

25 April 2024

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Sent via email: [nzqp@transpower.co.nz](mailto:nzqp@transpower.co.nz)

Dear John

## Future role of our HVDC link

1. This is a submission from the Major Electricity Users' Group (MEUG) on Transpower's discussion paper "*Examining the purpose and future role of our HVDC link*"<sup>1</sup> published for consultation on 7 March 2024.
2. MEUG members have been consulted on the approach to this submission. Members may lodge separate submissions. This submission does not contain any confidential information and can be published on Transpower's website unaltered.

## Important role of HVDC link in New Zealand's wholesale electricity market

3. MEUG and our 14 members recognise and support the important role that the HVDC link plays in New Zealand's electricity system and within the wholesale electricity market. Transpower's discussion paper concisely captures the role that the HVDC link currently plays in our power system, as well as covering both the history of its development, and the trends that will shape the future role of the link.
4. For MEUG, enabling access to lower cost, South Island renewable generation has been an important factor for the HVDC link. As we have discussed in many of our recent submissions:<sup>2</sup>

*It is important to note that an increase in renewable electricity generation (alongside an increase in competition) will be key to putting downward pressure on current wholesale prices. Wholesale prices and future prices in recent years have been increasing, making wholesale electricity in NZ relatively expensive....<sup>3</sup>Wholesale prices have more than doubled in the last five years....<sup>4</sup>*

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<sup>1</sup> [https://static.transpower.co.nz/public/2024-03/Discussion%20paper%20-%20Examining%20the%20purpose%20and%20future%20role%20of%20our%20HVDC%20link%20-%20March%202024\\_0.pdf?VersionId=fzwnOAb6ddofoemBdhEjGSFmYG3wSkLM](https://static.transpower.co.nz/public/2024-03/Discussion%20paper%20-%20Examining%20the%20purpose%20and%20future%20role%20of%20our%20HVDC%20link%20-%20March%202024_0.pdf?VersionId=fzwnOAb6ddofoemBdhEjGSFmYG3wSkLM)

<sup>2</sup> <http://www.meug.co.nz/node/1292>

<sup>3</sup> <http://www.meug.co.nz/node/1292>

<sup>4</sup> <https://www.ea.govt.nz/documents/2243/Promoting-competition-in-the-wholesale-electricity-market.pdf>

*These increases have an impact on business decisions around electrifying process heat. In short, it is unrealistic to expect industrial companies to significantly increase their load while the electricity price remains so elevated. These elevated prices also flow through to and impact all electricity consumers across the country.*

5. By enabling greater renewable electricity generation to enter the market, this should put downward pressure on the market, with the intention of near-term prices reflecting lower new renewable generation costs. This should encourage the shift to greater electrification that is needed to meet New Zealand's net zero targets.

### Role of NI reserves and peaking generation going forward

6. When considering the future role of the HVDC link, MEUG believes that it is important to look at how we can best optimise the assets we have in our system, before looking towards new investments. At present, the level of electricity that can be transmitted northward by the HVDC is being constrained by the level of North Island reserves available. Until we address this issue, any further upgrades or additional cables will not be able to be used to their optimal capacity.
7. MEUG recommends that more work in the short to medium term is carried out on the level of North Island reserves available in the market. For example:
  - What are the options for addressing this issue – i.e. how can the New Zealand market enable more North Island reserves to address this constraint?
  - What are the costs involved?
  - What studies have been undertaken in New Zealand into this issue? We understand that work in this area may have been undertaken by Concept Consulting.<sup>5</sup>
8. Much greater focus is also needed on how we can ensure sufficient peaking capacity to firm the increasing levels of intermittent generation (wind and solar generation) entering the generation mix. This is an issue that is being canvassed by the Electricity Authority, the Market Development Advisory Group (MDAG) and the Ministry of Business, Innovation and Employment (MBIE) as we look to support the energy transition. We would welcome more discussion in this space, with Transpower best placed to identify what upgrades to the transmission network may be needed to support an increase in peaking plant.
9. Alongside this work, MEUG considers that greater attention must be given to “flattening the demand curve” and greater incentivising the use of non-network / non-traditional solutions on both the transmission and distribution networks. We raised this issue in our recent submission<sup>6</sup> to the Electricity Authority on their consultation paper on the future operation of the power system. We outlined how pricing signals, such as ToU pricing and the RCPD, can help smooth peak demand and optimise use of existing assets. We are happy to talk through our submission points with the Transpower team, particularly comments around the role of transmission pricing.

### Understanding the future role of the HVDC – modelling needed

10. MEUG acknowledges that this is only a high-level discussion paper, aimed at starting a broader discussion with the sector. To support these discussions and possible future investments, we would encourage Transpower to undertake modelling of the benefits possible from the HVDC link going forward. We appreciate that some of this modelling and analysis may have already been completed as part of Transpower's work on its regulatory resets, its major capex

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<sup>5</sup> [https://www.concept.co.nz/uploads/1/2/8/3/128396759/which\\_way\\_is\\_forward.pdf](https://www.concept.co.nz/uploads/1/2/8/3/128396759/which_way_is_forward.pdf)

<sup>6</sup> <http://www.meug.co.nz/node/1358>

proposals, and *Te Mauri Hiko*. Work has also been done across other government agencies, such as John Culy's work for MDAG and the Electricity Authority.<sup>7</sup>

11. We suggest that Transpower look to update or expand upon this existing body of work and circulate this modelling to aid discussion with the broader sector. Collating this information would enable stakeholders to better understand the costs and benefits to support any future investment and make trade-offs between alternative options.

### Next steps

12. MEUG and our members would welcome the opportunity to meet with Transpower staff to talk through the future role of the HVDC link and the range of issues that we have highlighted in this submission. We have greatly appreciated our engagement to date and would welcome Transpower's attendance at one of our monthly meetings.
13. If you have any questions regarding our submission or to set up a meeting, please contact MEUG on 027 472 7798 or via email at [karen@meug.co.nz](mailto:karen@meug.co.nz).

Yours sincerely



**Karen Boyes**  
Major Electricity Users' Group

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<sup>7</sup> <https://www.ea.govt.nz/documents/1097/06-100-Renewable-Electricity-Supply-Simulation-Assumptions-and-Results.pdf>