TRANSPOWER

Waikoukou
22 Boulcott Street
PO Box 1021
Wellington 6140
New Zealand
P 64 4 495 7000
F 64 4 495 6968
www.transpower.co.nz

Infrastructure Regulation Branch

Commerce Commission

08 June 2026

By email: infrastructure.regulation@comcom.govt.nz

Copy to: Matthew.Clark@comcom.govt.nz;

Interruption Report: Waiotahe loss of supply, 12/13 April 2026

On 12 April 2026 at 12.19 pm, Transpower's 110 kV Edgecumbe–Waiotahe 2 (EDG–WAI 2) circuit tripped during severe weather causing a momentary loss of supply before it successfully auto-reclosed. At 12.42 pm it tripped a second time causing loss of supply to Horizon Networks (8 MW) and loss of connection to Lodestone's solar farm (0.67 MW) at Waiotahe. The cause of the second trip was later confirmed as a line becoming tangled in trees during the heavy rain and strong winds of Cyclone Vaianu.

A ground fault patrol was dispatched. By 6.30 pm, it had covered all public areas and some forestry areas – including the location indicated by distance-to-fault information. At that point the patrol was halted due to safety concerns related to high winds, downed trees on access roads, and loss of daylight.

The following morning, with improved conditions, we were able to complete a helicopter patrol of the full circuit, which identified three locations within the forestry area where conductor spans were caught on trees. The conductors were undamaged and we were able to return them to their normal locations, using a helicopter with a grapple.

Connection was made available to Horizon's 33 kV and 11 kV supplies at 2.22 pm on 13 April, for an outage duration of 1,540 minutes (approximately 25 hours), equivalent to 1.66 system minutes. Connection was made available to Lodestone's 33 kV grid injection at 2.34 pm, for an outage duration of 1,552 minutes. Downstream parties were not ready to take load/reconnect generation for some time after this.

The interruption exceeded both the 1 system minute reporting threshold and the 12-hour duration threshold specified under Transpower's Individual Price-Quality Path (IPP) Determination. Transpower must publicly report for each unplanned interruption over one system minute, or which lasts 12 hours or longer:

- the cause of the unplanned interruption

- the start date and time of the unplanned interruption
- the end date and time of the unplanned interruption
- the megawatts affected by the unplanned interruption
- the grid exit point(s) and grid injection point(s) affected by the unplanned interruption
- actions Transpower took to minimise the effect of the unplanned interruption
- a description of steps that Transpower proposes to take to mitigate the risk of future unplanned interruptions of this type.

Transpower is required to report on such unplanned interruptions within 42 working days of the interruption, in this case, by 11 June 2026. Please find **attached** our report prepared in accordance with clause 28 of our Individual Price-Quality Path (IPP) Determination 2025. This letter and the attachment will be published on our website.

Yours sincerely,

Mark Ryall

Executive General Manager Grid Delivery

INTERRUPTION REPORT: WAIOTAHE LOSS OF SUPPLY, 12/13 APRIL 2026

Summary

On 12 April 2026 at 12.19 pm, Transpower's 110 kV Edgecumbe–Waiotahe 2 (EDG–WAI 2) circuit tripped during severe weather causing a momentary loss of supply before successfully auto-reclosing. At 12.42 pm, it tripped a second time and did not auto-reclose, causing loss of supply to Horizon Networks (Horizon) (8 MW) and loss of connection to Lodestone's Waiotahe solar farm. The area was experiencing heavy rain and very strong winds associated with Cyclone Vaianu.

Service provider fault patrols were dispatched from either end of the circuit. While distance-to-fault (DTF) information was not immediately available[1], the mid-section of the line traverses a large forestry area in rugged terrain, so it was considered likely that the conductors had connected or tangled with trees, as occurred in the same area in 2019.[2] As the forestry areas were away from public access, a risk assessment supported a manual reclose. This was attempted at 1.30 pm but was unsuccessful. DTF data confirming the location of the (initial) fault within the forestry area became available at 2.29 pm.

The ground patrol continued until 6.30 pm, when it was called off for safety reasons. It covered poles 1-70 (Waiotahe end) and 114-167 (Edgecumbe substation) which encompassed all public areas on the line, as well as the location indicated by the DTF analysis[3]. Most of the forestry section could not be safely accessed due to high winds, downed trees on access roads, and loss of daylight.

About 5,500 ICPs in the Ōpōtiki/Te Kaha area were affected by the outage and faced a night without power. We had discussed, with Horizon, its ability to backfeed customers or provide partial supply using embedded generation in the event of prolonged loss of supply. Horizon advised that backfeed was not possible as its distribution circuits would likely not be able to sustain the loading. Embedded generation could supply Te Kaha, but not until Horizon had completed its own line patrols; Ōpōtiki is solely reliant on supply from Waiotahe.

