Electricity Engineers' Association

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To: Grid Investment Group, Transpower grid.investments@transpower.co.nz

From: Electricity Engineers' Association of NZ

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Subject: EEA Submission – *Transpower's HVDC Cable Replacement Consultation*

EEA Response

The Electricity Engineers' Association (EEA) welcomes the opportunity to provide feedback on Transpower's HVDC Cable Replacement consultation.

The EEA is a national membership organisation that represents engineers, technical professionals, and asset owners across the electricity supply industry in Aotearoa New Zealand. Our members span the generation, transmission, distribution, and service sectors, and together they are responsible for the safe, reliable, and efficient delivery of electricity across the country. The EEA plays a key role in connecting the industry to share knowledge, set good practice, and support system-wide solutions to enable a sustainable, low-carbon energy future.

We support Transpower's preferred Option 3 – Increased capacity, which proposes the replacement of the existing HVDC submarine cables with an upgraded configuration delivering 1400 MW capacity. This option represents a prudent and forward-looking investment that aligns with New Zealand's long-term energy and climate goals.

In particular, Option 3 is strongly aligned with the following sector priorities:

- Supporting Electrification: As New Zealand moves to decarbonise its economy, the demand for electricity will increase substantially. A higher-capacity HVDC link is essential to enable efficient transfer of renewable generation between the islands and to support growth in electrified transport, industry, and process heat.
- Strengthening Grid Resilience and Flexibility: Increasing the HVDC link capacity improves the national grid's flexibility and resilience, helping to balance load and generation across regions and seasons, especially as intermittent renewables continue to grow.
- Long-Term Efficiency: Investing now in additional capacity avoids higher incremental costs and potential future disruption that may result from deferring needed upgrades.

The EEA does not consider the other two options presented in the consultation to be fit for purpose given the scale and pace of change in the electricity system:

- Option 1 – No investment is not a viable option. Allowing the HVDC link to degrade and eventually decommission would severely limit the ability to transfer renewable energy between islands, reduce system resilience, and create major risks to security of supply and affordability.
- Option 2 – Like-for-like replacement, while maintaining existing capacity, fails to provide sufficient headroom for expected load growth or future energy needs. It would likely result in future constraints and necessitate further investment within a relatively short timeframe.

In conclusion, Option 3 is the only credible option that ensures the HVDC link continues to play a central role in enabling a secure, affordable, and decarbonised electricity future for Aotearoa New Zealand. We encourage Transpower to proceed down the regulated process with this investment option in a timely and coordinated manner, ensuring alignment with the wider sector transition.

Contact

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