

Before the Proposed Waitomo District Plan Hearing Panel

Under the Resource Management Act 1991 (the Act)

In the matter of Proposed Waitomo District Plan –
Tranche 2 Hearing Topics

Between **Waitomo District Council**
Local authority

And **Transpower New Zealand Limited**
Submitter 31 and Further Submitter FS30

Statement of evidence of Rebecca Mary Eng for Transpower New Zealand Limited

Dated 4 November 2024

1 Executive Summary

- 1.1. Transpower New Zealand Limited ("**Transpower**") owns and operates the National Grid, which transmits electricity throughout New Zealand from energy generation sources to distribution networks and direct-connect customers. Transpower owns and operates a number of assets within the Waitomo District.
- 1.2. While a resilient National Grid remains at the heart of New Zealand's energy future, climate change has become a central issue for governments globally and hence for Transpower as a responsible owner and operator of the National Grid on behalf of New Zealanders. In this role Transpower will play a critical role for New Zealand in meeting its zero carbon aspirations, by both investing in its existing National Grid assets and enabling connections to new sources of renewable energy.
- 1.3. Transpower wishes to see appropriate planning provisions that give effect to the National Policy Statement on Electricity Transmission 2008 ("**NPSET**") are included in the Proposed Waitomo District Plan ("**PDP**") to ensure that Transpower is able to develop, upgrade, operate, and maintain the National Grid to enable a sustainable, secure and reliable supply of electricity to the Waitomo District and nationally. Within this policy context, the National Grid corridor provisions as recommended by the S42A author for the PDP generally accord with the model approach sought by Transpower for the National Grid throughout New Zealand.
- 1.4. **Ms Whitney** (Transpower's independent planning expert) largely agrees with the S42a report conclusions with only four matters being understanding (three of which relate to points of clarification), to achieve consistency with, and give effect to (as appropriate), higher order provisions; to improve the efficiency, clarity and usability of the PDP and achieve the purpose of the RMA. I concur with the amendments supported by **Ms Whitney**, acknowledging the very confined nature of the outstanding points.

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Appendix A Statement of Experience

Appendix B National Grid Assets in the Waitomo District

2. Qualifications and Experience

- 2.1. My full name is Rebecca Mary Eng. I am the Technical Lead – Environmental Policy at Transpower, within the Environment Group. The Environment Group's responsibilities include:
- 2.1.1 Delivering Transpower's strategic policy approach on environmental regulations, legislation, and council planning documents;
 - 2.1.2 Developing and implementing Transpower's corridor management programme at a national and local level;
 - 2.1.3 Ensuring that all necessary environmental approvals are obtained for Transpower works, and internal staff, consultants/service providers are aware of, and able to comply with, their environmental obligations; and
 - 2.1.4 Internal external stakeholder engagement including with government officials, councils, iwi, industry stakeholders, developers and customers.
- 2.2. I have been employed by Transpower for nine years. My role involves leading Transpower's environmental policy workstream, including to ensure planning documents give effect to the NPSET.
- 2.3. I have a Master of Resource and Environmental Planning from Massey University. I have over 20 years' experience working as an environmental planner within New Zealand and the United Kingdom, and I am a Full Member of the New Zealand Planning Institute. My relevant experience and qualifications are included in **Appendix A**.
- 2.4. I confirm that I am authorised to give this evidence on behalf of Transpower.
- 2.5. Although this matter is not before the Environment Court, I confirm that I have read the 'Code of Conduct for Expert Witnesses' contained in the Environment Court Consolidated Practice Note 2023. As I am employed by Transpower, I acknowledge I am not independent; however, I have sought to comply with the Code of Conduct when preparing my written statement of evidence and will do so when I give oral evidence before the Hearings Panel. In particular, unless I state otherwise, this evidence is within my sphere of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

3. **Scope of Evidence**

3.1. My evidence will address the following:

- 3.1.1. Transpower and the National Grid;
- 3.1.2. Transpower's assets and projects within the Waitomo District;
- 3.1.3. The National Grid's role in Aotearoa New Zealand's energy future;
- 3.1.4. Transpower's approach to implementing the NPSET; and
- 3.1.5. Conclusions.

