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Commerce Commission

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

Tēnā koe

Net Zero Grid Pathways proposal draft decision

Thank you for the opportunity to respond to the Net Zero Grid Pathways – stage 1 proposal draft decision.

Electricity transmission is a key enabler of (or bottle-neck to) the electrification and decarbonisation of the New Zealand economy. Transmission is also an increasingly important component of energy security. With the transmission network creating limitations on the ability to shift generation across the country, it is important to gain clarity and certainty on when these limitations might shift. Understanding future market conditions is a key part of developing new generation (and retiring thermal assets), and the transmission network is an important aspect of that.

Our submission focusses on the proposed upgrade of the HVDC between the North and South Island. As noted by Transpower, the retirement of thermal assets and development of intermittent generation will lead to more reliance on inter-island transmission, with generation becoming more volatile on New Zealand's journey to decarbonise.

Proposed HVDC upgrade

The HVDC is a vital component of New Zealand's transmission network. The ability to shift cheap, renewable electricity from the South to the North Island means thermal assets that would otherwise be called upon remain dormant, avoiding carbon emissions that would be produced to keep the lights on. Conversely, when hydro conditions in the South Island are drier or the nights are colder, we are able to keep homes warm with assets from the North.

With that in mind, we support Transpower's proposal to upgrade the capacity of the HVDC connection the South and North Islands. However, we consider that the upgrade should commence as soon as possible. This upgrade will add a material amount of zero-carbon peaking capacity in the North Island and will materially improve security of supply in the North Island during peak periods. This investment is quite possibly the lowest cost source of peaking capacity in the market. We note that the upgrade is currently put forward as a contingent proposal, waiting for scenarios such as Tiwai's confirmed departure date or more certainty on generation mix or load forecasts. However, benefits from this investment will be realised now and are not contingent on future scenarios involving Tiwai.

There are also additional benefits from enabling investment in the South Island. Without certainty of transmission capacity in the HVDC, renewable developments in the South Island will be less attractive with the bulk of demand residing in the North – impeding the ability to gain certainty of future generation mix.

Already in the South Island about 450MW of wind has been consented (but not yet built), and an additional volume of over 700MW is in active development. Climate change models are indicating an increase in inflows on average, and increased volatility, meaning inter-island transmission will become more heavily relied upon. Without an HVDC upgrade, the outcomes are either significantly increased spill, or some of NZ's lowest cost generation (ie South Island renewables) remaining unbuilt. Both outcomes are unfavourable for New Zealand. By providing the extra cross-island capacity, developers will be enabled to make sounder business cases for new generation on the island. Build it, and they will come.

Upgrade to CNI and Wairakei Ring

Overall, we are supportive of the upgrades proposed in the North Island transmission networks. For the reasons outlined by Transpower, the upgrades are cost effective and provide extra capacity in the network that allows for more distributed intermittent generation to access areas of high demand. With thermal assets in Taranaki being retired, the ability to shift load across North and South will become more important – particularly if an HVDC upgrade were to occur. Stronger resilience in the network is a great outcome.

Lastly, Transpower should be encouraged to continue to debottleneck existing assets like the HVDC. Maximising the value of these assets should be a precursor to investment in new transmission assets.

Please contact me at [redacted] if you wish to discuss further.

Ngā Mihi

[redacted]

Brett Woods

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Contact Energy