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Mr Chris Pattas
General Manager
Network Regulation South
Australian Energy Regulator
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aerinquiry@aer.gov.au

Dear Chris

Submission in relation to the AER's Draft decision for Transend and Transend's revised Revenue Proposal

TransGrid appreciates the opportunity to provide a submission in relation to Transend's transmission determination 1 July 2009 to 30 June 2014.

Our submission relates to the replacement of Reyrolle circuit breakers as part of the 110kV substation redevelopments.

TransGrid understands that Transend's Revenue Proposal included renewal capital expenditure projects for the redevelopment of 110kV substations, which were associated with the replacement of Reyrolle 110kV circuit breakers. The AER Draft Decision reduced Transend's renewal capital expenditure proposal and deferred some of the proposed expenditure to 2014-2019. Transend's revised Revenue Proposal has argued for the reinstatement of the deferred renewal capital expenditure to allow for the ongoing replacement of the Reyrolle circuit breakers and where appropriate the redevelopment of 110kV substations.

TransGrid is supportive of Transend's view that assets should be replaced in accordance with asset management plans. TransGrid, like Transend, considers several factors when developing its asset replacement program. These factors include asset condition, reliability, maintenance requirements, age, spares availability, safety and environmental issues. Transend noted in its Revenue Proposal that "while asset age may indicate a need to replace or renew assets, Transend's asset renewal programs are not predominantly age-based. Transend considers issues associated with asset condition; asset performance; spares availability and product support; technical obsolescence; physical security; technical, safety and environmental compliance; and operational support systems; as well as age, when developing replacement strategies."[1] This is consistent with TransGrid's Asset management approach.

TransGrid replaced all its Reyrolle OS air blast circuit breakers by 2004 in accordance with its Asset Management Strategy. These circuit breakers suffered from the following generic issues:

- The high pressure air required to provide dry air for arc extinguishment introduced the need for a compressed air system, with an associated maintenance overhead. Leaks of high pressure air were a safety hazard for staff
- Operation of air blast circuit breakers was very noisy and in areas becoming affected by urban expansion presented a community concern
- Spare parts were generally no longer provided as this is a technology that is no longer used. There were a large number of specialised seals that required special manufacture and were difficult to obtain.

[1] Transend, Revised Revenue proposal for the period 1 July 2009to 30 June 2014, page 37

- These circuit breakers had a complex design with up to 8 interrupters for 330 kV units. This led to unreliable operation.
- The control systems were complex and depended on both electric and air control.

In addition to the problems outlined above, problems with the operation of the 'sequential arm' fitted to these circuit breakers resulted in recurring high contact resistance and contact separation during circuit breaker operation.

TransGrid must ensure its assets remain reliable, do not adversely affect the safety of its staff or the community, and meet all environmental standards imposed by legislation and by community expectations. At the time of replacing these circuit breakers, TransGrid had no major spares and a number of failures had occurred.

These issues are no different to the issues considered by Transend in its Revenue Proposal.

TransGrid like Transend also considers project alternatives when assessing the most prudent and efficient means to address assets in poor condition. In the case where a number of components of a substation are in poor condition TransGrid would consider the redevelopment of the substation rather than undertake asset replacements on a piece-meal basis, if this alternative provided the most efficient solution.

TransGrid consider Transend's proposed replacement plans are consistent with prudent asset management practice.

If you have any queries in relation to this submission please contact Mr John Howland on (02) 9284 3509.

Yours sincerely

18/2/'09

Peter McIntyre
General Manager/Network Development and Regulatory Affairs