4. **Transpower and the National Grid**

- 4.1. Transpower is a State-Owned Enterprise that plans, builds, maintains, owns, and operates New Zealand's high voltage electricity transmission network – the National Grid (or “**the Grid**”). The Grid links generators to distribution companies and major industrial users. It extends from Kaikohe in the North Island to Tiwai in the South Island and carries electricity throughout New Zealand.
- 4.2. New Zealand has become increasingly dependent on electricity. It is an intrinsic part of living and working in the 21st century. Electricity now accounts for approximately 26% of all energy used in New Zealand.¹ Each year, \$6 billion worth of electricity is traded on the wholesale electricity market.² Transpower, whose main role is to ensure the delivery of a reliable and secure supply of electricity to New Zealand, has a fundamental role in the industry and in New Zealand's economy.
- 4.3. Transpower is not a generator of electricity and has no retail sales of electricity. It can be considered a ‘freight company’ for electricity, in that it carries bulk electrical energy from where it is generated by companies such as Contact Energy, Meridian and Genesis to the local lines distribution companies (e.g., Top Energy, Northpower) and some major users of electricity (e.g. Tiwai Point Aluminium Smelter and NZ Steel at Glenbrook).
- 4.4. Transpower also manages New Zealand's power system in real time. In its role as System Operator, Transpower operates the electricity market to ensure electricity

¹ [Energy statistics | Ministry of Business, Innovation & Employment \(mbie.govt.nz\)](https://www.mbie.govt.nz/energy-statistics)

² [Clearing manager | Electricity Authority](https://www.electricityauthority.govt.nz/clearing-manager)

transmitted through the National Grid is delivered whenever and wherever it is needed, 24 hours a day, seven days a week.

- 4.5. Transpower plays a significant part in New Zealand's economy, with all major industries, cities and communities being reliant on a secure and reliable supply of electricity.

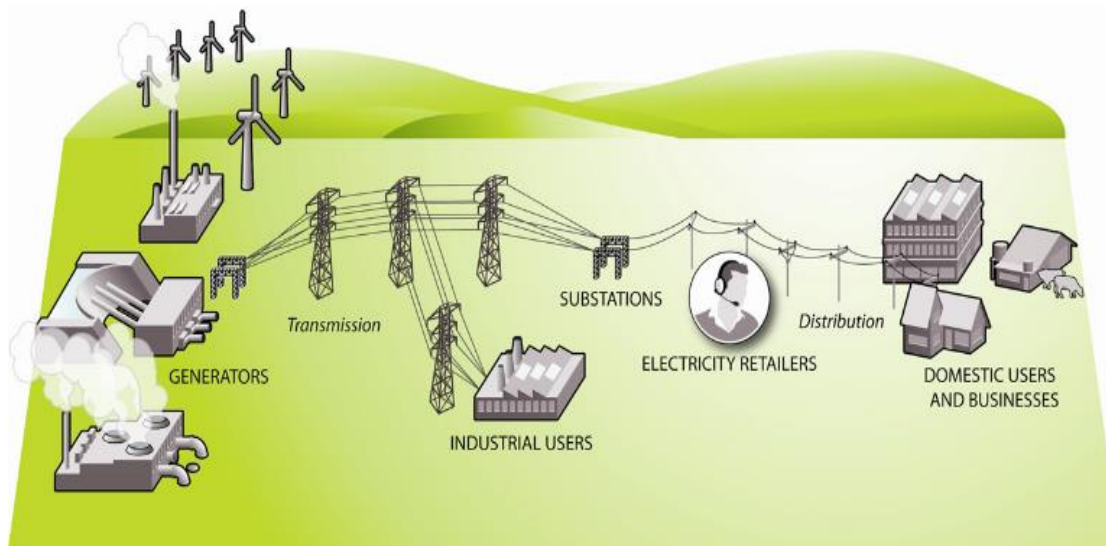


Figure 1. Electricity Industry in New Zealand. Source MBIE

- 4.6. As a State-Owned Enterprise, Transpower's principal objective is to operate as a successful business. It must operate within certain legislative constraints and report regularly to its shareholding Ministers. Transpower is required to deliver and operate a National Grid that meets the needs of users now and into the future.
- 4.7. One of Transpower's key objectives therefore is to maintain and develop the National Grid, which contributes to New Zealand's economic and social aspirations.
- 4.8. Prudent investment in the Grid, long term transmission planning strategies, and developing technologies are crucial to ensure the most can be made from existing infrastructure. Proper maintenance and access to the Grid is essential to defer the need for new lines and substations and to create better options for when new build is required. This will, in turn, help to limit the cost and environmental footprint of the National Grid for future generations. This is more critical than ever in the context of the Climate Change Response (Zero Carbon) Amendment Act 2019, which I expand on later in this evidence.

