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Submission on draft decision and reasons paper for Transpower's Waikato and Upper North Island voltage management major capex proposal

ETNZ - The Energy Trusts Association - represents the trust owners of electricity distribution businesses throughout New Zealand.

As the organisation representing consumer and community owners of EDBs, ETNZ has both an asset owner and – in particular - a consumer perspective in making this submission.

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Our position summarised

We agree with the Commission that the proposed capex commitment for stage 1 of this development is necessary. However, we believe that the Commission should look hard at the underlying funding arrangements for the voltage support investment and the impact of those arrangements on electricity consumers.

In addition, we are concerned that existing market arrangements have allowed almost imminent voltage stability risks to emerge.

Background

Over the past two decades there have been several decisions made by generators to decommission power quality support assets. For example, in 2007 a Marsden A power station unit that served as a synchronous condenser to provide reactive power support to the Grid was decommissioned, with Transpower instead investing in new capital equipment. Similarly, the risks associated with under frequency load shedding have been extended to domestic consumers, while dry year security for consumers and system support has been undermined by the decommissioning and removal of plant such as the Whirinaki power station.

To a large extent, each of these moves has had the effect of transferring to consumers costs involved in enabling generators to provide a stable, merchantable product to the wholesale electricity market.

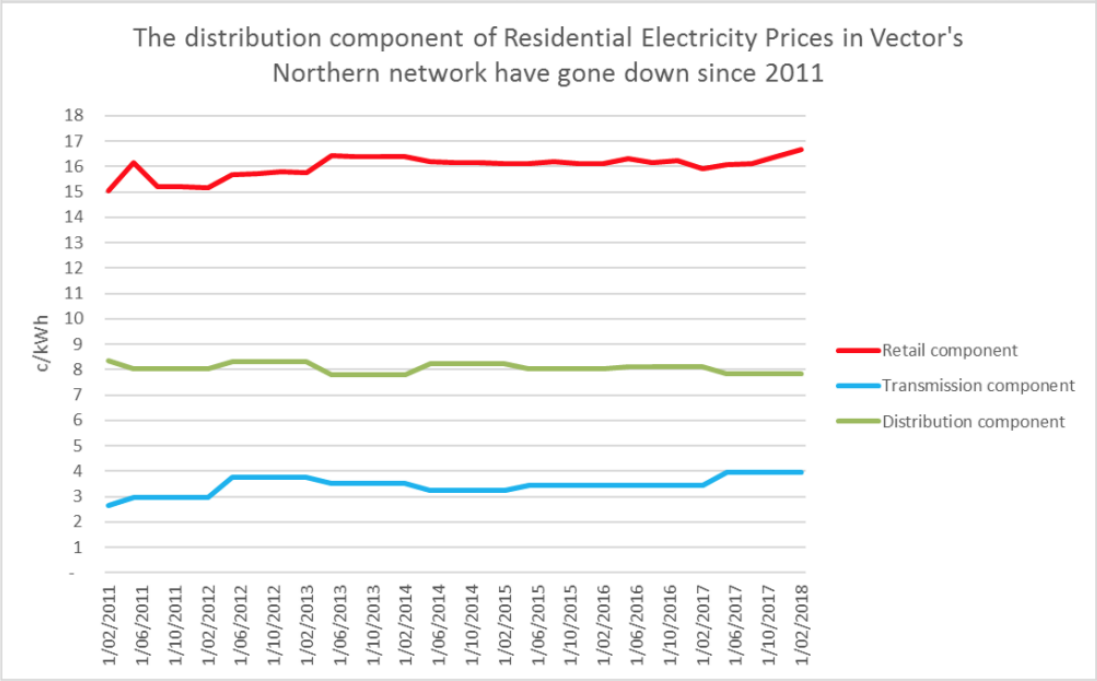
Another way of seeing this is that it is analogous with an arrangement that enables suppliers to strip the label and the container from their product, converting the costs of these to an unavoidable consumer levy, thus giving the primary product a competitive advantage at the point of sale (i.e. the GXP in the case of electricity).

