

While not a substantive issue for Transpower, Transpower would support provision within the NES-TF such that users can rely on district plan provisions where they are more lenient than the NES-TF.

5.0 Responses to Questions

Transpower is supportive of any amendment to the NES-TF that would better enable the efficient operation, maintenance and upgrade of the telecommunications network that supports the operation of the National Grid. In particular, Transpower supports enabling temporary telecommunication facilities. Confined concerns have been raised through this submission which Transpower considers can be satisfactorily addressed through Phase 2 or the wider Phase 3 reforms.

52.	Which option for proposed amendments to permitted activity standards for telecommunication facilities do you support?	Transpower has no preference on the options for amending the permitted activity standards for pole heights, cabinets and antennas.
53.	Do the proposed provisions appropriately manage any adverse effects (such as environmental, visual or cultural effects)?	Transpower considers that the proposed provisions appropriately manage the effects where they could arise.

Appendix A

To assist officials in understanding the relief sought in the Transpower submission on the various national direction instruments, the following provides a general summary of the submissions and amendments requested.

Package 1 Infrastructure and development

National Policy Statement for Electricity Networks - NPS-EN

Transpower is generally supportive of the NPS-EN and in particular the 'benefits' and 'consideration/recognition' policies and the introduction of P10 for the protection of the electricity network ('EN'). However, it has concerns with the lack of reconciliation of matters subject to Section 6 of the RMA and other national direction in the interim, until the Phase 3 changes are enacted and the transition to the new system is complete. Transpower supports in principle the inclusion of the electricity distribution network.

The primary points and amendments requested by Transpower are:

- Clear implementation requirements and inclusion of 'readymade' provisions for inclusion in plans.
- Confined refinement to definitions for *Customer driven projects, Decision makers, EN assets, EN line, Routine EN activities, Sensitive activities,* and *Upgrading*, and inclusion of a definition of *Transmission line or distribution line)*.
- Support for the objective, with confined amendment requested to clause b. and e. and rewording of clause f.
- P1 - amendment to clause 2) e) i) to recognise expanded or increased REG, and inclusion of reference to the broader issue of climate change mitigation.
- P2 - amendment to clause 2) b) to recognise the different needs, technical requirements and therefore scale of the EDN and ETN, and a new clause to recognise the need for EN to locate in hazard areas.
- P3 – confirmation as to how clause a) will be given effect to.
- P4 and P5 – support with minor amendments.
- P6 – amendment to apply the policy to significant adverse effects, and amendment to the avoid, remedy or mitigate where practicable policy directive.
- P8 – amendment to the chapeau to replace 'upgrades' with 'non-routine', and insertion of 'where appropriate' at the start of the policy.
- P9 – support
- P10 – confined amendments to clause 1) to refer to activities.
- P11 – amendment to refer to strategic planning documents.
- P12 – amendment to broaden application ('Electric and magnetic fields' policy).
- Significant amendments are requested to P7 to provide a complete policy framework for non-routine and new development ET activities that would apply to all environments, including matters subject to Section 6 and other national direction.

National Environmental Standards for Electricity Network Activities - NES-EN

Transpower supports the amendment and updating of the NESETA to respond to the increasing challenges of enabling electrification.

The primary points and amendments requested by Transpower are:

- Refinement and correction to some definitions, including ensuring consistency with the NPS-EN.
- Reframing of Regulation 4 to reflect requested amendments and clarify application of the NES-ENA.
- Refinement of the noise standards within Regulations 6 and 10, and inclusion of a definition for 'Assessment point'.
- Expansion of Regulation 23 to permit signage within the bed of a lake, river, stream or coastal marine area.
- Amendment to Regulations 30-32 relating to Trimming, felling, and removing trees and vegetation.
- Amendment to Regulations 33-35 relating to earthworks, including removing the exclusion of regional earthworks rules within Regulation 4.
- Amendment to Regulation 36 to manage soil disturbance on contaminated land, and removing the application of the NES-CS.
- Inclusion of regional rules for Waterway Crossings, Groundwater take and use, dewatering; Structures and works in the coastal marine area; and Works within the bed of a lake or river.
- Minor amendments (corrections) to the Part 4 Rules for the National Grid Yard and Corridor, and insertion of inclusion of the yard and corridor provisions from the AUP.

National Policy Statement for Infrastructure - NPS-I

Noting the NPS-I does not apply to the ETN, Transpower generally supports the proposed direction outlined in the NPS-I. Notwithstanding the general support, Transpower prefers the wording within the NPS-EN in so far as the application of any policies to the ETN. As with the NPS-EN, a principal concern of Transpower is the lack of reconciliation between the enabling provisions of the NPS-I and other 'protective' forms of national direction (and Section 6 RMA matters in general).