The National Grid Network

- 4.9. The National Grid comprises some 11,000 circuit km of transmission lines and approximately 175 substations across the country. This is supported by a network of some 300 telecommunication sites, which help link together and communicate with the components that make up the National Grid.
- 4.10. The Grid comprises a high voltage backbone that runs the length of the country and links major generation (such as the South Island hydro lakes and central North Island hydro and thermal generation sources) to major loads in the main cities (e.g., Christchurch, Wellington and Auckland) as well as the regions such as Waikato. The bulk of the Grid backbone was built around 60 years ago and comprises most of the 220kV lines throughout New Zealand, along with the High Voltage Direct Current (HVDC) link between the North and South Islands.

5. Transpower's Assets and Projects within the Waitomo District

- 5.1. Transpower's assets within and traversing the Waitomo District comprise the following:
 - 5.1.1. Arapuni – Ongarue A (ARI-ONG-A) 110 kV Single Circuit line on Pi Poles
 - 5.1.2. Arapuni – Ongarue B (ARI-ONG-B) 110 kV Single Circuit line on Steel Towers
 - 5.1.3. Huntly – Taumarunui A (HLY-TMN A) 220 kV Double Circuit line on Steel Towers
 - 5.1.4. Rangitoto Hills – Hangatiki A line (RTO-HTI A) 110 kV Double Circuit line on Steel Towers
 - 5.1.5. Hangatiki - Te Awamutu A (HTI-TMU-A 110 kV) 110 kV line – leased by Transpower and designated
 - 5.1.6. Rangitoto Hills Tee Site
 - 5.1.7. Hangatiki substation
- 5.2. The majority of support structure types in the district are towers, with seven pi-poles (on the ARI-ONG-A line) and two single poles (on the RTO-HTI A line).

- 5.3. Of specific note, the Hangatiki – Te Awamutu A 110kV line is owned and designated by Waipa Networks Ltd but is operated by Transpower. On that basis it forms part of the National Grid as defined in the NPSET, as while not owned, it is ‘used’ by Transpower. The line extends northeast from the Hangatiki substation, with approximately 1400m of the length contained within the Waitomo District, refer **Error! Reference source not found.** The location of the line at a district wide scale is shown as a blue circle on the insert map below.



Figure 2.. Hangatiki – Te Awamutu A 110kV line – refer black line outlined in blue

- 5.4. For the sake of completeness I note that the National Environmental Standards for Electricity Transmission Activities) Regulations 2009 (“**NESETA**”) do not apply (as the line is not owned and operated by Transpower as required by Regulation 3 Definitions of the NESETA, and the line was constructed after the NESETA came into effect). However, given the line is designated, any operation and maintenance activities are regulated through the operative designation as opposed to the PDP rules.
- 5.5. **Appendix B** of Transpower’s submission included a map showing the location and extent of the National Grid assets within the Waitomo District and a copy is also attached to this evidence at **Appendix B**.

- 5.6. The Grid is an interlinked network. Electricity flows along transmission lines via lines supported by towers (pylons), poles or pi poles and can vary in any instant, depending on actual generation at power stations and the demand for electricity across New Zealand. In operating the electricity market as System Operator, Transpower uses real-time information about electricity use by consumers and electricity generation available from generators to balance electricity demand and supply, ensuring optimum performance of the network.
- 5.7. For Transpower's transmission planning purposes, Waitomo is within the Waikato region. The existing transmission network for the Waikato region is set out graphically in Figure 3.³



Figure 3. Waikato region transmission. Source: Transpower Transmission Planning Report 2023)

³ Transpower Transmission Planning Report, 2023, page 136, [Transmission Planning Report 2023](#)

