



Mr Sebastian Roberts
General Manager
Australian Energy Regulator
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Dear Mr Roberts

The Energy and Technical Regulation Division (Division) of the Department of the Premier and Cabinet appreciates the opportunity to comment and provide the following submission on ElectraNet's electricity transmission revenue proposal for 1 July 2018 – 30 June 2023 and Australian Energy Regulator's Issues Paper.

The Division has noted the consultative approach undertaken by ElectraNet in the publication of its Preliminary Revenue Proposal in early September 2016 and is aware of the supportive feedback from the early engagement process with stakeholders.

The Division is supportive of the reduction in transmission costs that would be achieved through ElectraNet's revenue proposal.

In light of need for immediate restoration and system security works arising from the September 2016 storms the Division acknowledges the impact has resulted in delaying work on a number of other projects that had been planned for the 2013-2018 period.

The Division is supportive of the necessary work needed in maintaining system security as the electricity market transitions to a low carbon future and prudently managing the impacts of extreme weather.

The Division notes that the proposed definition of Natural Disaster Event in the pass-through, which differs from that in the current period, does not include the term 'major' or 'material', but simply any natural disaster that increases costs to ElectraNet. The new definition also does not include the requirement for the AER to have regard to 'forecast operating expenditure allowance approved in the AER's final decision'. The Division is not aware of justification for the proposed new definition. The Australian Energy Regulator's final decision (30 April 2013) on ElectraNet's current regulatory control period dealt with similar definitional issues and included the meaning of 'major' in the final definition, stating that 'if the costs of non-major natural disaster events are able to be passed through, an unacceptable amount of manageable and affordable risk will be transferred from ElectraNet to its customers'.

Capital expenditure

As you are aware, the Australian Energy Market Operator (AEMO) have conducted an Independent Planning Review of ElectraNet's proposed capital expenditure projects as part of their South Australian Advisory Functions. The Division notes that ElectraNet's revenue proposal reflects AEMO's advice.

The ESCRI Energy Storage project involves installation of a 30MW, 8MWh energy storage device connected at the Dalrymple substation on the Yorke Peninsula. It is a proof-of-concept project with both regulated and non-regulated benefits. The Division notes that regulated component aims to demonstrate the application of fast acting battery storage to provide essential system security services such as Fast Frequency Response and to demonstrate islanded operation during contingency periods. The Division is supportive of the regulated cost component in ElectraNet's revenue proposal as the provision of a prescribed transmission service, with resulting customer benefits being reduced unserved energy around Dalrymple and reduced Heywood interconnector constraints.

In the wake of the September 2016 storms, the Division understands that ElectraNet considered a group of projects to improve system security and increase resilience of the network to extreme weather events. Substation improvement for System Black conditions was one of the projects which included options for improving resilience to the three 275kV lines between Davenport and Adelaide.

In its assessment, it is understood that ElectraNet found it was not possible to demonstrate an economic case for the majority of projects without assuming significantly higher frequency of wind events in the future, beyond those expected when considering the forward-looking impacts of climate change. ElectraNet were able to identify a small number of new projects for the next period to further improve the resilience of the network. In supporting the proposal, the Division seeks that the AER confirm the justification and reasoning undertaken in the assessment.

In relation to the specific projects put forward to address network security risks (Table 5 of the Revenue Proposal Overview) the Division notes the advice of AEMO regarding installation of reactors at the Templers West, Para and Blyth West substations. This is in response to the AEMO forecast that minimal operational demand in South Australia will decline to 200MW by June 2023, and that therefore 150MVAR of additional inductive reactive power support needs to be provided in 2022-2023 to manage potential over voltages. In their Independent Planning Review of ElectraNet's proposed capital expenditure projects, AEMO suggests combining installation of these reactors as one project, as they are inter-related and address a single emerging need.

Eyre Peninsula electricity supply

The Division supports inclusion of both an ex-ante capital expenditure project to partially replace transmission lines on the Eyre Peninsula, and the Eyre Peninsula Electricity Supply Options contingent project to exploring alternatives through a formal Regulatory Investment Test – Transmission (RIT-T). In reaching this position, the Division has considered both the potential for overlapping expenditure, and whether there is sufficient uncertainty for alternative replacement projects to be included as contingent projects.

With regard to the potential for overlapping expenditure, ElectraNet clearly set out that, in the event the contingent project is triggered, they would seek to recover only the difference in project costs. The proposed timing of the partial replacement projects (end 2023) allows for proper consideration of alternatives, and also for the overlap of expenditure to be avoided

Sufficient uncertainty around the need for alternative replacement projects exists regarding both reliability standards and load growth. Reliability standards are under consideration as part of the Essential Services Commission of South Australia (ESCOSA) Inquiry into the reliability and quality of electricity supply on the Eyre Peninsula. The Inquiry's draft report indicates that in relation to transmission reliability standards, ESCOSA has no plans to change those transmission network exit point standards given the review it undertook during 2016.

