18 May 2017

John Pierce
Australian Energy Markets Commission
PO Box A2449
Sydney South NSW NSW
(lodged online at www.aemc.gov.au)

Dear John,

Directions Paper – Five Minute Settlement

The Australian Financial Markets Association (AFMA) welcomes the opportunity to provide comment on the Directions Paper – Five Minute Settlement ("directions paper"). AFMA represents the common interests of its members in dealing with issues relevant to the good reputation and efficiency and competitiveness of wholesale banking and financial markets in Australia. Our members include Australia's major energy companies and other users of over-the-counter electricity derivatives.

Whilst acknowledging the overall purpose of the rule change request and the directions paper, AFMA's focus is on the efficiency and competitiveness of electricity financial markets. Accordingly, our comments are limited to those areas that relate to this focus.

AFMA agrees with the AEMC's view that the rule change, if implemented, would have far-reaching consequences to the operation of the physical electricity market and the supporting contract markets, and appreciates the AEMC's extension of time to make the draft determination.

AFMA's view with respect to the AEMC's directions paper can be summarised as follows:

- AFMA agrees with the AEMC that ideally, a market where the price provides signals and incentives for supply to be responsive to demand over the shortest timeframe practicable will drive more efficient wholesale market outcomes. AFMA notes that the benefits that AEMC sees from the proposed change largely result from efficiencies in investments, bidding and operational decisions that would result from an improved price signal. We note however that the actual proposed benefit in the form of lower retail electricity prices is largely theoretical, and will be dependent on actual participant behaviour once 5 minute settlement is implemented. The effect on retail electricity prices may be different over the short, medium and longer term.

- This theoretical expected long-term benefit must be weighed against the not insignificant expected costs that will be incurred by market participants, both initial and ongoing, in order for the AEMC to determine if there will be a material net benefit from the proposed change.

- In determining the overall costs of such a change, the AEMC should be particularly mindful of the potential negative effects on financial market liquidity of such a change, as well as the potential for increased prices in financial market contracts for an extended period of time. Whilst the AEMC's focus in the directions paper has been on the effect on liquidity and prices of the cap market in particular, we contend that the potential effect on swaps and futures is just as important and potentially will involve additional costs.

- Given these potential negative liquidity and cost effects, AFMA suggests that the AEMC gives further due consideration and undertake further analysis with respect to this issue before making its draft determination.

- With respect to a transition period if implemented, AFMA member views are mixed in this regard, but most consider that a three year period is too short, and a longer period would be preferred.

In the direction paper's summary section, the AEMC correctly notes the following: "*The potential contract market disruption from a move to five minute settlement is of particular concern to the Commission. The contract market plays a crucial role in that it reduces price uncertainty for generators, retailers, major industry and consumers of electricity. It allows generators to manage risk, secure finance and provides signals for on-going investment in generation capacity. For retailers, it provides for security of supply to deliver price stability for consumers, and allows them to secure financing for their own operations. Given the importance of liquidity in the contract market, it is vital that disruption to this market is minimised.*"

AFMA agrees with the above. The spot market and contract market for electricity are inextricably linked, and changes to one, for better or worse, will affect the other and vice versa. Consequently, any significant change to one market (such as five minute settlement) will have consequences for the other.

The response below focuses on ways in which the suggested change to 5 minute settlement could affect the efficient functioning of the financial market and in particular contract market liquidity and pricing. Hence, we have only responded to specific questions in the directions paper that relate to this focus.

Materiality

2b. How material are the price signal inefficiencies under 30 minute settlement and are there other data or data sources that would enable this issue to be more comprehensively addressed?

Whilst this is not an area in which AFMA has sufficient expertise to answer in full, it is clear that participant behaviour in the wholesale spot electricity market for each 5 minute period is influenced by the fact that settlement occurs based on the 30 minute average. As the Committee notes on p23, with five minute settlement it would be expected that incentives would change, resulting in different bidding strategies and responses by generators.

The AEMC in its analysis of current price signals has noted the variation between dispatch prices and settlement prices under the current 30 minute settlement regime, and that this form of variation would be reduced under 5 minute settlement as participants' behaviours alter. In theory, this should provide a wholesale price benefit in the long run. However, as noted, given that bidding strategies will change under 5 minute settlement, it is virtually impossible to quantify any benefit of a change to 5 minute settlement in the absence of actual data that examines the effects of these yet-to-be-developed different bidding strategies. Indeed, there is a risk that, despite the removal of price distortions created by 30 minute settlement, the different bidding strategies and generator responses could actually result in higher average or potentially more volatile prices at times under a 5 minute settlement regime.

We note that AEMC has asked for further information on potential 5 minute bidding behaviour in Question 4, and we trust the answers to that question from electricity participants' submissions will help inform AEMC's analysis in this regard.