- 5.8. The Waikato region includes the city of Hamilton, together with several large towns and smaller rural localities. Significant industry in the region includes dairying and pulp and paper processing. The region comprises two distinct transmission networks, 110 kV and 220 kV, of which the 220 kV network forms part of the grid backbone. The Brownhill–Whakamaru–A line that traverses the region (but not within the Waitomo district) is a 400 kV-capable line but is currently operated at 220 kV.
- 5.9. The Waikato region’s generation capacity is currently 2,531 MW. This excludes embedded solar (PV) generation, which was approximately 28 MW in the Waikato region at the time of publication of the 2023 report. The region’s generation capacity represents a major portion of New Zealand’s generation and significantly exceeds local demand. Surplus generation is exported via the National Grid to other demand centres.
- 5.10. The Waikato regional peak demand is forecast to grow by an average 3.2 per cent per annum over the next 15 years, from 557 MW in 2023 to 898 MW by 2038. This is greater than the national average growth rate of 2.0 per cent per annum.⁴
- 5.11. The National Grid provides connectivity between all sources of generation and consumers. Without the National Grid, consumers across New Zealand would be dependent on locally generated electricity which would be more expensive and less reliable. As such, the National Grid plays a significant role in the sustainable management of natural and physical resources.

Transpower’s Projects in the Waitomo District

- 5.12. The main project work planned for National Grid assets in the Waitomo District is transformer replacements at the Hangatiki substation, and reconductoring of existing transmission lines.
- 5.13. Other works to the transmission lines in the district include routine insulator replacements and tower painting.
- 5.14. While Transpower currently has no specific plans for new transmission assets in the district, that could change at any stage. For example, where new National Grid transmission lines are needed to connect new renewable energy generation sources to the network. This is discussed further below.

⁴ Transpower Transmission Planning Report, 2023, page 138

6. The National Grid's Role in Aotearoa New Zealand's Energy Future

6.1. The National Grid has a central role to play in the decarbonisation of New Zealand's economy. Transpower has undertaken a series of workstreams to understand this role in the decades to come:

6.1.1. Transpower's 2016 publication "Transmission Tomorrow" set out Transpower's strategy for the future development of the Grid for the next 30 years and beyond. Transmission Tomorrow was updated in 2018 and 2023. The 2023 revision identifies optimising Transpower's existing infrastructure as a cost-efficient way to deliver value to New Zealand now and in the future, as well as building new connections.

6.1.2. In 2018, Transpower published its white paper "Te Mauri Hiko – Energy Futures". This project closely examined a range of electricity supply, demand and future technology scenarios and began exploring what will be required for New Zealand to maximise the potential of the energy opportunity it is facing, including meeting its Paris Climate Accord commitments and the Climate Change Response (Zero Carbon) Amendment Act 2019.

6.1.3. In 2020, Transpower released "Whakamana i Te Mauri Hiko – Empowering our Energy Future" which sets out a blueprint for how New Zealand might get to a zero-carbon future. As the economy electrifies in pursuit of the most cost efficient and renewable sources, the Whakamana i Te Mauri Hiko base case forecasts that electricity demand will increase by 68% by 2050.

6.2. All of this work confirms that there will be an enduring role for existing National Grid assets into the future, as well as a need for significant investment in new National Grid assets. Transpower estimates that around 70 new grid scale connections, each requiring new lines and potentially new substations, will be required in the next 15 years, with this trend continuing through to at least 2050. This trend is reflected in the significant increase in customer connection enquiries that Transpower has received annually since 2016. A maximum of five enquiries per year were received between 2016 and 2019. By 2022, this figure had jumped to 124. The protection of existing National Grid assets is therefore a critical component of enabling the decarbonisation of the economy.

6.3. In terms of a summary, the National Grid:

- a. transports electricity across the country (connecting generation to consumers);
- b. supports New Zealand's national and regional economic growth;
- c. plays an essential role in maintaining reliability and security of supply of energy;
- d. provides a basis for investment decisions to be made by both suppliers and consumers of electricity;
- e. enables competition among suppliers and retailers of electricity, thereby providing the basis for competitively priced electricity;
- f. assists the development of new electricity generation technologies, including renewable energy, by providing access to markets;
- g. enables the electrification of transport and process heat, without which there is no way in which our Paris Agreement and net-zero carbon economy commitments can be met; and
- h. is predicted to play a key role in the decarbonisation of the economy.

6.4. The following section is included to provide context for Transpower's submission points on the Waitomo PDP.

7. Transpower's approach to giving effect to the NPSET

- 7.1. As outlined in the evidence of Ms Whitney, there are three broad aspects to the NPSET which must be given effect to in local authority plans:
- a. **Enabling the National Grid:** Provide for the effective operation, maintenance, upgrading and development of the National Grid.
 - b. **Managing the effects of the National Grid:** Take into account the characteristics of the National Grid, its technical and operational constraints, and the route, site and method selection process when considering the adverse effects of new National Grid infrastructure on the environment.
 - c. **Managing the effects on the National Grid:** Manage inappropriate development, land use and subdivision in close proximity to the National Grid, which can compromise its operation, maintenance, development and upgrade. This is achieved through a National Grid Corridor management approach.