The weather system passed over the area during the afternoon, with winds changing from easterly to westerly. This raised the possibility that a fault present earlier in the afternoon may have cleared as wind conditions changed. Given the number of homes without power, and the fact that public places and the DTF zone had been patrolled, we carried out a risk assessment for attempting a second manual reclose. Finding that risk was low, a second manual reclose was attempted at 7.08 pm, but was again unsuccessful, confirming a persistent fault.

---

[1] All protection relays operated as designed. The delay in providing the fault location was due to the high-resistance nature of the fault (trees caught on the line). In these situations, the DTF calculated by the relay is rarely accurate, and must be manually calculated using event records (waveforms), which is a much slower process.

[2] Following the 2019 event we were able to reach agreement with forest owners to clear a significant area of trees. We had been working towards this for some time prior to that event.

[3] DTF was calculated to be 33% from Waiotahe, at pole 115. Northpower crews cut trees to access this section of line, but no fault was found. Accessing other sections of the line required cutting in through different routes, which was prevented by loss of daylight.

A helicopter patrol of the full length of the line was dispatched at first light on 13 April 2026.[4] The middle (forestry) section was completed just after 9 am, identifying three locations where conductor spans were caught in trees[5]. In all cases the conductor appeared undamaged.

We considered whether the conductor should be lifted and reinstated to its normal position by helicopter, or from the ground. Risk assessment, which included engineering review, supported the use of the helicopter to re-position the conductor. A local helicopter business had standard operating procedures for external load and experience carrying out similar works on distribution lines.[6] This approach would bring forward return to service by several hours compared to a ground-based approach given the access issues due to fallen trees and debris. Expected conductor loads for the three spans were calculated by our service provider, Northpower, and provided to the pilot prior to mobilising. Additional risk assessments of each span were undertaken from the air by the pilot and Northpower supervisor, to establish the risks at each site. Vegetation crews, line crews and excavators were mobilised in case a ground-based approach was needed.

The conductors were returned to their normal positions, and we successfully livened through to the Waiotahe 110 kV bus and restored the 11 and 33 kV buses. Connection was made available to Horizon at 2.22 pm (1,540 minutes) and to Lodestone at 2.34 pm (1,552 minutes). However, Horizon was unable to take load at this time as it had not completed patrols of its own circuits, and Lodestone was unable to reconnect generation due to ongoing communications and site readiness issues.

Figure 1: Transmission system map

Clause 28.1.1 – the cause of the unplanned interruption

The unplanned interruption was caused by conductor spans becoming caught in trees with a forestry area traversed by the circuit. Three spans were identified as affected; however, the exact sequence and timing of these contacts could not be determined.

[4] While the patrol targeted the middle section of the line, the full line was flown. Due to the change in wind direction as the system passed over, additional trees could have fallen after the initial ground patrol.

[5] All were mid span – on spans 78-79, 96-97 and 107-108.

[6] The conductor on the Edgecumbe to Waiotahe circuit is a lightweight type, similar to some distribution conductor.

Figure 2: Span 107-108 of the EDG–WAI 2 circuit

Clause 28.1.2 and 28.1.3– the start date and time and end date and time of the unplanned interruption

Supply to the Waiotahe 33 kV and Waiotahe 11 kV grid exit points (WAI033S1 and WAI011S1) was lost at **12.42 pm on 12 April 2026** and restored at **2.22 pm on 13 April 2026**. Generator connection at Waiotahe (WAI033I1) was restored at **2.34 pm on 13 April 2026.**

Clause 28.1.4 – the megawatts affected by the unplanned interruption

Lost load by grid exit point is shown in Table 1.

Table 1: Summary of loss of supply information

GXP affected	MW affected[7]
Waiotahe 33 kV	0.39
Waiotahe 11 kV	6.87

In addition, connection to the Lodestone solar farm was lost for 1,552 minutes. It was generating 0 MW of electricity at the time of tripping.

[7] This is the estimated average MW lost, based on a similar weekday/weekend.

Clause 28.1.5 – the grid exit point(s) and grid injection point(s) affected by the unplanned interruption

Grid exit points affected were Waiotahe 33 and 11 kV.

The grid injection point affected was Waiotahe 33 kV.

