

BEFORE THE HEARINGS PANEL

UNDER THE

Resource Management Act 1991

IN THE MATTER OF

the Proposed Kaipara District Plan

**STATEMENT OF EVIDENCE OF ANDREA CATHERINE GREENHALGH
ON BEHALF OF NORTHPOWER LIMITED**

HEARING STREAM 9 (RENEWABLE ELECTRICITY GENERATION)

Corporate

3 March 2026

1 INTRODUCTION

- 1.1 My full name is Andrea Catherine Greenhalgh. I am the Group Manager - Renewables at Northpower Limited (**Northpower**), the electricity distribution network owner and electricity provider in the Kaipara District. Northpower also owns and develops renewable electricity generation facilities including the new 19.3MWDC solar farm, Te Puna Mauri ō Omaru in Ruawai.
- 1.2 I have worked at Northpower for 31 years. My roles have focused on business development, strategy and planning for different aspects of Northpower's business. I have been a Group Manager for the Renewables team since November 2022. In this role, I lead Northpower's renewable generation portfolio and am responsible for strategic development of a sound portfolio with positive shareholder returns, acceptable risk profile and positive growth opportunities for our local economy.
- 1.3 I am an experienced strategy and planning manager with over 30 years' experience in the utilities industry. I graduated from Massey University's Executive MBA programme in 1996 and obtained a Bachelor of Arts from the University of California at San Diego in 1991.

2 PURPOSE AND SCOPE OF EVIDENCE

- 2.1 My evidence addresses the submission (#286) and further submission (#FS82) by Northpower on the Proposed Kaipara District Plan (**PDP**), as relevant to Hearing Stream 9 on Renewable Electricity Generation.
- 2.2 My evidence should be read in conjunction with the evidence of Mr David Badham, Northpower's independent planning consultant, who addresses the relevant planning matters associated with Northpower's original submission (#286) and further submission (#FS82).
- 2.3 My evidence will address the following topics:
 - (a) an introduction to Northpower;
 - (b) Northpower's role in the development of renewable electricity generation within the Kaipara District;

- (c) the overall need for the PDP to recognise the operational and functional need for renewable electricity generation to be in certain locations; and
- (d) the need for an amendment to Rule REG-R9 (Upgrading and Repowering).

3 NORTHPOWER

Background to Northpower

- 3.1 Northpower was formed under the Energy Companies Act 1992 and is registered under the Companies Act 1993. Northpower is based in Whangārei, with depots in Dargaville and Maungaturoto. Northpower is an electricity distributor under the Electricity Industry Act 2010 and an electricity operator under the Electricity Act 1992. Its electricity network links the national grid, owned by Transpower New Zealand Limited, to power consumers in Kaipara and Whangārei.
- 3.2 Northpower owns and operates the electricity distribution and fibre networks supplying over 62,500 customers across the Kaipara and Whangārei districts.
- 3.3 Northpower's networks traverse the full range of Northland environments. Asset location has historically been (and continues to be) determined by community demand for supply/service and network physical design constraints which typically require linear placement of assets. Northpower is certified to the ISO14001:2015 standard for Environmental Management.
- 3.4 Northpower has a range of assets throughout its network. This includes assets for transmission, distribution and generation of electricity and the provision of ultra-fast broadband throughout the Whangārei district. Northpower's Whangārei and Kaipara electricity distribution network consists of around 5,200 kms of overhead lines and 1,300 kms of underground cables. The Fibre network consists of around 600 km of underground fibre cable and over 1000 km of aerial cable (excluding the distribution links between towns).

Northpower is Community Owned

- 3.5 Northpower is proudly 100% locally owned by its distribution network customers, via the Northpower Electric Power Trust (**Trust**). The Trust was established in March 1993.
- 3.6 The Trust holds the entire share capital of Northpower on behalf of the power consumers of Kaipara and Whangārei and is accountable for the stewardship of the Trust’s assets - funded by consumers - for the benefit of current and future generations of beneficiaries.
- 3.7 This ownership structure ensures that Northpower’s profits and the benefits of ownership are returned to the electricity consumers in the Kaipara and Whangārei districts and ownership of critical infrastructure assets is locally retained.
- 3.8 All consumers connected to the Northpower network are beneficiaries of the Trust. Every year, any benefits of ownership are returned to beneficiaries, either as dividends from the Trust or pricing discounts from Northpower. Currently, with the support of the Northpower Trust, connected customers receive a discount on electricity distribution charges, with over \$17.4m (plus GST) being returned to consumers in the financial year 2026. Since 1993 more than \$278 million has been returned to Trust beneficiaries in either discounts or dividends.

