



AusNet Transmission Group Pty Ltd

Transmission Revenue Review 2017-2022

Appendix 4G: Proposed Contingent Project



ISSUE/AMENDMENT STATUS

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1 Introduction and Overview

Contingent projects are capital projects that will not necessarily be required to proceed in the forthcoming regulatory control period. For this reason, these projects are not included in the capex forecast. Instead, the Rules allow TNSPs to propose these projects as contingent projects for the period, which will proceed subject to a specified trigger event occurring.

AusNet Services has developed a contingent project as a means of managing uncertain outcomes for major capital works. This contingent project covers the replacement of two synchronous condensers located at Brooklyn and Templestowe Terminal Stations.

A summary of the proposed contingent project is below.

Table 1: Proposed Contingent Project (\$ million, real 2016-17)

Project	Trigger Event	Cost Estimate
Replacement of the synchronous condensers at Brooklyn and Templestowe Terminal Stations	Formal confirmation from AEMO that the magnitude of the expected benefits provided by the synchronous condensers justify the replacement of the Brooklyn and/or Templestowe Terminal Station synchronous condensers with reactive plant providing a similar, or reduced, level of service.	\$70m (direct cost plus overheads), less the operating expenditure allowance provided to decommission the relevant synchronous condensers

2 Background

Synchronous condensers provide important voltage stability and oscillatory benefits to the network. There are three synchronous condensers on the Victorian transmission network located at Brooklyn, Fishermans Bend and Templestowe Terminal Stations which were built in the 1960s. Due to their age, the synchronous condensers are in extremely poor condition and the refurbishment required to keep these assets operational is costly. Under its standard asset management practices, AusNet Services would have already replaced these assets. However, AEMO has questioned whether the benefits provided by the synchronous condensers justify their continued service.

AEMO and AusNet Services jointly agreed to retire the synchronous condenser at Fishermans Bend Terminal Station, as it was considered to be providing no net benefit. It was taken out of service on 29 July 2015. AusNet Services has forecast this asset be decommissioned in 2017-18.

It is uncertain whether the expected future benefits of the remaining two synchronous condensers are sufficient to justify their replacement. As network planner, AEMO is undertaking an assessment to establish the expected future benefits. AusNet Services is working with AEMO to estimate replacement costs and assess potential locations for any new synchronous condensers should AEMO determine they are necessary.

Contingent Project 2017–2022

A decision has not yet been made on whether to replace the Brooklyn and/or Templestowe synchronous condensers. However, AusNet Services does not consider that continuing to refurbish the existing synchronous condensers provides value-for-money for consumers, given the significant amount of capex that would be required (around \$15m (direct costs only) over the 2017-22 period) and uncertainty over their remaining lives, which could be as short as 5 years given their condition.

Given the significant expense of replacing the synchronous condensers, AusNet Services has not forecast this capex requirement in this revenue proposal given that the economic benefits are currently unclear. However, as it is still to be confirmed if replacement is justified, a contingent project is proposed.

It is expected that a firm decision on the future of the synchronous condensers will be made by May 2016. If it is determined that replacement is the most economic option, then the capital expenditure requirements will be included in the Revised Revenue Proposal's capital expenditure forecast. However, for the purposes of the Revenue Proposal, it has been treated as a contingent project for the following reasons:

- To flag this potential addition to the capital expenditure forecast to stakeholders; and
- In the event that AEMO's analysis is not concluded in time to incorporate any arising replacement costs in the revised proposal, a contingent project will remain the most appropriate treatment of this project.

3 Project Description

The scope of this contingent project is the replacement of the synchronous condensers at Brooklyn and Templestowe Terminal Stations with reactive plant providing a similar or reduced level of service. This could cover:

- Replacement of a single synchronous condenser;
- Replacement with reduced capacity synchronous condensers; or
- Replacement with other reactive plant providing similar services.

These assets may be located at the same sites as the current synchronous condensers or at alternative sites. The benefits provided by the synchronous condensers vary depending on location. It is possible that locating assets at alternative sites could have greater benefits and lower costs than at existing sites. Therefore, AEMO and AusNet Services' net benefits analysis also encompasses alternative locations.

4 Trigger Event

Formal confirmation from AEMO that the magnitude of the expected benefits provided by the synchronous condensers justify the replacement of the Brooklyn and/or Templestowe Terminal Station synchronous condensers with reactive plant providing a similar, or reduced, level of service.

5 Estimated Contingent Project Expenditure

The direct cost of replacing the two synchronous condensers with two reduced capacity units is estimated to be \$70m (direct plus overheads). This is considered to be the most costly option and the cost of alternative options could be significantly lower.

6 Compliance with the Rules

This contingent project complies with NER 6A.8 for the following reasons:

- This project meets the cost threshold – as \$70m is greater than \$30m (note 5% of the proposed MAR in the first year is less than \$30m, being \$29.8m), so \$30m is the applicable threshold.
- The case for undertaking the contingent project during the next regulatory control period depends on an uncertain event occurring – whether AEMO's completed benefits assessment will justify the ongoing need for the services provided by the synchronous condensers.
- In addition, given the various project options that are currently being assessed vary in scope and cost, the costs associated with the contingent project are not sufficiently certain to justify their inclusion in the capital expenditure forecast.
- The trigger event is specific, capable of verification, sufficiently uncertain and meets the other requirements set out in 6A.8.1(c) – in particular, whether or not AEMO's completed benefits assessment will justify the ongoing need for the services.
- The expenditure estimates represent prudent expenditure to achieve the capital expenditure objectives (NER 6A.6.7) – this project is required to maintain the reliability, safety and security of the transmission system. Expenditure has been estimated by applying AusNet Services' standard expenditure forecasting approach. The expenditure forecasting methodology is described in Chapter 4 of the Revenue Proposal.
- The project is not otherwise provided for in the capital expenditure forecast – no capital expenditure (replacement or refurbishment) on the synchronous condensers is included in the capital expenditure forecast.