

7 May 2019

Sebastian Roberts
General Manager, Transmission and Gas Branch
Australian Energy Regulator
Level 17, Casselden
2 Lonsdale Street
Melbourne VIC 3000

Dear Sebastian,

Re: Request for extension of time to submit cost pass through application

I am writing to seek an extension of time in which to submit a cost pass through application in respect of an inertia shortfall event. This request is made due to the additional time required to assess and quantify the full effect of the inertia shortfall in South Australia declared by AEMO in December 2018, pursuant to clause 6A.7.3(k) of the National Electricity Rules.

Background

Declared inertia shortfall

On 21 December 2018, AEMO published its 2018 National Transmission Network Development Plan (NTNDP) and declared an inertia shortfall in South Australia. AEMO has assessed an inertia shortfall of 6,000 MWs will arise in South Australia once ElectraNet meets the declared system strength gap by installing synchronous condensers (indicatively by 31 May 2020). Once installed, AEMO will no longer need to direct synchronous generation to remain online for system strength purposes, revealing the inertia shortfall.

AEMO's declared inertia shortfall requires that ElectraNet use reasonable endeavours to procure at least 4,400 MWs of synchronous inertia services to meet the 'minimum threshold level of inertia' when the South Australian region is at credible risk of islanding.

ElectraNet may address the balance of the 6,000 MWs shortfall by contracting generation, batteries and other equipment capable of fast frequency response to provide inertia support to meet the 'secure operating level of inertia' under islanded conditions.

Approved solution

Since the system strength gap was declared in October 2017, we have worked closely with AEMO to develop and validate a solution through detailed electromagnetic transient (EMT) studies.

Following this work, our proposed solution is to install four high inertia synchronous condensers on the South Australian transmission network, each with 575 MVA nominal 275 kV fault capability and 1,100 MWs inertia contribution. The inertia capability of these machines also addresses the synchronous inertia component of the inertia shortfall declared by AEMO.

On 18 February 2019, the AER approved the outcomes of this analysis and economic assessment, confirming the installation of high inertia synchronous condensers on the network as the most economical solution.

On 8 March 2019, the proposed solution received technical approval with AEMO confirming the solution meets both the declared system strength gap and the 4,400 MWs minimum threshold level of inertia declared in its inertia shortfall notice.

Next steps

Work is progressing to implement the synchronous condenser solution, including finalisation of the detailed specification and design in consultation with AEMO and manufacturers, AEMO approval of the technical specifications, performance standards and operational arrangements and competitive sourcing of synchronous condensers and associated equipment.

In order to investigate economic options to address the remaining component of the inertia shortfall up to the secure operating level of 6,000 MWs under islanded conditions, we plan to take the following steps:

- Define the detailed technical requirements of a compliant solution;
- Test the market for options and costs to provide the required service;
- Evaluate the technical and economic viability of the potential solutions; and
- Finalise a recommended solution and the associated cost impacts.

We anticipate this process to be concluded by late 2019. Given this work is required to assess and quantify the full effect of the inertia shortfall, the estimated cost impacts will not be known until that time. In the event that an option (or combination of options) is identified that represents a least cost solution to address the balance of the declared inertia shortfall, we then intend to submit a cost pass through application to the AER in order to recover the costs of implementing that solution.

Cost pass through requirements

Clause 6A.7.3(c) of the National Electricity Rules (Rules) permits ElectraNet to apply to the AER for a positive pass through amount within 90 business days of a relevant positive change event occurring. When applying for a cost pass through, the information we must provide includes evidence of the actual and likely increase in costs resulting from the relevant event.

Clause 6A.7.3(k) allows the AER to extend this 90 business day time limit if it is satisfied that the difficulty of assessing or quantifying the effect of the relevant pass through event justifies the extension.

Rule amendments in September 2017 as a result of the AEMC's introduction of a new framework for the provision of inertia services introduced an 'inertia shortfall event' as a new category of

eligible pass through event for the purposes of clause 6A.7.3.¹ An inertia shortfall event occurs where a transmission business is required to provide, or cease providing, inertia network services and meeting this requirement materially increases or decreases the costs of providing prescribed transmission services.²

Amendments were also made to definitions within Chapter 10 of the Rules relevant to a network support pass through under clause 6A.7.2. If the AER approves a pass through amount for an inertia shortfall event under clause 6A.7.3 that relates to inertia service payments, these changes allow a transmission business to recover (or refund) any differences between that pass through amount and the actual amount of network services payments in the following regulatory years as a network support pass through under clause 6A.7.2.

In this way, as intended by the AEMC's final rule determination, a transmission business is able to use a combination of forward-looking cost pass through inertia shortfall provisions under clause 6A.7.3 of the Rules and the backward-looking network support pass provisions through under clause 6A.7.2 to recover in a timely manner the actual costs incurred during the current regulatory control period in order to meet an inertia shortfall.³

Request for extension of time limit to submit cost pass through application

Until we have tested the market and fully evaluated potential solutions, we are unable to assess the cost impact for the purposes of a pass through application, or indeed, whether a cost pass through application is required at all in the event that available options do not represent a technically and economically viable solution.

We note there is some uncertainty as to when a positive change event for the purposes of clause 6A.7.3(c) of the Rules is taken to have occurred. On one interpretation, the issue of the inertia shortfall notice to ElectraNet could be taken to constitute the relevant cost pass through event. On another view, the relevant event may not be taken to have occurred until the obligations under that notice take effect (i.e. once ElectraNet addresses the system strength gap by installing synchronous condensers and the declared inertia shortfall becomes apparent). Alternatively, the cost pass through event may not actually be deemed to occur until such time as sufficient information is available to confirm the actual cost impact (which in many respects is the most logical interpretation).

For the avoidance of doubt, we therefore request an extension of the time limit, pursuant to clause 6A.7.3(k) of the Rules, to submit a cost pass through application for a positive pass through amount in relation to addressing the full extent of the declared inertia shortfall in South Australia until 31 December 2019.

This extension will allow sufficient time to fully investigate and evaluate potential options to determine the most economical solution.

¹ AEMC, [*Rule Determination, National Electricity Amendment \(Managing the rate of change of power system frequency\) Rule 2017*](#), 19 September 2017.

² As provided Chapter 10 of the Rules.

³ AEMC, [*Rule Determination, National Electricity Amendment \(Managing the rate of change of power system frequency\) Rule 2017*](#), 19 September 2017, p.49.

Should you wish to discuss any aspects of this request, please contact Simon Appleby in the first instance on 08 8404 7324.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Rainer Korte". The signature is fluid and cursive, with the first name "Rainer" and the last name "Korte" clearly distinguishable.

Rainer Korte
Group Executive Asset Management