7.2. These three matters are addressed in turn.

Enabling the Grid and managing the effects of the National Grid

7.3. As outlined in the evidence of Ms Whitney, policies and plans must provide for the effective operation, maintenance, upgrading and development of the National Grid. Ms Whitney has well canvassed the policy directive within the NPSET.

7.4. Paragraph 6.2 of my evidence explains that as the economy electrifies in pursuit of the most cost efficient and renewable energy sources, electricity demand is likely to more than double by 2050. This will necessitate significant and frequent investment in New Zealand's electricity generation portfolio over that period, including the National Grid. While there are no current plans for new National Grid assets in the Waitomo District at this time, that situation could change within the life of the PDP. This means that the extent to which the PDP objectives, policies and rules regulate both existing and new National Grid transmission infrastructure is critical to Transpower.

7.5. The NESETA does not apply to National Grid substations or transmission lines constructed after 14 January 2010. This means that Transpower relies on the consenting and/or designation process under the RMA to gain approval for any new National Grid assets constructed after this date.

7.6. As part of the process of securing RMA approvals for new National Grid infrastructure, Transpower uses various tools to select the route of any new transmission line or the site of any new substation. A key methodology is the ACRE process. Transpower developed the ACRE model to identify and secure the most suitable location for transmission infrastructure. It is based on a progressive filtering approach, where increasing and more specialised detail is provided on environmental, property and engineering constraints throughout the process to enable the identification of a preferred route or site.

7.7. The key stages of the ACRE process are summarised below (these can be modified or combined, depending on the scale and nature of the project):

- a. A – Area (identification of the wider study area within which the project might occur; undertaking constraints and opportunities mapping);
- b. C – Corridor (identification and confirmation of alternative corridors, ranking and selection of preferred corridor);

- c. R – Route (selection and evaluation of a route, or alternative routes, within the preferred corridor, consultation on one or more routes and confirmation of preferred route, following public consultation); and
- d. E – Easement/Designation (identification and confirmation of the easement and designation centreline). There are two further process steps, referred to as “D” and “S”.
 - i D – Documentation (preparation of full documentation for lodgement with councils); and
 - ii S – Statutory Process (lodgement of documents for statutory approvals under the RMA, board of inquiry/council hearings, Environment Court appeal process where relevant).

7.8. During the Area, Corridor, Route and Easement/Designation stages, consideration is given to the location of the proposed infrastructure, with negative scoring being given to any special areas, such as Sites and Areas of Significance to Māori, historic heritage sites, Significant Natural Areas or Outstanding Natural Landscapes (ONL).

7.9. The ACRE process allows for a trade-off between several factors, with the intent of finding a preferred solution:

- a. It takes into account technical and operational requirements, such as the need to connect to existing assets, or maintain safety clearances;
- b. It demonstrates that adverse effects have been avoided through the site, route and method selection – although it will not always be possible to avoid all adverse effects;
- c. Sensitive activities such as residential areas can be mapped, so that options which avoid effects on sensitive activities are known and appropriately factored in; and
- d. Town centres and other valued locations such as areas of high recreational value, ONLs, ecological areas and areas of high natural character are also mapped, so that consideration to avoiding those areas can occur.

7.10. Often it is not practicable to avoid adverse effects on all identified values. For example:

- a. Avoidance of urban areas and sensitive activities can often deflect assets towards areas with greater landscape, natural character or recreational value (i.e., non-urban locations);
 - b. Avoiding particular locations can also mean a National Grid transmission line must take a longer route, impacting a greater number of people and values along that longer route, and costing more to develop, operate and maintain (that cost being borne by electricity users);
 - c. Reducing the height of lines (to reduce their visibility) can mean that a greater number of support structures (towers or poles) are required to maintain safe ground-to-conductor clearances. Lower conductors can require greater vegetation clearance, and more extensive access tracks for the greater number of support structures; and
 - d. Undergrounding lines is often prohibitively expensive, still requires earthworks, a clear corridor (including clear of vegetation and above-ground structures) and can complicate maintenance and repairs.
- 7.11. The ACRE process reflects NPSET policies in terms of seeking to avoid some areas while taking in to account the technical and operational requirements of the Grid in the route, site and method selection process. I would support a district plan framework that supports the ACRE process and recognises it as a key tool for managing the effects of National Grid development, particularly given that it is not always possible to avoid effects.

