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Mr John Pierce  
Australian Energy Market Commission  
PO Box A2449  
Sydney South NSW 1235

Submitted online via [www.aemc.gov.au](http://www.aemc.gov.au)

18 May 2017

Reference ERC0201

Dear Mr Pierce,

### **Directions Paper Five Minute Settlement**

AGL welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC) Directions Paper.

AGL is one of Australia's leading integrated energy companies and largest ASX listed owner, operator, and developer of renewable generation. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional generation fuel sources as well as renewable sources. AGL is also a significant retailer of energy, providing energy solutions to over 3.7 million customers throughout eastern Australia.

The views in this submission reflect AGL's considerable experience.

AGL considers that Five Minute Settlement is an inevitable market development that will ultimately reflect the National Electricity Market (NEM)'s transition and transformation to a more granular market – in terms of more effectively harnessing increased demand response capability, battery storage opportunities (e.g. AGL's Virtual Power Plant) and a greater renewables-based generation profile. That said, Five Minute Settlement would undeniably be the most significant change to the NEM design, since market inception, and would have equivalent implementation risks.

Accordingly, whilst on balance, AGL is supportive of Five Minute Settlement, its support is contingent on it being implemented when the AEMC is absolutely confident that all retailers – including new entrants – are able to effectively manage their exposure to pool price risk via access to a deep and liquid financial market. As Energy Edge noted in the recent AEMC convened public forum on this matter - it is very difficult to recover from illiquid markets.

AGL suggests that investing in comprehensive scenario modelling of the impacts of Five Minute Settlement would be a logical step to identify the appropriate timeframe for implementation. Not doing this work risks negatively impacting efficient market operations – increasing the need for regulatory intervention - in the short to medium term if participants are left without the means by which to manage their market exposure. This scenario modelling should consider the Five Minute Settlement rule change in the context of changes in the



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broader regulatory and commercial market. Further, such a fundamental alteration of market design should not be examined in isolation, but rather as part of a total market vision. Incorporating, for example, the work currently being completed by the Finkel Review.

AGL provides the following additional material in support of its position.

### **Ensuring sufficient generation capacity and risk management options**

Five Minute Settlement will further incentivise the deployment of Distributed Energy Resources (DER) and is likely to lead to the introduction of new financial risk management products at some point in the future. Without comprehensive modelling however, it is unclear how long it will take to build up sufficient capacity in these alternative generation and risk management products. AGL considers these developments could potentially take longer than three years.

Restricting physical peaking generation capacity in the short term will negatively impact financial market liquidity. Cap contracts offered by peaking generators are a major component of retailers' risk management strategies. However, most existing peaking generators are unable to respond within five minutes and will offer less and/or more expensive cap contracts to reflect their altered risk management profiles. Alternative risk management strategies may emerge to compensate for the removal of cap contracts, such as battery storage aggregators providing their own risk management services to retailers, but these new products will clearly take time to develop. An illiquid and expensive cap contract market will remain until there is sufficient means by which market participants (retailers) have access to products capable of responding within five minutes.

The timeframe in which new services will compensate for the loss of existing peaking generation and offer complementary risk management products will remain uncertain without comprehensive scenario modelling. Comprehensive modelling will provide some assurance that the implementation timeframe chosen is appropriate for expected market development.

### **Implementation framework**

As noted in the Directions Paper, the introduction of Five Minute Settlement will lead to participants incurring additional costs, including changes to IT systems, settlement and forecasting tools and processes, and the upgrade of metering infrastructure. Costs will impact a range of participants, including AEMO, networks, retailers and generators. AGL has included an overview of Five Minute Settlement implementation areas as an Attachment to this submission at Attachment A. This attachment specifically identifies areas for which implementation processes should be designed and where implementation risks should be managed.

AGL considers that analysis on the impact on settlement systems should be undertaken before decisions on implementation timeframes and processes is taken. AEMO, as the market operator, is ideally placed to perform this task. Additional opportunities to increase the efficiency and effectiveness of existing market operating systems or regulatory processes in a five-minute settlement environment may be identified as part of this work.

AGL considers that the wider regulatory and commercial environment will also influence an appropriate implementation framework for the Five Minute Settlement rule change. The implementation framework is likely to be more appropriate and robust if it is considered within the work program currently underway which is analysing responses to a changing energy environment. As noted in many submissions to this consultation, Five Minute Settlement may not achieve the expected benefits without simultaneous regulatory changes in other areas of energy market operation.

On balance, AGL considers that the Five Minute Settlement rule change is a natural response to the NEM's transition to an increasingly flexible and renewables based generation mix which will mirror the market transformation, including greater integration of demand side products and energy storage penetration.



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However, AGL also considers that this rule change represents a fundamental alteration of market design and that appropriate care should be taken in designing its implementation framework, including detailed analysis of the proposed 3 year implementation window and a recognition of the broader market vision of which this rule change is a part. Consequently, AGL supports the rule change on the basis that it is introduced when the AEMC is confident that there is sufficient means by which retailers have adequate access to risk management strategies to limit their exposure to the market price cap.

If you have any queries about the submission or require further information, please contact Brigid Richmond at [brichmond@agl.com.au](mailto:brichmond@agl.com.au) or on (03) 8633 663.

Your sincerely,

A handwritten signature in black ink, appearing to read 'Simon Camroux', written in a cursive style.

Simon Camroux

Manager Wholesale Markets Regulation



Attachment A

5 Minute Rule Implementation Areas								
Customer	5 Min Metering							A period of time for a shadow market to test effective operations
MCS	Upgrade Metering Spec to 5 Min							
Network	Upgrade Meter Data Systems	Update Billing System	Update Network Planning	Review Network Configuration Requirements				
Generation / Demand	Appropriate SCADA	Upgrade Forecasting Systems		Upgrade Bidding Systems	Update Financial Instruments			
Retail	Roll out additional Type 4 meters	Upgrade Meter Data Systems	Upgrade Forecasting Systems	Upgrade Bidding Systems	Upgrade Reconciliation Systems	Update Customer Contracts	Update Financial Instruments	
AEMO	Upgrade Meter Data Systems	Upgrade MSATS	Upgrade Forecasting Systems	Upgrade NEM Dispatch Systems	Update Forecasting Reports			
3 <sup>rd</sup> Party data Providers / Users				Upgrade Data Systems	Update Financial Instruments			