

To be completed by the Commission:

Issue Date	8 September 2026	RFI No.	RFI001
Attention	Joel Cook	Date required	14 September 2026
Originator	Abdul Khan	Document number/name	5947375v1
Subject	Transpower normalization application – Waioatahe interruption		

Clarification	☒	require clarification of information that is unclear or contradictory
Confirmation	☐	seeking confirmation of information previously considered preliminary
Incomplete	☐	current information is incomplete
New data	☒	require additional information
Other	☐	

Detailed description of request – Please include the file name(s) the request relates to (if applicable)

Outages and interruptions due to natural disaster

Transpower mention in its normalisation application that outage was a result of natural disaster, being Cyclone Vaianu in this case.

Q1. Can Transpower please provide the following information:

- Severity data on Cyclone Vaianu, such as wind speed, wind direction in relation to the line orientation;
- EDG-WAI 2 line design and build standard for maximum withstand parameter to wind speed and wind direction; and
- Summer and Winter line sag of the conductors.

Challenge with stakeholders on vegetation management

Transpower noted that similar event occurred in 2019 and more recently when small areas of trees were removed.

Transpower mention that current and recent draft amendments to the Tree Regulations will not help Transpower in relation to better management around transmission assets.

Q2. What steps has Transpower taken since the previous two events and what are Transpower's plans now to ensure that forest owners meet their obligations under the Electricity Regulations so that trees do not impact transmission network operations.

Extreme weather intensity and frequency

Based on long-term weather forecast, HILP events are likely to be more frequent and more intense.

Q3. Looking forward, what resilience measures are Transpower considering at implementing to minimise outages and interruptions associated with extreme wind events. In particular, has Transpower reviewed its design standards of transmission assets and wind speed assumptions to ensure these are resilient to higher wind speeds and wind gusts during extreme weather events.

Reason for request / Impact on evaluation

To make our decision on Transpower's normalisation application.

To be completed by Transpower:

Transpower' Response – Please include the file name(s) the response relates to (if applicable)

Q1. Can Transpower please provide the following information:

- Severity data on Cyclone Vaianu, such as wind speed, wind direction in relation to the line orientation;
- EDG-WAI 2 line design and build standard for maximum withstand parameter to wind speed and wind direction; and
- Summer and Winter line sag of the conductors.

Challenge with stakeholders on vegetation management

Transpower noted that similar event occurred in 2019 and more recently when small areas of trees were removed.

Transpower mention that current and recent draft amendments to the Tree Regulations will not help Transpower in relation to better management around transmission assets.

Response

Transmission lines are not intentionally designed for loading from trees or branches, and there are clearance standards for lines under the Tree Regulations.

On the day of the event, easterly winds peaked after dawn on Sunday morning at 110–130 km/h.

Region	Wind (gust values)	Rain	Comment
Auckland	Easterlies peaking early Sunday morning 110-130 km/h . Brief lull before a snap back to westerlies/ southwesterlies peaking Sunday afternoon 110-130 km/h .	70-120 mm , mostly falling in first half of Sunday.	Sunday afternoon is most likely to see the worst wind
Bay of Plenty	Easterlies peaking after dawn on Sunday morning 110-130 km/h . Snap back to westerlies/ southwesterlies late Sunday afternoon or in the evening 110-130 km/h	Early focus Sunday on western BoP, then switches to the east later. 150-180 mm for western BoP, especially up against the Kaimai range.	Potentially the worst affected of these regions

Based on this wind direction, the wind would have been at or close to perpendicular to the line, with gusts of up to 130 km/h. The IMT SitReps also recorded that a Red Weather Warning was in place for the Bay of Plenty.

The EDG-WAI-2 installation was completed in 1975, so it is likely to have been designed to the 1968–1975, which used a 40 m/s wind speed for conductor design loading (equivalent to 144 km/h).