The prospect of increased load due to mining on the Eyre Peninsula has recently reemerged. On 3 May 2017 the South Australian Government announced two key approvals for Iron Road's Central Eyre Iron Project. These are a 21 year mining lease for a mining and minerals processing operation near Warrambo, and Development Authorisation for associated infrastructure components (transmission line, port, railway, water pipeline, and worker village).

The Division considers that using the conclusion of the RIT-T process as a trigger for the contingent project is appropriate. The timing of the RIT-T will accommodate the results of the ESCOSA Inquiry and emerging demand requirements.

Other contingent projects

With regard to the South Australian Energy Transformation (SAET) project, the Division agrees with the project needs outlined by ElectraNet, and with the outcome of a RIT-T forming an appropriate trigger. As part of the 2016/17 State Budget the South Australian Government provided \$500,000 towards the RIT-T to explore options for greater energy interconnection with the Eastern states. In its independent review, AEMO is also supportive of including the SAET as a contingent project.

The Division notes that the indicative scope of the Main Grid System Strength Control contingent project involves upgrading existing protection devices and installing six synchronous condensers at selected locations across the 275 kV transmission network at a cost of \$60 to \$80 million. Synchronous generators are the predominant source of fault levels, which are a local characteristic of the power system and are important for system strength on the network. Existing intermittent renewable generators are generally asynchronous and do not contribute significant fault levels. With the current state of the technology, non-synchronous generation is unable to provide system restart ancillary services. This primarily stems from the source intermittency and the need for a minimum system strength or fault level which is not available during black system conditions.

The triggers for the Main Grid System Strength Control contingent project include confirmation by AEMO of the existence of a Network Support and Control Ancillary Services (NSCAS) gap relating to system strength, or other requirement for ElectraNet to address a system strength requirement, in the South Australian Region and successful completion of the RIT-T. It is understood that AEMO are to publish technical studies to define the NSCAS requirement which will confirm the optimal locations and required numbers of synchronous condensers.

It is important to note that the South Australian Government's Energy Plan, which was announced on 14 March 2017¹, contains measures aimed to improve the resilience and system strength of the South Australian power system. They include:

- a state-owned gas power plant to provide up to 250 megawatts of stand-by generation which can be switched on in times of emergency, whilst in the meantime procuring temporary back-up generation if necessary;
- a \$150 million Renewable Technology Fund which will fund Australia's largest 100 megawatt grid-connected battery;
- new Ministerial powers to direct the market to operate in the interests of South Australians;
- incentivise increased gas production to ensure more of our State's gas is sourced and used in South Australia;
- an Energy Security Target to ensure our power system uses more clean, secure energy generated in South Australia; and
- use the Government's purchasing power through its own electricity contract to attract new electricity generators to increase competition in the market.

The Australian Energy Market Commission's (AEMC) final rule determination on the Emergency Frequency Control Scheme rule change request from the South Australian Minister for Mineral Resources and Energy established an enhanced framework for emergency frequency control in the National Electricity Market. The framework will ensure a regular review of current and emerging power system frequency risks, so as to allow AEMO to identify and implement the most efficient means of managing emergency frequency events. This would be expected to allow for the identification and procurement of NSCAS to mitigate non-credible contingencies which were previously not possible under the rules.

In assessing the Main Grid System Strength Control contingent project the Australian Energy Regulator will also need to be aware of the interaction of any potential procurement of NSCAS and the AEMC's current thinking on managing power system fault levels ie system strength. The AEMC recently released a draft rule and draft determination on Managing power system fault levels rule change request which provides for an enhanced framework that requires network service providers to maintain the system strength at generating system connection points above agreed minimum levels under a defined range of conditions. Any decisions involving contingent capital expenditure for the Main Grid project will need to be balanced against the ongoing consideration of the regulatory frameworks being developed that affect system security in the National Electricity Market.

Financial building block parameters

The Division notes ElectraNet's proposed cost of corporate tax (γ) of 0.25 which remains at odds with recent determinations including the April 2017 AusNet and Powerlink where the AER has maintained a view that the best estimate γ is 0.40. This was the view that was upheld in the Federal Court decision of 23 May 2017 in the appeals brought by the AER against a decision last year by the Australian Competition Tribunal on the revenue determinations of the NSW and ACT electricity and gas distribution network system operators

¹ <http://ourenergyplan.sa.gov.au/assets/our-energy-plan-sa-web.pdf>

This was also the view when the Australian Competition Tribunal affirmed the AER's final determination of SA Power Networks (SAPN) limited merits review appeal. This is currently subject to Federal Court's final judgement on the SAPN's appeal of the Australian Competition Tribunal's decision.

Should you require any further information on any element of the attached submission, please contact me on (08) 8204 1724.

Yours sincerely



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Executive Director Energy and Technical Regulation

12 July 2017