5a. What other issues are likely to be material in considering the introduction of five minute settlement?

As noted by AEMC, the eventual benefits of any efficiencies brought about by the change are material in principle. In order for the AEMC to come to a well-informed decision, and be reasonably certain that a material net benefit exists, the AEMC will need a degree of confidence that the theoretical benefits should be greater than the sum of a range of costs, both actual and potential.

Other than those actual costs already identified in the directions paper (for example, IT systems, metering, and hedge renegotiation costs), AFMA would like to highlight the potential risks to financial market efficiency, particularly with respect to financial market liquidity, that could arise as a result of the change. The potential negative liquidity effects, on all financial market contracts, as well as uncertainty about future prices, also has the potential to result in increased hedging costs for participants over a significant period of time, and this could be passed through in the form of higher costs for consumers. The effect of the change on the liquidity and efficient functioning of financial markets is in AFMA's opinion a material risk and needs to be closely examined. A more detailed discussion on this issue is in the next section.

Financial market liquidity and pricing

9a. To what extent would contract market liquidity be affected by a move to five minute settlement, as distinct from other pressures on liquidity?

We note the Committee's concern with respect to workable hedging and risk management outcomes on page 57 of the directions paper:

"T*he Commission would be concerned if the rule change was to undermine the ability of market participants to manage risk through the wholesale contract market, as this could damage competition in the retail market and lead to higher prices for consumers"*

It appears that the AEMC's analysis with respect to liquidity in the financial markets is primarily focused on the liquidity and price of cap contracts in the contract market, on the basis that the pricing will most likely be higher and the fact that it is likely that the supply of caps will fall substantially.   AFMA agrees that, with respect to the cap market, supply and hence liquidity in caps will likely be significantly reduced and the price for caps will likely rise under 5 minute settlement. This is not an insignificant cost and AFMA believes that liquidity in cap contracts will suffer and prices will likely rise. As AEMC has noted on page 107, whereas new technologies could eventually replace any reduction in supply, there is uncertainty as to whether they would replace the existing supply of caps, and over what time frame this might occur.

However, the directions paper appears to dismiss or at the least downplays the potential negative effects on liquidity on other electricity financial derivatives, such as swaps and futures.

AFMA believes that a change to 5 minute settlement has significant potential to affect the liquidity and price for all financial market contracts in electricity, and that the AEMC has not undertaken sufficient analysis as yet to factor these potential costs into their cost considerations.

Liquidity, and the efficient functioning of financial markets in any product relies on a number of factors, not the least of which is the willingness of buyers and sellers to enter into long-term arrangements. This willingness to enter future contracts is influenced by uncertainty with respect to the future, be it regulatory, political, environmental, or otherwise. For example, the retrospective carbon tax repeal in 2014 created political uncertainty which severely impacted the liquidity of electricity derivatives for an extended time until repeal was finalised. Likewise, the proposed introduction of a 5 minute settlement regime itself creates regulatory uncertainty, and this can affect willingness to trade in forward markets, and hence market liquidity. Whereas an eventual decision either way by AEMC will reduce this uncertainty, a decision to implement 5 minute settlement creates a new uncertainty with respect to forward pricing of a new benchmark.

The 30 minute settlement regime has been in place for over 20 years, and this has provided certainty for the spot and financial markets to develop on the basis that 30 minute settlements is the “benchmark” rate for almost all electricity financial derivatives in Australia. A change to 5 minute settlement effectively creates a new benchmark, and participants in the financial markets will need a period of time to adjust to the new benchmark. Consequently, AFMA believes that there is a significant potential that the change will have a negative effect on liquidity and turnover in all electricity derivatives (at least for a period of time), including swaps and futures as the markets adjust.

A forward price at any point in time (as per swaps and futures) in a product is effectively the market’s expectation (via the agreement between buyers and sellers) of the average of spot prices over that future period. For example, a current electricity swap contract for the 2019 calendar year will reflect the average current market expectation of spot prices for each 30 minute period in 2019. If the market moves to settling on a 5 minute basis, then the price of an electricity swap contract for 2019 will then reflect the average expectation of spot prices for each 5 minute period in 2019.

