TRANSPOWER

2022 Capex IM Workshop

Transpower comment: responding to the Commerce Commission's discussion slides from the 11 November workshop

Supplementary information

12 December 2022

Investment test discussion

Grid investment test – sensitivity analysis

- Transpower submitted:

  "A comparison of the Fibre and Transpower Capex IMs' sensitivity analysis requirements provides a good example where we consider that the Transpower Capex IM includes unduly prescriptive requirements." (P+I submission p. 13)

  "The key elements of the existing requirements which should be retained are that Transpower can justify the choice of sensitivity analysis and the analysis is sufficiently robust to rely on to demonstrate an investment option should be approved." (P+I submission p. 14)

- Some discussion points and questions:
  - Schedule D7(1) sets out the sensitivity analysis Transpower needs to apply in the investment test "save where it is neither reasonably practicable nor reasonably necessary". What do stakeholders see as the relevant issue or concerns with the sensitivity analysis?
  - If the requirements of D7(1) were amended, how would stakeholders prefer to see this framed and applied?
  - We understand uncertainty has increased and should make sensitivity analysis even more relevant. How does this relate to the submission point raised?

How much time does it take to run scenarios?

Each scenario included in our analysis adds work and adds Optegn and SDDP runs to be completed. It is difficult to estimate how much extra work and time, because it depends:

- how many different options need to be evaluated
- on whether the scenario is included at the start of the analysis, and;
- how different the scenario is from the others

With a small number of options (say four), a similar scenario to the others, included at the start of the analysis, might add as little as 3 days of setting up and 2 days of dispatch modelling.

With a large number of options (we had 18 options in NZGP1), adding another scenario late in the analysis could add as much as 20 days of setting up and 10 days of dispatch modelling.

So somewhere between 5 and 30 days would be a reasonable range.

How does higher penetration of intermittent generation impact the modelling?

We used hourly modelling for NZGP1, rather than the standard load-block approach, to try and capture the effects of intermittent generation. We estimate that hourly modelling took around two to three times longer than load block modelling (although we anticipate that we will be able to close this gap in the near future). Our approach was to model snapshot years every 5 years and interpolate benefits for the in between years. This reduced the extra time required but overall the hourly modelling added *10 to 15 days to our modelling.*

As mentioned at the workshop, our key concern is the requirement to do scenarios that we do not believe are relevant or are not material different enough to produce different results.

Investment Test – P50 major capex allowance

- You have asked us to expand on our explanation of how a P50 approach to setting the major capex allowance has added to the time required to prepare an MCP. In the past we have calculated P50 estimates but they have been based on higher level costs with higher cost uncertainties. As Transpower is now exposed to higher levels of risk as a result of the P50 major capex allowance approach, we generally undertake more work to reduce the cost uncertainties in our proposal. This can include completing some aspects of detailed design before the MCP is submitted.
- While this extra work increases cost certainty it also takes more time and makes Transpower more committed to the preferred option at the time of submission and less able to change. In addition, while we can increase cost accuracy it is not possible to eliminate scope uncertainties that could be binary in nature (e.g. contingent on resolving an engineering issue still being investigated).
- While the Commission reduced the incentive rate on MCPs to 15%, this did not result in Transpower taking the same approach to cost assessment as we had under a P90 capped allowance. This is due to the nature of MCPs, large discrete projects, which unlike base capex do not offer the chance of offsetting a series of over budget projects with a series of under budget projects.
- We consider changes to the Capex IM should be made to recognise these issues. One option we consider has merit is for the Commission to move away from specifying a point estimate to specifying a symmetrical range for the major capex allowance. If the project was delivered in the range, then no incentive reward or penalty would apply, only if the project exceeded the top of the range would a penalty result, and we would only receive a reward if the project was delivered below the range. Our view is that this would be a better approach in the context of the need to undertake significant investments, at pace, to enable electrification. We consider that it is important that the range is symmetric, e.g.P10/ P90 or P20/P80, etc, to ensure risk/ reward is balanced with consumers.

Investment Test– Staging approval requirements

- You have also asked us to reflect on what changes to the Capex IM would help relating to the staging of MCPs. While we appreciate the effort the Commission has put into adding a staging approach and acknowledge that we have not submitted a second (or subsequent) stage project, we consider some changes in the drafting of 3.3.1 would help provide more clarity of what is envisaged in a second or subsequent stage proposal. For example, the last paragraph of 3.3.3(1)

"For the avoidance of doubt, any application by Transpower to the Commission for approval of subsequent stages of a major capex project (staged) must be made in a new major capex proposal."

- could be improved if it was revised to make it explicit that an application for subsequent stages of a major capex project (staged) should be commensurate with the estimated expenditure and complexity of the staging projects subject to approval and have regard to the information provided in previous stages and materiality of the changes since the approval of previous stages. In other words, we should be able to submit an update to the first proposal rather than a new major capex proposal.
- Clause 7.4.1(3) could also be updated to make it more explicit that regard can be taken of information provided in previous stages and materiality of the changes since approval of previous stages. We note that consultation requirements for a major capex project (staged). I6 (3). already sets out the requirement for consultation to be commensurate with the materiality of changes. We consider these amendments to the Capex IM would help clarify that Transpower can use a commensurate approach can be used when seeking approval for a subsequent stage of a major capex (staged) project.

Investment Test - Non-transmission solutions (NTS) requirements

- Our experience has indicated that that some of the prescriptive consultation requirements set out in I5 associated with NTS are difficult to meet. The current consultation requirements envisage a very linear approach where we provide sufficient information to proponents of NTS at the investment need/long-list stage for them to provide us with relevant information, and then in developing the short-list we invite proponents to provide comprehensive proposals. While this might work in some circumstances, this approach means we may be engaging with proponents 5-7 years before we need their services, as we will be developing proposals well in advance to ensure we can deliver transmission solutions. This is a long way in advance.
- We see value for both us and NTS proponents if engagement could also occur later in the process and be part of a second (or subsequent) stage proposal or via an amendment application. We think reducing prescription and increasing flexibility to the approach that can be taken to engaging over NTS and clarifying the commensurate nature of subsequent stages of a major capex (staged) project will help with the consideration of NTS.