



14 August 2025

Transpower
Via online survey

Te Kanapu Future Grid Blueprint: Consultation 1

Meridian welcomes the opportunity to comment on Transpower's Te Kanapu consultation document regarding the design of a future grid blueprint for Aotearoa.

Rather than complete survey questions, perhaps the best way for Meridian to contribute to Transpower's development of 2050 scenarios would be to share the assumptions and modelling that we maintain for Meridian's long-term forecasts for the New Zealand power system.

Meridian uses a range of scenarios to explore plausible futures, including 'adaptive business-as-usual behaviour', 'rapid and significant decarbonisation', 'disrupted delayed divergence', 'decentralised communities', and others. These scenarios cover a wide range of possible grid configurations and needs (from greatly reduced to greatly expanded).

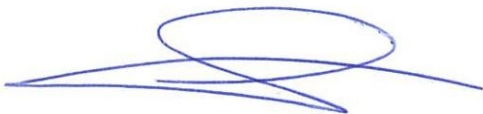
Meridian explores those scenarios using its Wholesale Market Outlook (WMO) model. WMO is a forward-looking, long-term quantitative analysis of the fundamentals underpinning the New Zealand wholesale electricity market. It provides an analytical framework to explore, understand and respond to the strategic issues facing the electricity market within a volatile future environment. The methodology seeks to establish a balance in the costs, security, and sustainability challenges inherent in meeting the future energy needs of New Zealand. It is a full system model that uses historical weekly hydro inflow sequences as well as all the other non-hydro features needed for a power system to serve consumer demand, including other generation types and fuels (including storage), demand response, ancillary services, and transmission networks. The WMO models also inform Meridian's three climate scenarios for our climate related disclosures.

Meridian has had initial conversations with Transpower and its consultants to share modelling assumptions and insights from these Meridian scenarios. To the extent it is helpful, we would be happy to continue those conversations. If it has not already, Transpower should also draw on expertise and insights from other existing modelling of the New Zealand power system, including:

- EECA TIMES 3.0;
- Boston Consulting Group and Concept Consulting work on The Future is Electric;
- the Climate Change Commission's pathways; and
- MBIE EDGS 2024.

All these modelling exercises have grappled with similar questions about the plausible assumptions for the future of New Zealand's economy, the energy sector, technological developments, climate change and other global mega trends. There is no need to start from scratch with Te Kanapu. Transpower should draw on and adapt existing work to reduce costs and avoid reinventing the wheel.

Nāku noa, nā



Sam Fleming
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