Clause 28.1.6 – actions Transpower took to minimise the effect of the unplanned Interruption

To minimise the effect of the unplanned interruption, Transpower:

- Over a period of years, has been advocating for stronger regulations around management of hazard/defect trees, so we can better manage risk in forestry areas.[8]
- Had, prior to the event, been actively working with forest managers in the area traversed by the Edgecumbe–Waiotahe circuit. Small areas of tree removal had been achieved, in 2019 (following a similar event to this one) and again more recently.
- In 2023, implemented a proactive approach to tree hazard identification. This uses data from two-yearly vegetation-specific LIDAR surveys to model conductor positions under maximum wind and snow. These are used to set work priorities and plans with our service providers, and support (along with other tools) negotiations with forest managers and owners.
- In view of the forecast severe weather event, established an Operations Incident Management Team (IMT) earlier in the week to monitor the event and manage it if/as necessary. We communicated with service providers advising that we were preparing for a severe weather event, information which was well received.
- Immediately after the trip, advised connected parties of the loss of supply and the likely cause. Police were also advised. The on-call (acting) Regional Services Manager (RSM) also communicated with Horizon Networks throughout the event.
- Undertook two manual reclose attempts, each supported by a risk assessment.
- Dispatched ground patrols to locate issues or signs of damage along the line. The patrols were stopped at about 6.30 pm due to loss of daylight, strong winds and blocked roads. A helicopter patrol of the full circuit commenced at first light the following day.
- Once the fault locations had been identified, and given the conductors were undamaged, carried out a risk assessment to determine how best to return the conductors to their normal position. A helicopter lift was determined to be safe and would minimise the outage period. Ground crews were readied as a back-up, in case the aerial approach was not successful.

[8] MBIE is currently progressing an update to the Electricity (Hazards from Trees) Regulations 2003 (Tree Regulations). The changes included in the draft version provide limited assistance with tree risk management.

- Restored supply as quickly as possible following reinstatement of the conductor spans to their normal positions.

Clause 28.1.7 – a description of steps that Transpower proposes to take to mitigate the risk of future unplanned interruptions of this type

Operational response and restoration process

Communications throughout the event between the Transpower National Grid Operations Centre (NGOC) controller, the acting Regional Services Manager (RSM) and service providers were effective. However, the event identified opportunities to improve role clarity and information flow during restoration:

- Controller resourcing and continuity: During event preparations, it is important that sufficient and experienced NGOC controllers are assigned, and lead roles are clearly understood. This supports continuity and timely decision-making during severe weather and regional emergency events.
- Risk assessment roles: Risk assessments were undertaken before both manual reclose attempts. These assessments are carried out by NGOC, in discussion with the RSM where required. In this event, a changeover of NGOC staff contributed to a short delay in reaching agreement on the second reclose attempt.
- Communication channels: At times during the event, information from field crews was relayed to NGOC via the acting RSM. More direct communication from service providers to NGOC would support more timely and complete information flow.

To improve the efficiency of the restoration process in similar events, NGOC:

- is reviewing its policy for circuit restoration, particularly clarifying the roles and responsibilities for manual reclose decisions.
- Is adding a scenario of this nature to periodic simulator training for controllers, to reinforce risk assessment requirements, including when RSM input is required.
- has confirmed policy and expectations regarding market requirements versus restoration decisions and confirmed that the policy was correctly applied in this event.
- has confirmed with service providers the need to communicate directly with NGOC, alongside communication with Transpower field staff.

Vegetation Management

Vegetation risk has long been a significant area of concern to Transpower. In recent years we have moved to a more comprehensive approach[9] to identifying risks but our ability to mitigate some forestry vegetation risks remains limited.

[9] Previously our service providers advised of hazards identified through their work.

Two-yearly network-wide LIDAR surveys are used to model conductor positions under a range of conditions to inform a prioritised risk-based approach to vegetation management. These surveys support annual ground patrols that identify hazardous (leaning/dead) trees. Forestry owners also collect data on tree health. Our service providers work with forest managers and owners to address the highest-risk defects, generally sag (grow-in) defects, while the lower-priority swing and fall defects are addressed in conjunction with other work where cost effective. The trees involved in this event were lower priority swing and fall risk defect trees.

Managing vegetation risk in forestry areas remains challenging, time-consuming and costly. It requires engagement with individual forest managers and multiple forest owners to secure removal of trees that we assess as presenting a high risk to the network. Tree removal can impose costs on forest owners under the Emissions Trading Scheme. While proposed changes to the Tree Regulations may assist in some areas, including lower growing species for new plantings and removal of specific hazardous trees (those leaning into a line), they provide limited assistance for managing fall and swing defect trees. Transpower will continue to advocate for regulations that better support effective management of tree risk affecting the transmission network.

Risks faced by field crews

This event also highlighted the risks faced by field crews operating in forestry areas during severe weather. During the period when the eye of the cyclone was over the area, patrol crews were sent into forestry areas. When the wind direction reversed, additional trees fell, creating safety risks for the crews, who then had to clear trees in order to exit the forest.

Operational decisions of this nature are made by the service provider. Following the event, Northpower identified the risk of wind reversal after the eye of a cyclone as a matter to be incorporated into its risk register/emergency procedures.