Mechanisms available to manage the effects on the National Grid

- 7.12. Most National Grid transmission lines and substations were originally built in the early to mid-twentieth century in (what were then) rural areas over open land. These areas posed little to no constraint on the ability to operate, maintain, upgrade and develop the National Grid.
- 7.13. Over time, urban boundaries have expanded and both urban and rural development has occurred under, and in close proximity to, National Grid assets. There are a range of regulatory tools that variously provide for the National Grid, each with different pros and cons. Nationwide, only a small proportion of transmission lines are designated, including a small section of line within the Waitomo District.

- 7.14. Under the Electricity Act 1992, Transpower is able to access, maintain and upgrade its lines on private property. However, Transpower has little direct control over activities that have been constructed under, and in close proximity to, the National Grid without Transpower's knowledge or consent.
- 7.15. The NESETA regulations are enabling of many of Transpower's activities on existing National Grid transmission lines. However, they do not include any provisions to regulate subdivision, land use or development carried out by third parties near the National Grid.
- 7.16. The NPSET was developed (in part) as a mechanism to provide better management controls for National Grid activities and third party activities that impact the Grid. Policies 10 and 11 in particular provide direction to protect the National Grid from inappropriate subdivision, land use and development.
- 7.17. While these policies are not prescriptive in the form of rules or definitions, the mandatory language used in these policies means that councils must ensure that appropriate protections are in place. Ms Whitney's evidence includes further comments on Policies 10 and 11 of the NPSET.

National Grid Corridor Approach

- 7.18. The nature of the assets across New Zealand and their operational and technical requirements are very similar. The challenges Transpower faces maintaining and upgrading existing assets in urban environments are also very similar. Accordingly, Transpower considers that it follows that the National Grid corridor should be treated consistently across the different councils. For this reason, Transpower participates in every plan review and plan change in the districts the National Grid is located in and seeks a consistent National Grid corridor approach. This corridor framework and formula is applied nationwide.
- 7.19. The National Grid corridor approach supported by Transpower has eight important purposes, namely:
1. **To ensure that sensitive activities, such as residential development, are generally not provided for near National Grid structures and lines:** Sensitive activities include the establishment of dwellings, schools and papakāinga close to the Grid. The purpose of Policy 11 of the NPSET is to

prevent sensitive activities (including the expansion of existing sensitive activities) such as these from being established near the National Grid;

2. **To manage reverse sensitivity effects:** These effects occur when people undertake activities close to an existing line or structure. For example, National Grid lines can cause noise (especially in damp weather), reduced visual amenity, radio and television interference, perceived effects of electric and magnetic fields from the lines, and interference with landowners' business activities beneath the lines. These effects often lead to neighbouring landowners/occupiers wanting to constrain operation or alter the existing lines. Landowner complaints can ultimately lead to constraints on the operation, maintenance and upgrade of existing National Grid assets;
3. **To protect the integrity of the National Grid (structures and lines):** Structures, earthworks and other land use activities that are too close to a transmission line and support structures can affect the stability of that line and contribute to electricity outages. The presence of these structures and activities can also increase the need for, and thereby the risk associated with, mobile plant (such as cranes, forestry haulers and excavators) and other equipment. Transpower wishes to ensure that safe distances are maintained so the risk of coming into contact with the lines is minimised;
4. **To enable efficient and safe operation, maintenance and potential upgrade operations:** National Grid Yards/Corridors provide a relatively clear area for line workers to gain access to the line and structures in order to conduct operational maintenance on high voltage equipment, sometimes at great heights. The National Grid corridors also limit the need for costly workarounds (for example, bypass lines), when maintaining and operating the Grid. In addition to this, corridors can also preserve the ability to undertake upgrades in the future, rather than potentially having to construct a new asset;
5. **Reliable and secure electricity supply:** To provide the residential, rural, commercial and industrial electricity users in the Waitomo District with a reliable and secure supply of electricity;
6. **To provide the community, Council and Transpower with the knowledge and confidence that the lines are being managed in a safe and sustainable manner:** To provide certainty as to how that management is being achieved in response to the policy framework established by the NPSET; and

7. **To minimise safety hazards:** Electricity transported at high voltages can cause serious, or even fatal, injuries to people who come in close contact with the lines. Corridor management is therefore of paramount importance as it provides for the wellbeing, health and safety of people.