The primary points and amendments requested by Transpower are:

- Refinement and correction to some definitions, including ensuring consistency with the NPS-EN.
- Amendment to clause f) of the objective to reflect the 'proportionate' approach under the NPS-EN.
- Support for policies, with amendment to policies P1, P3, P6 and P7.
- Significant amendments are requested to P8 to provide clear guidance on the expectations for management of effects, particularly in relation to Section 6 RMA values such as for landscapes, indigenous biodiversity and historic heritage.
- Concerns if P9 and P10 were applied to the ETN.

National Policy Statement for Renewable Electricity Generation - NPS-REG

While Transpower's main role is to ensure the reliable supply of electricity to the country, Transpower is also responsible for managing the power system in real time, a role referred to as the 'System Operator'. As part of this role, Transpower operates the electricity market to ensure electricity transmitted through the Grid is delivered whenever and wherever it is needed, 24 hours a day, seven days a week. In this way, we balance electricity demand and supply. To ensure this balance, Transpower is responsible for providing information and forecasting to the industry about security of electricity supply.

Transpower is cognisant that while it has a strong interest in the NPS-REG, its actual application to the ETN is limited. As such Transpower recognises that the electricity generators are best placed to comment on specific wording and concerns with the NPS-REG. At a high level, Transpower is concerned that the intent of the amendments to the NPS-REG will not address the problems articulated in the discussion document. On this basis, Transpower has requested limited amendments to the NPS, with those sought confined to refinement and correction to the definitions of *REG activities* and *REG assets*.

National Environmental Standards for Telecommunication Facilities - NES-TF

Noting Transpower's confined use and interaction with the NES-TF, in principle Transpower is supportive of the proposed changes to the NES in so far as it applies to the ETN, acknowledging that other users of the NES may have broader concerns. In particular Transpower supports the new state of emergency provisions. Transpower requested clarification as whether the NES-ENA or NES-TF manage Optical Ground Wire ('OPGW'), with specific wording requested to address the issue.

National Environmental Standards for Granny Flats - NES-GF

Transpower is neutral on the overall objective and the majority of provisions in the NES-GF. However, Transpower requests clarity on the relationship to the NES-ENA. It is requested that the NES-GF is amended by adding reference to Part 4 of the NES-ENA (the corridor provisions).

National Environmental Standards for Papakāinga - NES-P

Transpower is neutral on the overall objective and the majority of provisions in the NES-P. However, Transpower requests clarity on the relationship to the NES-ENA (noting ET is not included within *PAS3 Applicable rules of the underlying zone*). It is requested that the NES-P is amended by adding reference to Part 4 of the NES-ENA (the corridor provisions).

National Policy Statement for Natural Hazards - NPS-NH

Transpower supports the NPS-NH not applying to infrastructure. However, despite this exclusion, the NPS-NH states this NPS does not limit local authorities from managing natural hazard risk beyond the application of the NPS. Transpower is concerned this non-limitation could mean local authorities could apply provisions for infrastructure (including the National Grid) despite the specific exclusion in the NPS-NH. Transpower seeks this non-limitation be clarified/confined.

Package 2 and 3 - Primary Sector, and Freshwater

National Policy Statement for Freshwater and National Environmental Standards for Freshwater

Acknowledging the confined scope of the proposed amendments within Package 2, Transpower has provided general comments on the discussion points for Package 3, including concerns with any delay in the identification of wetlands; that Regulations 46(4)(b), 46(4)(c) and 46(4)(d) of the NES-F not apply in relation to altering, relocation and replacing support structures, transmission line removal, tree trimming and earthworks; and that 'operational need' be included for specified infrastructure (as is proposed for quarries as part of Package 2). Other matters to be addressed relate to how upgrading is managed within the NES, the lack of provision for Specified Infrastructure ancillary activities, the ability for councils to impose more stringent rules, and the offsetting and compensation principles when applied to existing electricity transmission assets.

New Zealand Coastal Policy Statement - NZCPS

Transpower supports the amendments to Policy 6, and specifically the amendment to recognise that electricity transmission (as a priority activity) may have an operational need to locate in the coastal marine area. Notwithstanding its support and the proposed changes to Policy 6, Transpower is cognisant the NZCPS requires the avoidance of all adverse effects in valued areas, and the avoidance of significant adverse effects in all other areas (referred to as the 'protection policies' within the discussion document). The amendments proposed to the NZCPS and in the NPS-EN neither recognise or reconcile these tensions, or provide a policy pathway for recognised activities when read alongside protective NZCPS policies, despite the recognition of 'operational need' within the NZCPS or how 'enabling' the NPSET/NPS-EN policies are expressed to be. While Transpower understands that reconciliation of the major tensions will occur as part of the replacement of the RMA in Phase 3 of the reform, and therefore the policy 'gap' and tensions are an interim issue, given the significance of the issue and need to enable electricity transmission (and renewable electricity generation) as soon as possible, Transpower would support the policy gap being addressed in the interim to provide certainty. Suggested additional wording to Policy 6 is requested in the Transpower submission.