

SUBMISSION BY WAIKANAЕ COMMUNITY BOARD TO TRANSPOWER

The Waikanae Community Board (“WCB”) is pleased to make a submission to Transpower on proposals to upgrade the transmission lines which travel through the Kapiti Coast, in particular that section which travels through the area that the WCB has responsibilities for.

The WCB has a statutory mandate pursuant to section 52 of the Local Government Act 2002 to make submissions on areas and concerns so as to “represent, and act as an advocate for, interests of its community”.

At a recent meeting of the WCB, representatives of Transpower attended and spoke to a presentation regarding the need to upgrade the current transmission assets that run through the Kapiti Coast. The proposal outlined the replacement of the transmission lines on the Bunnythorpe to Haywards A and B transmission lines. Where these lines pass through Waikanae is of particular concern to the WCB.

History

The transmission lines that run through the Kapiti Coast are more than 50 years old. Their design, having a steel core, means that they are susceptible to corrosion in the coastal environment. As the lines are coming towards the end of their useful life, Transpower has signalled that in a timeframe 2014-2018 it is proposed that these transmission lines will be replaced. This is also an opportunity for Transpower to take into account greater capacity issues to make the transmission lines viable for a further 50 year period.

When the transmission lines were first erected on the Kapiti Coast, the Waikanae population was very small. While it is acknowledged that Transpower now has policy of not having residential dwellings under its transmission lines, there are currently a significant number of Waikanae properties nestled directly under those transmission lines. It is therefore an opportunity when considering an update to also consider the appropriate route for those lines in what is a substantially residential area of Waikanae.

Current proposals

There are three options placed before the WCB. These are options are the short-listed options proposed to be considered by Transpower.

1. Option 1 – replacing the current transmission lines with a conductor the same diameter and specification

The advantage is only small in terms of carrying capacity (3%) but would see no changes needed to the height of transmissions lines nor would there be any realistic increase in magnetic fields.

2. **Option 2**

This would see the current transmission lines replaced by a higher capacity conductor which would still have a steel core but with extra aluminium layers.

The advantage is a higher carrying capacity (30%) over the current transmission lines. The disadvantages however are increases in the magnetic field as well as lower radio frequency interference. There would be no need with this option to increase the height of the transmission towers.

3. **Option 3**

The third option that is proposed is a modern-like conductor being of all aluminium construction.

There are a number of substantial advantages discussed by Transpower, not the least of which being a 60% higher carrying capacity than the current transmission lines with a system better suited to the coastal environment and the corrosive environment in which the current lines stand. They are also, under high load, less noisy than the current transmission system.

There are a number of significant disadvantages however for the community. There will be a substantial increase in the magnetic field. Transpower's tables provided to the WCB indicate that this is still within international guidelines. The WCB notes that there is substantial concern in the community from cellphone towers and any other mechanism which produces radiation into the environment.

At a visual level, the requirement to increase the size of transmission towers by a minimum of 6.5 metres in a residential area is a significant issue to be considered.

WCB response

The WCB notes firstly the timeframe that is to be considered by Transpower for the upgrade. It coincides with NZTA's timeframe for the construction of the expressway, especially the section between Mackays Crossing and Peka Peka.

The WCB sees this as an opportunity for Transpower to remove its current transmission lines between the Waikanae River and Peka Peka (as they overhang domestic dwellings) and to underground that section of the transmission system using the corridor and works provided by NZTA with their expressway.

The WCB acknowledges that cost issues are in the forefront of the considerations that Transpower must consider. On that basis the WCB seeks the undergrounding for only a short distance, that is the area which is currently heavily populated and over which the transmission lines currently run.

While a decision for Transpower, it would seem logical that Option 3 would be taken up. A 60% increase in capacity would future-proof the transmission lines for the next 50 years and would be subject only to the carrying capacity of the Cook Strait cable. It is an opportunity however to remove what are ugly and unsightly structures in the community. Any decision which increases the size of those structures is unacceptable to the community.

The proposal associated with Option 3 of increasing the size of the current transmission towers and in particular the series of transmission towers at Jim Cooke Park, Te Moana Road, and those contained in the confines of the Waikanae Park by a height increase of a minimum of 6.5 metres is unacceptable to the community. The WCB notes that options for undergrounding are thought to be too expensive for the length of the entire Haywards-Bunnythorpe transmission line, but the costings for the short Waikanae section have not been provided or it seems considered.

Transpower indicate that undergrounding has difficulties for detection of faults. The WCB notes however that the distance that is sought to be undergrounded is short by comparison to the length of the overall transmission system to be upgraded.

The timeframe provided by Transpower fits neatly within the current known proposals for NZTA and their expressway. The alignment of the expressway which has now been established by NZTA gives a clear footprint for Transpower to now consider undergrounding the Waikanae section of the transmission lines. This step would remove all of the visual pollution and in all likelihood remove much opposition which Transpower will otherwise face from residents in relation to not only visual but magnetic and radiation issues.

The WCB submits that this is an opportunity which occurs literally only every 50 years for Transpower to make some significant gains for the community in amenity as well as the removal of unsightly transmission lines from the only residential area in which they traverse on the Kapiti Coast, being Waikanae.

If the new transmission lines are not undergrounded through Waikanae then the WCB would oppose Option 3. Option 3 would provide a considerably larger conductor with a higher windage profile. The lower tensile strength of the aluminium conductor means that the towers need to be substantially taller to maintain realistic ground clearance. The larger conductors also mean that there is a considerably larger ability for side-swing meaning that a significantly greater magnetic field and electric field is extended further out of the current corridor. Trees and other people's premises are likely to be contacted in a way currently not envisaged with the current conductor size.

There is also significant question whether the maximum safe field strengths will comply with the new industry standard of 200MT. Any potential increase in radiation or higher magnetic fields is detrimental to the health of the community and is likely to be

significantly opposed once Transpower's plans and the extra capacity of Option 3 were known.

Summary

While it is acknowledged that there can be issues with the repair of underground lines damaged by seismic events, as well as issues created by the repair of underground lines faults, the WCB takes the view that a short undergrounding of that part of the transmission system on the Bunnythorpe-Haywards route as it runs through Waikanae is still the only sensible and realistic option for the future of that transmission line. It is able to be sited within the works corridor for the expressway and will simply need two state organisations, that is Transpower and NZTA, to work together in synchronising their timetable and works programme which the WCB notes Transpower will be advancing in stages.

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Chairman
Waikanae Community Board

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