Submission to:

The Australian Energy Market Commission (AEMC)

Response to: Five Minute Settlement Rule Change

From UnitingCare Australia

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Contact:
Mark Henley
Energy Advocate
UnitingCare Australia

Ph: 0404 067 011

UnitingCare Australia is the national body for social services in the Uniting Church in Australia, supporting service delivery and advocacy for children, young people, families, people with disabilities, and older people

UnitingCare Australia

Background

UnitingCare Australia is the national body for the UnitingCare Network, one of the largest providers of community services in Australia. With over 1,600 sites, the network employs 39,000 staff and is supported by the work of over 28,000 volunteers. We provide services to children, young people and families, Indigenous Australians, people with disabilities, the poor and disadvantaged, people from culturally diverse backgrounds and older Australians in urban, rural and remote communities.

UnitingCare Australia works with and on behalf of the UnitingCare Network to advocate for policies and programs that will improve people's quality of life. UnitingCare Australia is committed to speaking with and on behalf of those who are the most vulnerable and disadvantaged, for the common good.

UnitingCare Australia is making this submission in part to express our interest in the topics under consideration through this rule change and to indicate an interest in greater involvement assuming that there is further exploration of this rule change proposal.

Our particular interest is in the potential impacts, positive or negative, for small consumers both households and small business.

The we recognise that the wholesale market for electricity is complex and do not pretend to have a full understanding of all of the implications of the proposed rule change, within the initial consultation period for the consultation paper. Back following comments should be regarded as preliminary with the expectation that further consideration of the issues at hand will be undertaken during anticipated continued consideration of this rule change proposal over the coming months. We observe that the wholesale market is the element of the Australian National electricity market that has had least consideration by groups taking a small consumer perspective, we opine that the wholesale market, as with the rest of the energy markets is facing considerable change from new technologies and new consumer expectations and so greater consumer consideration is timely.

Is our opinion that the most important question posed by the consultation paper remains: "is there a problem?" So this is the question to which we will give greatest consideration.

Issue 1. Is there a problem?

In particular we consider:

1.1 to what extent does the mismatch between dispatch and settlement intervals create risks for market participants? What is the materiality of these risks and under what circumstances are they most acute?

1.3 would the wholesale market operate more less sufficiently if supply-side participants were settled on a five minute basis

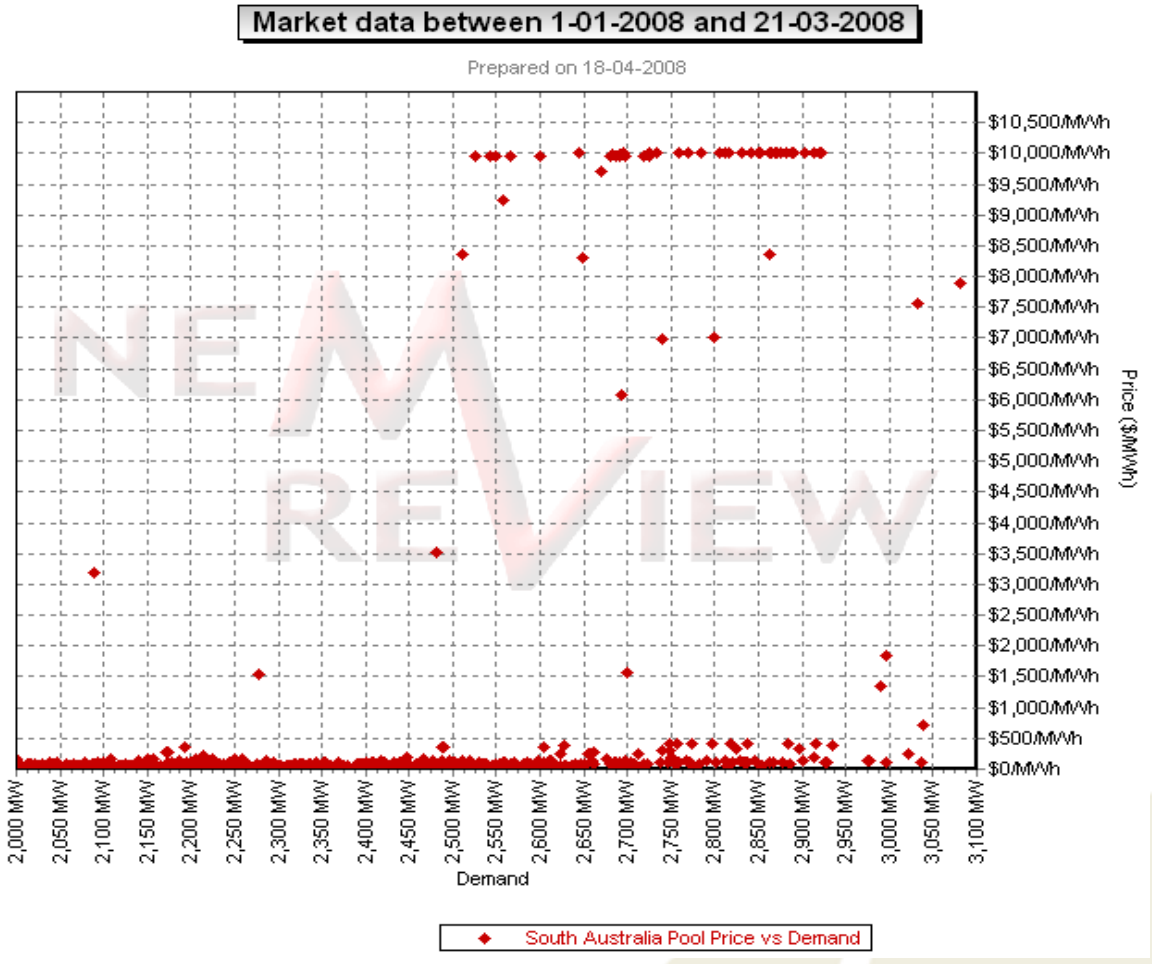
1.4 compared to the current arrangements, would settlement on a five minute basis be more conducive to demand-side participation? How would demand-side participants respond and what impact would this have on market efficiency?

