Submission by Transpower on Planning for Successful Cities – a Proposed National Policy Statement on Urban Development

1. **Required information**

   **Company name:** Transpower New Zealand Limited

   **Given names:** N/A

   **Surname:** N/A

   **Contact person:** Personal

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   **Region:** Personal

   **Country:** Personal

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   **Submitter type:** Crown entity

   **Overall position:** Support in Part

2. **General Submission**

   **The National Grid and Transpower’s role**

   Transpower is the state owned enterprise that plans, builds, maintains – and owns or operates, New Zealand’s high voltage electricity transmission network (the National Grid). The National Grid includes some 12,000 km of transmission lines and cables (overhead and underground), and 178 substations across the country. The National Grid is controlled by a telecommunications network with 300 telecommunication sites, which help link together the components that make up the National Grid.

   The National Grid extends from Kaikohe in the North Island to Tiwai Point in the South Island, and in doing so links generators to distribution companies and major industrial users throughout New Zealand, and provides electricity to all major urban areas throughout the country. In this regard, the National Grid is not “development infrastructure,” nor does it “service” development.

   The assets in the National Grid are an extensive, linear, and connected system of lines and substations. Thus, activities or changes on one part of the system can affect other parts. The National Grid operates in a regional or national scale in terms of the location of assets and the distances over which electricity is transmitted.

   The National Grid provides a number of critical and essential functions across New Zealand. Society could not function, nor could we maintain or improve our standards of living, without a secure electricity system of which the National Grid is an essential part. Electricity underpins the economic growth and the economic goals of New Zealand. It enables social and community development, contributing actively to the lives of people in New Zealand. Without the National Grid, electricity that is generated at power stations throughout New Zealand could not reach distribution companies and power our homes, businesses, schools, communities or major industrial and rural users. This has been recognised by the Court:
“Electricity is a vital resource for New Zealand. There can be no sustainable management of natural and physical resources without energy, of which electricity is a major component.”

Ultimately, the National Grid will be required for many years into the future (and is critical to enabling wider social and economic wellbeing). Transpower needs to be able to operate, maintain, upgrade and develop the National Grid in the most sustainable way for that outcome to be achieved.

Relationship between the Proposed NPS-UD and the NPSET

Transpower recognises the challenges facing urban areas throughout the country, and understands the need to provide for housing and urban development as a priority. Transpower supports the development of the Proposed National Policy Statement for Urban Development (the NPS-UD). Transpower’s key concern relates to reconciling the Proposed NPS-UD with the National Policy Statement on Electricity Transmission 2008 (the NPSET).

The NPSET was developed under the Resource Management Act 1991 and recognises the importance of the National Grid, both as an asset in its own right and also in terms of the role that it plays in the functioning of the country. The NPSET, along with the Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009 (NESETA), formalise the national significance of Transpower’s infrastructure – something that is not shared by other utilities or infrastructure operators. These documents also mandate particular provisions dealing with the protection and promotion of Transpower’s current and future infrastructure (as well as imposing constraints or consent requirements that do not apply to other utilities and infrastructure operators).

The NPSET recognises that the efficient transmission of electricity on the National Grid has special characteristics, including:

- technical, operational and security requirements which can limit the extent to which it is feasible to avoid or mitigate all adverse environmental effects, with some effects potentially being significant;
- the fact the operation, maintenance, upgrade and development of the National Grid can be significantly constrained by the adverse environmental impacts of third party activities and development; and
- the adverse environmental effects of the National Grid are often local – while the benefits extend beyond the local to the regional and national – making it important that those exercising powers under the Act balance local, regional and national environmental effects, including beneficial effects.

Transpower relies on the NPSET to ensure that regional policy statements and district and regional plans adequately provide for and protect the National Grid. It is crucial that the NPS-UD does not dilute the effectiveness of the NPSET and/or threaten the security of the National Grid. In particular, the NPSET requires local authorities to consult with Transpower to identify an appropriate buffer corridor within which it can be expected that sensitive activities will generally not be provided for in plans and/or given resource consent.

