



TRANSPOWER

Keeping the energy flowing

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Dane Gunnell
Manager – Price-quality regulation
Commerce Commission
44 The Terrace
Wellington

Dear Dane

Waikato and Upper North Island Voltage Management major capex project

Please find attached our Waikato and Upper North Island Voltage Management Major Capex Proposal.

In May 2016 we wrote to the Commission outlining our intention to plan a major capex project to address voltage management needs in the Waikato and upper North Island (WUNI) region. The catalyst for the project was the decommissioning of approximately 1000 MW of thermal generation since 2012, forecast demand growth in the WUNI region, and the planned closure of the Rankine units at Huntly which we understand (based on latest public announcements) is possible by 2022. In combination, this would have a significant impact on power flows on the grid and the need for voltage management. The closure of the Rankine units in 2022 means that new investment would be needed by the winter of 2023 to limit the potential for large power interruptions. Forecast demand growth would require investment before winter 2024 even if the Rankines remain operating (based on the deterministic N-1 standard and a prudent demand forecast).

Since our initial letter we have completed the following consultation:

- In July 2016 we released a long-list consultation document. It highlighted the need for voltage management in the WUNI region and the potential options for addressing the need. It also requested information on non-transmission solutions (NTSs) and set out the assumptions we planned to use. We received 17 responses to the long-list consultation document. In general, the responses agreed with our assessment of the need and potential project scope.
- In May 2018 we released an investigation update. While not a formal consultation document, this included our latest view regarding our preferred solution for addressing the need.
- In June 2019 we released a short-list consultation document seeking feedback on our preferred option for addressing the voltage management need, and our preliminary application of the investment test. We received 12 responses. The responses showed general support for our proposed project.

The attached proposal is the result of considerable effort by Transpower and those who responded to our consultations. Modelling dynamic voltage needs in one of our major demand centres is complex and has required detailed and careful analysis.

We have consulted on the need for the project with direct reference to the future of the Rankine units. 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. Our investigation has also shown that even if the Rankine units were not to close, there would still be a near term need for voltage management due to recent demand growth. Hence, we are seeking the Commission's approval for our proposal now. If there were a significant announcement regarding the Rankine units before an approval, we would consider amending our application, and if this occurred after an approval, we would consider submitting an amendment application.

In our process, and in our proposal, we have considered NTSs. One option evaluated considers the use of demand response. While we consider demand response to be uneconomic for the need of this project, we recognise that other NTSs may be more attractive. In a letter to the Commission in March 2019 we said we wanted to evaluate NTSs further but considered we would not be able to complete a formal procurement process before submitting an investment proposal to the Commission. Our concern was that if we did delay our proposal in order to complete the process, the approval of the project would be delayed such that we would not be able to commission the necessary plant by winter 2023. This concern remains. Accordingly, we are submitting our proposal now with the intention of updating the Commission once we have completed our evaluation of NTSs.

At present we are part way through our NTS assessment. On 26 November 2019 we completed a request for information (RFI) process for NTSs. We received three responses which we are evaluating. We will update the Commission on the outcomes of our assessment, and amend our proposal if necessary, in early March 2020.

The cost estimates and major capex allowance in our proposal reflect the best information we have at this time, received from vendors in response to RFIs. In November 2019 we released a request for proposal (RFP) asking for formal tenders to complete the work of designing and installing the dynamic reactive devices that form part of stage 1 of the project. Tenders are due on 19 February 2020. The tenders will provide more certainty as to the cost of the project. We will update the Commission on the results of the RFP process, and amend our proposal if necessary, in early March. We have not waited for this information before submitting our proposal as we consider our current cost estimates to be reasonable, and waiting may compromise our ability to commission the necessary plant by winter 2023.

In summary, this is an investment proposal for which there are still some uncertainties to be resolved. However, we believe it is prudent to progress the proposal given the proximity of the need date. We ask that the Commission work with us through the approval process to ensure we can deliver good outcomes to consumers and are able to manage the risk of closure of the Rankine units.

Attached with this letter are:

- Waikato and Upper North Island Voltage Management Major Capex Proposal
- Attachments A-F supporting our Major Capex Proposal, including the Transpower Chief Executive Officer's certificate required under clause 9.2.1 of the Capex IM.

Please let me know if you have any questions.

Yours sincerely



Stephen Jay
General Manager Grid Development