4 NORTHPOWER’S ROLE IN THE DEVELOPMENT OF RENEWABLE ELECTRICITY GENERATION

Role as a Generator

- 4.1 In recent years, Northpower has made and continues to make a significant investment in building and maintaining a resilient network that meets the growing demand of its customers while harnessing the region’s renewable energy capacity through generation. In particular:
- (a) In December 2024, Northpower completed the new 16.8MWDC solar farm, Te Puna Mauri ō Omaru in Ruawai. With an additional 2.5MWDC extension completed in July 2025. This has the capacity to power 3,900 homes per year.

- (b) In 2023, Northpower renewed its consents for the 5MW Wairua Falls hydroelectric power station. This was commissioned in 1916 and is one of New Zealand's oldest hydro schemes still in operation. The station currently has the capacity to power 1700 homes per year. Northpower is currently refurbishing the station, increasing generation by winter 2027. This is a significant investment for Northpower, which will double the generation output.
- (c) Northpower is currently constructing a 18MW solar farm in Maungatapere, which will be commissioned in December 2026 and supply 3,700 homes per year.

4.2 All of the above projects are (or will be) connected to Northpower's distribution electricity network. This strengthens the entire network's resilience of supply. It also helps to put downward pressure to wholesale electricity prices.

4.3 Northpower's vision is to double our impact in the region, delivering sustainable infrastructure that generates long-term value for our communities.

Role as the Electricity Distribution Network owner

4.4 In addition to its own projects, Northpower plays an important role in enabling the development of renewable electricity generation by working with developers to connect their scheme to the electricity distribution network and, indirectly, the National Grid. This often involves the construction of new infrastructure and upgrades to our network capacity.

4.5 For example, when Te Puna Mauri ō Omaru in Ruawai was developed, Northpower was required to upgrade support structures and asset protection to accommodate the solar farm. The community has benefited from this work through improved line resilience.

5 THE NEED FOR THE PDP TO RECOGNISE THE OPERATIONAL AND FUNCTIONAL NEED FOR RENEWABLE ELECTRICITY GENERATION TO BE IN CERTAIN LOCATIONS

5.1 When we assess the feasibility of a new site for a solar farm, we consider the following factors:

- (a) Proximity to distribution and transmission assets (e.g. lines and substations) and the available capacity of those assets.
- (b) Topography and geotechnical characteristics of the site. Solar farms typically require large areas of flat or gently sloping land with minimal disruption to sunlight exposure. Geotechnical considerations are focused on the land's ability to hold the mounting structures for solar panels and the level of flood risk to the site.
- (c) The availability and feasibility of the resource. To justify investment and maximise the benefits to community, renewable generation activities must be located where they get optimum supply of the renewable energy resource. For solar, this is generally dictated by the topography, as discussed above.

5.2 Due to these considerations, and the fact that the land must be available for occupation (generally by purchasing the land), the ability to develop solar farms is constrained.

6 THE NEED FOR AMENDMENT TO RULE REG-R9 (UPGRADING AND REPOWERING)

6.1 As highlighted in Northpower's submission, the permitted activity standard in REG-R9 that limits upgrades or repowering of renewable generation activities to 10% is arbitrary for solar farms.

6.2 By way of example, the height of the solar farm, Te Puna Mauri ō Omaru in Ruawai is 2.8m, which consists of the solar panels and their mounting structures. REG-R9 as currently drafted would only permit upgrades that increase the height of the solar panels by 28cm. This leaves little room for change.

6.3 Northpower anticipates that a solar farm could be upgraded to add a battery energy storage system (**BESS**) or lift the solar panels to accommodate agriculture. The current height limit in REG-R9 would likely prevent either of these scenarios:

- (a) A BESS is an asset that can be located on its own site or alongside a renewable generation activity. A BESS maximizes renewable energy usage by storing excess, intermittent power (i.e. solar or wind) for later use, enhancing reliability. The batteries are held in container units that can reach up to 3.5m in height. Two containers can also be stacked on top of each other to double that height.
- (b) There is a practice called 'agrisolar', which describes the dual-use of land for both solar energy production and farming. This can involve elevating the solar panels and planting crops, such as apples, pears, berries and other crops, underneath the panels. This method provides a range of benefits for the crops including shade and protection from the elements such as wind. It is also an efficient and productive use of the land. To provide space for the plants and cropping machinery, solar panels need to be elevated to around 5m in height.

6.4 In addition to the above scenarios, there is a possibility that simply replacing old panels with new panels that adopt modern technology could result in a height increase greater than 28cm.

6.5 Therefore, there is an operational and functional need to enable upgrades and repowering of solar farms that result in a height increase of up to 3m. Mr Badham has proposed amendments to REG-R9 to reflect this and I support his approach.

7 CONCLUSION

7.1 Renewable electricity generation activities help to provide a cleaner more resilient future for Kaipara and the wider Northland region. Therefore, they need support from the PDP to ensure that their operational and functional needs can be met. I support the proposed

amendments to the PDP as set out in Mr Badham's evidence to better provide that support.

Andrea Catherine Greenhalgh

3 March 2026