- 7.20. In response to the submission point by Horticultural NZ (27.09) requesting a 10m setback for support structures, I concur with the evidence of Ms Whitney in her response to the officer invitation to comment on this matter. I can confirm that a 12m setback from support structures is entirely consistent with the nationwide corridor approach. The 12m National Grid Yard will allow the support structures and conductors to be accessed and provide sufficient space for most (but not all) maintenance activities. The 12m National Grid Yard will not eliminate all inconvenience caused by operation and maintenance activities, nor necessarily ensure full access for maintenance activities is provided in all circumstances - it attempts to strike a reasonable balance in absence of more comprehensive property rights and protection. While not raised in submission point 27.09, I am aware that many parties in their querying of the corridor provisions refer to relying on compliance with the New Zealand Electrical Code of Practice for Electrical Safe Distances ("**NZEC34:2001**"). NZEC34:2001 relates to electrical safe distances - it does not address the resource management matters in Policies 10 and 11 of the NPSET. Transpower does not support simple reliance upon NZEC34:2001, as it does not ensure the National Grid infrastructure and surrounding land are proactively and sustainably managed for the future. For example, NZEC34:2001 compliant development can still prevent access to National Grid support structures and does not distinguish between land use types (e.g. sensitive activities).
- 7.21. The current approach supported by Transpower has been relatively settled since 2012 following Environment Court appeal, Board of Inquiry, Independent Hearings Panel processes and ongoing engagement with Transpower's key stakeholders. The NPSET requires local authorities to give effect to its provisions within plans made under the RMA within four years of its approval (by 2012). To date, more than 90% of councils with National Grid assets in their districts have completed this task in relation to Policies 10 and 11 of the NPSET (i.e. by including National Grid corridor provisions in their plans).

8. Conclusions

- 8.1 The National Grid is critical to the social and economic wellbeing of the Waitomo District and our nation generally. It will also play a critical role in New Zealand's carbon zero commitment and mitigating the effects of climate change. This will necessitate the upgrade of existing, and construction of new, National Grid assets in the future. As an infrastructure asset of national significance, the NPSET requires that the National Grid be protected in the Waitomo PDP.
- 8.2 Transpower's relief will ensure integrated management of activities through the District Plan to provide for sustainable development of both the National Grid infrastructure and other natural and physical resources, both of which are critical for the future development of the Waitomo District and New Zealand.

Rebecca Mary Eng

4 November 2024

Appendix A: Statement of Experience

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Career Summary

Technical Lead – Environmental Policy, Transpower New Zealand Ltd: January 2022 – present

Senior Environmental Planner, Transpower New Zealand Ltd: July 2015 – December 2021

Principal Policy Analyst, Parks & Recreation Policy - Central, Auckland Council: January 2014 – July 2015

Senior Planner, Barker & Associates, Auckland: February 2012 – January 2014

Associate, RPS Group plc, London, United Kingdom: September 2006 – May 2011

Planner, Beca, Wellington & Tauranga: December 2002 – June 2006

Qualifications

Master of Resource & Environmental Planning, Massey University (2004)

Bachelor of Resource & Environmental Planning (First Class Hons) (Massey Scholar), Massey University (2002)

Affiliations

Full Member of the New Zealand Planning Institute

Appendix B: National Grid Assets in Waitomo District

Transpower Assets

Waitomo District

Legend

Territorial Land Authority

Boundary

NZ Roads

Highways

Transpower Assets

Cable Protection Zone

Overhead Fibre Cable

Underground Fibre Cables

Site

ACSTN

COMMS

HVDC

TEE

Transmission Line

0kV Overhead

11, 66kV Underground

11, 33, 66 kV Overhead

110kV Underground

110 kV Overhead

220kV Underground

220 kV Overhead

350 kV Overhead

350kV Submarine

400kV Overhead



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TRANSPOWER

Prepared by: Transpower Geospatial

Projection: NZTM 2000 Scale: 1:302,000 Plan Size: A3L

0 1,000 2,000 km

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