The buffer corridor rules that have been included in district plans restrict sensitive activities (such as dwellings, hospitals, and schools), and generally restrict industrial and commercial

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1 Genesis Power Ltd v Franklin District Council (2005) 12 ELRNZ 71; [2005] NZRMA 541 (ENC)
buildings\(^2\) within 12m of the centreline of a line\(^3\), and within 12m of the outer edge of the support structure. The image below depicts the area where development should be restricted. The conductors (wires) swing out beyond the 12m area, potentially out as far as 37m either side of the centreline. The district plan rules provide that development can occur in this wider area, provided maintains safe separation from the conductors, and access to the structures is not prevented.

The buffer corridors required by the NPSET are necessary to protect the National Grid from reverse sensitivity and direct effects, and to ensure that operation, maintenance and development of the lines is not compromised, with the consequential effect of the lines and community are not being subject to safety risks.

Before NPSET-corridors, development occurred under and around lines in an unconstrained manner (and has occurred until corridor rules have taken legal effect in district plans, a process which is about 70% complete). The photograph below shows development that has occurred under and near the line – creating issues for even the simplest maintenance activity.

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\(^2\) There are some exceptions for commercial and industrial activities, where a line is already compromised.

\(^3\) Many district plans refer to this area as a “Yard” or “National Grid Yard.”
Some extremely unsafe situations have occurred – for both industrial and residential development. Crane booms have come into contact with the conductors (wires) of a line in a number of instances, as have mobile plant, which is extremely dangerous and crane. Serious injuries have been sustained by the operators of the mobile plant and cranes.

There have also been examples where Transpower has had to intervene during the building of a dwelling and stop the work. Transpower was very concerned about the construction risks associated with the property shown in photo 2 below – that scaffolding equipment and contractors could encroach into the safe separation distances from electricity lines. WorkSafe issued a construction prohibition notice. Work had to stop until design changes and construction mitigation measures were taken (for example a cover was placed above the scaffolding to reduce the risk of construction material contacting the conductors).

**Photo 1:** house and garage in very close proximity to National Grid structure, and fence through the structure.
The scenario in photo 2, and the associated risks, would not occur now, as there are corridor rules in the relevant district plan.

The corridor rules will impact on infill-subdivision potential, and yield, particularly if development is not properly planned taking into account any National Grid lines. For example, photo 3 shows a lot with apparent infill subdivision potential. There are many lots of this kind around the country. The NPSET-corridor is shown by the red hatching - subdividing the lot at the rear to allow a second single storey dwelling should be prevented by the rules. Other options remain available – such as removing the existing dwelling and replacing it with multi-unit dwellings with the NPSET corridor remaining clear.
Transpower recognises that its assets, and the NPSET mandated corridors, are a constraint on existing and future development. However, this constraint is necessary in order to protect Transpower’s nationally significant infrastructure - ensuring that the lights are kept on for homes, businesses, industries, schools, hospitals, and communities. These constraints need to be recognised in any areas where urban development is proposed around the National Grid. If Transpower’s buffer corridors are not recognised as a constraint then the stated “development capacity” will be inaccurate and the development potential from the relevant zones will not be able to be achieved.

Transpower considers that with minor amendments to the policies in the NPS-UD, the NPS-UD will provide enough direction to local authorities and other decision-makers under the RMA about how the NPSET and NPS-UD are to be reconciled. In particular, Transpower seeks a directive policy that National Grid corridors are to be maintained, rather than revisited, when undertaking urban development.

Structure of Transpower’s submission

Transpower has provided answers to the questions in the discussion document on the basis that the questions and answers may be analysed and assessed by different members of the Ministry for the Environment team.

Therefore Transpower has repeated a number of points throughout its submission so those reading and analysing the individual questions have a good understanding of Transpower’s interests in the Proposed NPS-UD and the implications for the National Grid.