



Government of South Australia

Department of the Premier
and Cabinet

Mr John Pierce
Chair
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

The Energy and Technical Regulation Division (Division) of the Department of the Premier and Cabinet thank you for the opportunity to make a submission to your Directions Paper on Five Minute Settlement (ERC0201).

The Division strongly supports introduction of the Five Minute Settlement rule change and agrees that introducing five minute settlements would better enable electricity supply and demand to be balanced in real time, resulting in a more efficient mix of generation and demand response.

The Division understands that the Australian Energy Market Commission (AEMC) is seeking views on the rate of change of technology capable of a fast response. Such technologies, including grid-scale and behind-the-meter batteries, are rapidly entering the market in South Australia. Our submission outlines examples of this change.

The Division also understands that proponents of these technologies have indicated their ability to provide hedging contracts, including cap contracts, that would assist market participants manage risk under five minute settlements. They have also indicated this technological change provides the ability to design and provide alternative risk management products, such as customer contracts with exposure to the spot market (like those offered by Mojo Power and Reposit Power).

The recent overwhelming response to the South Australian Government Expression of Interest (EOI) to deploy 100MW/100MWh of grid-connected battery storage illustrates the commercial readiness of battery suppliers. The minimum project requirements included the ability to be operational by December 2017. More than 90 responses were received.

This response supports the claims of battery suppliers that their technologies may be installed and operational in a short timeframe, and demonstrates that this capability exists across many battery suppliers.

The response also indicates the need for a price signal that properly values fast response to incentivise battery suppliers to implement their technologies. In the case of the South Australian EOI the value of fast response would be underpinned by a 10 year capacity reservation payment offered by the South Australian Government in return for access to the battery in times of critical need. Under five minute settlements, the value of fast response would be clearly reflected in spot market prices.

The 100MW grid-connected battery will be the first project to be funded through the Government's \$150 million Battery Storage and Renewable Technology Fund. The Fund will support other large scale storage projects, in recognition of the value of improved dispatchability of renewables and fast response capabilities.

Behind-the-meter batteries are being rapidly deployed in South Australia. AGL are establishing a 'virtual power plant' that will consist of 1000 residential batteries each with the capability to store around 10kWh. AGL subsidise the cost of batteries and install software that allows them to use the batteries to manage exposure to high spot prices.

This operation of behind-the-meter batteries by retailers is an emerging method of internal hedging. To some extent, it replaces the need for a retailer to hold cap contracts or to have access to generation by operating as a gentailer. For example capturing wholesale benefits of avoided hedging costs has been identified as one of the value streams of AGL's 'virtual power plant' project.

New generation technologies continue to enter the South Australian market. This includes large scale 'battery ready' solar photovoltaic projects, such as the 220MW Bungala Solar Project and the 100MW Taillem Bend Solar Project which are well underway. It also includes more conventional generation capable of a five minute response.

For example, the 30MW Taillem Bend Diesel Project is well underway and planning approvals are in place for stage two of the Pelican Point Power Station, a 320 MW open cycle gas turbine plant. On 24 April 2017 Engie's Head of Corporate Affairs Jim Kouts confirmed development of Pelican Point stage two could commence with favourable market conditions.

The South Australian Government is leveraging its long-term electricity procurement initiatives to encourage new market entrants. The Government is tendering 75 per cent of its annual electricity load to a source that introduces new competition into the energy market, and 25% to support dispatchable renewable energy initiatives. The Government will sign contracts with successful parties by mid-2017.

Overall, the Division agrees with the AEMC's assessment that the benefits of the rule change, principally an improved price signal, are likely to be material and increase over time. Benefits will also be somewhat difficult to quantify and spread over a long time period. The Division urges the AEMC to keep the ongoing, long term nature of these benefits front-of-mind in its assessment of upfront transition costs.

Timely introduction of five minute settlements will ensure technologies entering the market are those that best reflect the cost of generating electricity and its value to consumers. To this end, the Division supports the rule change being introduced with as short a transition period as practicable, using a staged transition process if necessary.

The Division notes that that the AEMC Directions Paper proposes a transition period of three years (Stage A), in which metering upgrades, IT upgrades, and adaptation of the net system load profile would occur. This would be followed by a period of two years (Stage B) in which metering upgrades would continue.

The Division urges the AEMC to consider ways to stage transition so that five minute settlements, at least on the supply side, could commence earlier. On this matter, we agree with Sun Metals. As you are aware, Sun Metals, in response to your Directions Paper have voiced their support for a shorter Stage A, aimed at removing supply distortions first.

The Division understands the AEMC's position that use of revenue metering is preferred for five minute data collection over a profiling approach using SCADA systems. However, a possibility for further staging the transition period may be through retaining the 30-minute settlement interval and using a hybrid volume weighted price regime for settlement, as per

Option 2.2 set out in the 2002 National Electricity Market Management Company (NEMMCO) cost-benefit analysis on five minute settlements.

The opportunity to implement new generation technologies as older generators retire and system security challenges are met exists in South Australia currently. Introduction of five minute settlements would allow their value to be clearly communicated to the market, and so support their development and a smoother transition to a low carbon future. We urge the AEMC to implement this rule change in a timely manner.

Thank you for accepting our submission. Please contact me for further clarification of discussion on (08) 8204 1724 or at vince.duffy@sa.gov.au.

Yours sincerely



Vince Duffy
Executive Director, Energy and Technical Regulation Division

22 May 2017