In theory, this extra loading on consumers would be offset by lower prices from those generators, driven by a strongly competitive market. As the current debate around wholesale electricity price manipulation associated with monopolistic control of hydro lakes suggests, there are serious doubts about the degree of competition actually existing in the wholesale electricity market.

The failure of distribution price reductions to be passed through to consumers by integrated generator-retailers is further evidence of weak competition in the electricity market.

For the Upper North Island region (where Vector has reduced distribution charges several times) the chart[1] on page 3 below illustrates the dislocation between retail, transmission and distribution charges through to 2018.

[1] Entrust submission to Electricity Price Review 23 October 2018



Recently, ENA Chief Executive Graeme Peters provided the following comments to *Energy News*, indicating that this evidence of weak or non-existent competitive forces in the wholesale electricity market is persisting[2].

> "ENA members expected that network charge reductions would be passed to consumers and were repeatedly assured by retailers that that would be the case," Peters says.
>
> "But the data doesn't lie."
>
> **The numbers**
> Ministry of Business, Innovation and Employment data released last week shows retail prices were 30.68 cents/kWh on 15 May – down only 0.5 per cent from 30.84 c/kWh three months earlier.
>
> Yet network charges fell 8.3 percent over the same period, to 11.09 c/kWh from 12.09 c/kWh.
>
> Meanwhile the aggregate number's "energy and other components" figure increased 4.5 per cent from 18.75c/kWh – to 19.59c/kWh.
>
> "This appears to show that retailers are absorbing the $280 million in annual network charge reductions – or more likely that they are paying greater amounts to generators," Peters says.

[2] 'Where did the line charge savings disappear to? *Energy News* 22 June 2020

> "Either way, a group of companies is pocketing $23 million a month in network charge reductions and the customer is seeing little or no savings.

Some of the responsibility for the emerging voltage support investment requirement can be sheeted home to Transpower and the Electricity Authority. Transpower opted for the 400 kV line upgrade to Auckland that has proved virtually redundant, and the Authority approved the investment (despite its predecessor rejecting it in favour of alternatives). Instead a much less costly mix of control devices and localised voltage support in Auckland would have solved the current problem while meeting market needs.

Our concerns with the proposal

The draft decision acknowledges that issues created by generators are the primary reasons that the Phase 1 capex is required:

> "X6 Transpower considers, and we agree, Stage 1 is needed because Transpower's studies show that during periods of high demand there are risks of widespread interruptions to supply due to large fluctuations in voltages in the transmission network. Such fluctuation in voltages can occur after an unplanned disconnection of a major component from the transmission network when the two 250MW-Rankine generation units at Huntly Power Station (Rankines) are not in service during periods of high demand.
>
> "X7 The other aspect of the investment need for Stage 1 is the effects on voltage stability in the WUNI region that could occur if Genesis Energy Limited (Genesis) removes the Rankines from normal service. While Genesis has not announced its position on the Rankines' future, Transpower has prepared and submitted the MCP on the basis of Genesis retiring the Rankines, without replacement, by the end of 2022.5
>
> "X8 The main benefit of approving Stage 1 is that it will ensure the transmission network has enough capacity to supply consumers in the WUNI region and to manage voltage stability effectively as demand grows and if the Rankines are removed from normal service. Without the Stage 1 investment, there would either be a need for rolling power cuts during times of high electricity usage or a heightened risk of the North Island power system collapsing. "

In addition, it is clear that the main beneficiaries of Phase 1 will be generators. Without it:

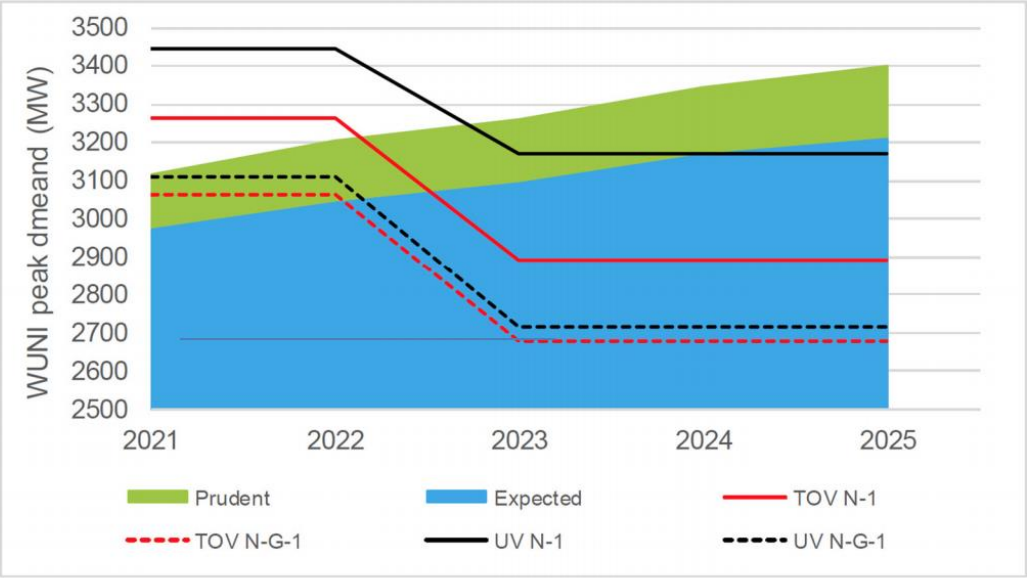
- Their product would be at risk of becoming unmerchantable;
- They would face significant financial losses;

- Without Transpower's intervention they would need to look at either retaining or replacing the plant they are decommissioning, or else contracting with another party to provide voltage support;
- They would be exposed to a number of contractual risks, penalties and the strong possibility of punative government intervention in the event of a system collapse;
- Their reputations would suffer, implying further costs.

The Electricity Authority stresses that it adopts a 'beneficiaries pay' approach to transmission pricing (a rather dubious rationale for allocating virtually all transmission costs to consumers, rather than generators, when it is obvious that each side of a buyer/seller relationship is equally a beneficiary). However, as far as we can establish the pending Transmission Pricing Methodology – and probably the existing one - will result in the Phase 1 costs being allocated to consumers directly and, in particular, via charges to distributors.

We have a separate concern about the level of risks posed to the Waikato/ Upper North Island region, and to the North Island power system, as identified in the draft decision:

Figure 3: Voltage stability limits and peak demand forecasts



It appears from the chart that these risks become material from next year and will be critical by 2023. Transpower's letter to the Commission of 13 December 2019 states:

> To date there has not been a commitment from Genesis to retain the Rankine units beyond 2022. However, we recognise Genesis Energy may choose to revisit this date. Due to the time required to procure and install plant by the winter of 2023, we do not have time to wait for more certainty regarding the Rankine units' closure date.

This timing mismatch between the emergence of risks and the planned completion of the remedy is worrying. It is evidence of the inadequacies of a market that relies on spot pricing that is not supported by capacity commitments. An associated capacity market would ensure that retention of plant such as Otahuhu and Huntly remained in the mix of options in avoiding problems such as these.

Recommendations

ETNZ recommends that the Commission approves Transpower's Phase 1 investment proposal but also reviews the methodology that will be used to allocate its costs, with a view to ensuring that generators – as the primary beneficiaries – meet all or most of those costs.

We recommend that the Commission notes that the primary need for the voltage support investment is being created by actions (and the refusal to provide undertakings) by North Island generators, and that the most significant beneficiaries of the investment will also be North Island generators. Given the importance of a stable and reliable electricity supply options such as a capacity market should not be overlooked.

ETNZ also recommends that the Commission notes how close to the wind the North Island electricity system will be sailing until new plant is commissioned and investigates options for avoiding risk exposures of this magnitude with future system support investment proposals.

Karen Sherry
Chair, ETNZ