

3 September 2007

Mr Tim George
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Dear Tim

HVDC Pole 1 replacement investigation project – need for economic justification for retirement date

At its meeting of 24/25 July 2007, the Commission Board was provided with various documents¹ relating to Transpower's recent request for feedback on the methodology, assumptions, and options to be used for the HVDC Pole 1 replacement investigations project (**HVDC Proposal**).

The Board also discussed the issue that was raised at Transpower's workshop on 8 June 2007 relating to the justification for the retirement of the existing Pole 1 at a fixed date of 2012.

After the workshop, Transpower requested interested parties provide feedback by 31 July 2007 on the retirement need and life extension analysis documents in Volume 3 of the 2005 Grid Upgrade Plan (**2005 GUP**) (as detailed below) and whether these are adequate for justifying the proposed 2012 retirement of Pole 1.

The relevant documents are:

- 'The Need to Decommission Pole 1';
- 'HVDC Pole 1 Condition and Risk Assessment'; and
- 'Pole 1 Replacement Options'.

Following discussion of the issue, the Commission Board confirms that the economic rationale for the decommissioning of Pole 1 is a necessary part of the analysis to support the HVDC Proposal.

In discussions with Transpower on 26 July 2007 the Commission indicated that it would expect Transpower to supply analysis providing the economic rationale for decommissioning of Pole 1 when submitting its grid investment

¹ This included the following documents: Transpower's summary of submissions document '*Methodology, Assumptions and Options Consultation – Summary of Submissions*'; Transpower's response to submissions document '*Methodology, Assumptions and Options Consultation – Response to Workshop comments and written submissions*'; and Grant Read's report prepared for Meridian Energy '*Using GEM to produce SOO Scenarios: A Preliminary Conceptual Critique*'

proposal. Transpower requested suggestions from the Commission on how such analysis should be carried out and on 31 July 2007, the Commission provided Transpower with a draft letter setting out some suggestions for how such analysis could be carried out. While the Commission did not finalise this letter, at that time, the ideas and principles in it should be considered as has been, commented on in our subsequent discussions. As a general principle the Commission is hopeful that an analytic result may be able to be obtained at a coarse level of analysis.

The Commission notes that the 31 July 2007 submissions from Meridian and Contact Energy, published on Transpower's website, raise many of the same issues that were covered in the Commission's draft letter. In addition, the recent meetings between Commission and Transpower staff to discuss modelling approaches have provided further clarity on a way forward.

As discussed at our meeting on 29 August 2007, on a number of occasions, the terminology 'run to failure' has been used. The Commission confirms its support for the suggestion that the term "run to failure" no longer be used and that the intent of the analysis is to discover the "optimal life" of Pole 1.

The Commission is aware of Transpower's concerns about the environmental, health, and safety issues associated with the continued operation of Pole 1 of the HVDC link.

The Commission would like to better understand the nature of these risks, why these risks exist, and the extent to which these risks increase as the technology ages, including the risk of catastrophic failure. Are there mitigation options available to manage these risks? If so, what are the costs of these options and how does this fit with the economic analysis Transpower is already undertaking? The Commission notes that Transpower had previously advised that it would make available an updated condition assessment of the assets involved

The Commission will be interested to see Transpower's "optimal life" economic analysis alongside its environmental, health, and safety risk assessment when it is available, as these matters are all linked in a decommissioning decision.

Best wishes



Mervyn English
General Manager

cc. Peter Griffiths