Whilst Energy Edge notes that 30 minute swaps and 5 minute swaps are mathematically equivalent, they make limited comment on whether liquidity will be affected in swaps as a result of a 5 minute rule change, nor whether the actual forward price would change as a result of different future expectations of prices under a new settlement regime. Importantly, and as noted in 2b above, the rule change itself will result in different participant behaviour in the wholesale spot market if implemented, and hence will create different 5 minute prices than those under a 30 minute regime. This has two potential key impacts on the forward markets for electricity prices:

- The uncertainty with respect to the unknown behaviour of future 5 minute prices is more likely to reduce the willingness of participants to transact in financial markets, and hence reduce liquidity in all financial contracts, not just caps, for at least a period of time before, during and after the date of change to 5 minute settlement.
- The actual forward price will be dependent not only on the lower liquidity that may be available as a result of this uncertainty, but also on market participant’s expectations of likely future 5 minute prices under the new settlement regime. If for example market participants’ expectations are that the new settlement regime will result in higher 5 minute prices over time, higher forward contract prices will result. The converse is true if lower future 5 minute prices are expected by market participants.

AFMA is concerned that the AEMC has not adequately considered the risk that liquidity in all financial market contracts (not just caps) will be negatively affected as a result of a change to 5 minute settlement and contends that the risk of lower liquidity in financial market contracts and higher forward prices for a period of time is not immaterial. We urge the AEMC to take these into consideration further as these have the potential to translate into additional costs for consumers.

AFMA notes that in consultation with its member base, a strong dissenting view with respect to the potential negative affect on liquidity and forward prices has been expressed by a member.

AFMA recommends that the AEMC undertake further analysis on the potential liquidity impact on all financial market contracts of a change to 5 minute settlement (not just caps), and attempt to measure the potential price impact of the change, as this could have a significant impact on its cost/benefit analysis.

9b. How would the contract markets adapt to a move to five minute settlement?

As noted above, it is possible that it will take a significant amount of time for the contract markets to adapt to a five minute settlement regime, both before and after the moment when 5 minute settlement begins. In particular, the likely changed participant behaviour in both spot and contract markets (and hence prices that will result) has the potential to have a significant impact on contract liquidity and pricing, and it will potentially take a significant amount of time for liquidity to develop in the new contracts. During this period of adoption, forward prices could be higher than previously due to liquidity effects and uncertainty surrounding participant and price behaviour. In the long run, however, and provided that participants' willingness to transact improves over time, liquidity should return to the market, and if forward market participants agree with the AEMC's view that the change will result in lower spot prices in the future, then forward prices will reflect expected lower spot prices as well.

9c. To what extent would new types of hedge cover emerge?

If the AEMC decides to proceed with 5 minute settlement, financial market participants, will need to develop and agree upon new standardised documentation in swaps and option contracts that reference 5 minute settlement prices (albeit this can happen in advance of the change once a decision is made). AFMA understands that some participants may have already started to bilaterally agree individual long-term contracts which have clauses that have been developed to allow for a change to 5 minute settlement, although AFMA has not been engaged in the work of creating any new form of standardised documentation. The Australian Securities Exchange will likely evolve the range of futures and options contracts to cater for the change if implemented as well. We have no doubt that new standardised contract products and futures will emerge to allow for hedge cover, but again note that it may take time for liquidity in these new products to build, particularly in the cap market.

Transition period

8a. To what extent would a transition period mitigate the one-off contract negotiation costs of a move to five-minute settlement?

AFMA agrees that, if the AEMC decides to proceed with 5 minute settlement, a significant transition period will mitigate the one-off negotiation costs of a move to five-minute settlement, as this will allow the majority of current contracts to mature without the need for renegotiation. As noted by AEMC, it is important to ensure that "market disruption events" provisions are not triggered for as many current contracts as possible.

As noted by the AEMC, although firm data on outstanding maturities is difficult to estimate, historical Australian Financial Markets Report data indicates that a majority of contracts traded in most years historically have been for relatively short periods. This is not unusual given the uncertainties with respect to the future state of the electricity market in recent years. However, AFMA members have indicated that there are a significant number of contracts (such as PPAs) that have much longer maturities (out to 2030 in some instances). Depending on the transition period chosen, one-off negotiation costs and market disruption events are inevitable for participants with long-term contracts. Consequently, it is fair to say that the longer the transition period, the greater the mitigation of one-off contract negotiation costs.

8b. What length of time would be appropriate to enable contracts to either expire or be adapted to take into account the future implementation of five minute settlement?

The AEMC has suggested 3 years as an appropriate period for contracts to expire or be adapted. We understand that AEMC is looking for a trade-off between realising the expected benefits of the change as soon as possible and minimising the costs, but many members believe that 3 years is too short.

We note that implementation in a shorter time frame than 3 years would be likely problematic for Settlement Residue Auctions and Australian Securities Exchange contracts, and as noted above, over the counter contracts will be impacted beyond a 3 year period.

AFMA members hold different opinions as to whether the 3 year transition period is achievable, as there are many issues to consider outside of financial market implications. Most members consulted have expressed a preference for a longer transition period, to minimise the expected negative consequences and costs of a change such as those highlighted above, as well as ensuring market readiness for the proposed change, both in the physical and financial markets.

Yours sincerely

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