The modern design standard for the spans, using site-specific wind speeds, would be:

- 140–144 km/h for B0078
- 196–202 km/h for B0096
- 147–152 km/h for B0106

Transpower operates the transmission network using seasonal conductor ratings (summer, shoulder and winter ratings), which reflect differing ambient temperature assumptions and are used in operational planning and system operation. While conductor temperature can influence conductor sag, neither seasonal conductor sag nor the line wind-loading design standard determines whether vegetation remains clear of the transmission line. Vegetation risk is managed through inspection, monitoring, vegetation

assessments, and engagement with landowners and forest owners under the Electricity (Hazards from Trees) Regulations framework. The Waiotaha interruption arose from vegetation contact during severe weather conditions rather than from conductor sag or exceedance of line design loading limits.

Q2. What steps has Transpower taken since the previous two events and what are Transpower's plans now to ensure that forest owners meet their obligations under the Electricity Regulations so that trees do not impact transmission network operations.

Response

Since the previous vegetation-related events, Transpower has implemented several measures to improve the identification and management of vegetation risks affecting the transmission network. These include vegetation-specific LiDAR surveys, first implemented in 2023 and now undertaken on a two-year cycle, with the resulting data used to model conductor positions under a range of operating and weather conditions. This allows us to identify vegetation violations with significantly greater accuracy than the previous methodology, establish work priorities, and support engagement with tree owners, forest owners and managers. Transpower continues to undertake annual patrols and works with forest owners to address identified hazards and defects, prioritising higher-risk vegetation issues.

In addition to operational measures, Transpower has actively engaged with MBIE and MCERT on improvements to the regulatory framework governing vegetation management around transmission assets. This has included submissions and participation in industry workshops and engagement on amendments to the Electricity (Hazards from Trees) Regulations 2003, particularly in relation to growth limit zones, cut and trim notice provisions, and the management of fall-distance tree risks. The most recent amendments, introduced in 2026 but not yet in force, provide improvements in some areas, such as the ability to target fall-distance trees. These amendments will allow notices to be issued to remove fall-distance tree risks and restrict some limited planting of trees near electricity lines. We continue to engage with officials at MCERT, particularly in relation to possible further changes to prevent trees being planted around our assets. The current focus of this advocacy is on the resource management reforms.

Transpower will continue to combine operational vegetation management, engagement with forest owners and managers, and advocacy for appropriate regulatory settings to reduce the likelihood of vegetation-related interruptions in the future.

Q3. Looking forward, what resilience measures are Transpower considering at implementing to minimise outages and interruptions associated with extreme wind events. In particular, has Transpower reviewed its design standards of transmission assets and wind speed assumptions to ensure these are resilient to higher wind speeds and wind gusts during extreme weather events.

Response

Climate projections related to wind are lower confidence compared with other climate variables. Guidance from climate models does not suggest much change in the magnitude of extreme winds in New Zealand through to around 2060 as a result of climate change. However, there is some indication that some wind events may become more severe in the South Island and lower North Island by 2100, with extreme wind speeds increasing by up to 10% or more.

Future impacts may include higher rates of asset failure, with associated impacts on reliability and repair costs. We hold spares of poles, conductors, insulators and associated fittings, along with emergency restoration structures, to minimise the impacts of possible tower failures. We also undertake regular readiness exercises to ensure we can respond quickly.

In this instance, the wind speed does not appear to have exceeded the design standard used when the line was built. It is also worth noting that Transpower's design standards for transmission lines have evolved over time, through six different eras of development. As a result, some lines have higher vulnerability than others depending

on the design era. At present, site-specific information on extreme wind under different climate-change scenarios is not available from scientific organisations in New Zealand.

We are working to understand vulnerabilities and areas with repeated wind-related faults. One example is the proactive investment in the BEN-HAY tower wind-strengthening work, which will also address some clearance issues. Recent events on ISL-KIK have identified clearance issues and, as we work through these risks, we anticipate further proactive resilience investment to improve the performance of lines in high winds.

Confidential	<i>Is the content of this RFI confidential?</i>
Attachments	<i>are there attachments with Transpower' response?</i>