By way of background, UnitingCare Australia, through Uniting Communities which is based in South Australia have been concerned about the potential for the exercise of generator market power particularly in smaller NEM jurisdictions, for some time.

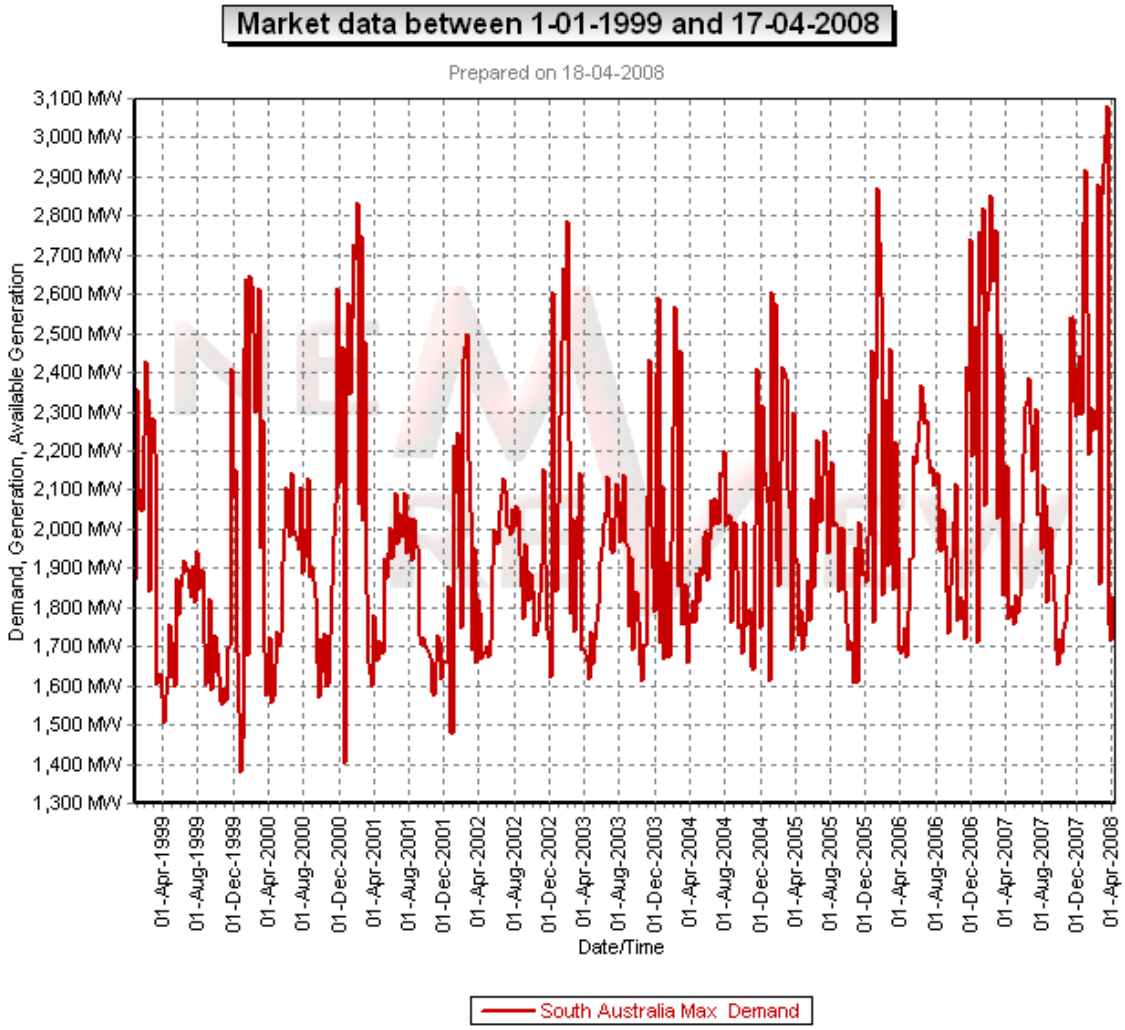
The following extract is taken from a submission to the AEMC as part of the effectiveness of competition review for South Australia conducted in 2008.

"6.6 Taking spot risk in SA

In the summer of 2008, the half hourly spot price in SA exceeded $300/MWh on 74 occasions, exceeded $1000/MWh on 57 occasions and exceeded $9900/MWh on 41 occasions in the three month period. This indicates that taking any exposure to the spot price was extremely risky. What is just as concerning is that these high prices were endemic when demand was at or above 2500 MW, a relatively modest level!



Every summer since the commencement of the NEM, demand in SA has exceeded 2500 MW, as the following graph of the weekly high demands shows:



This clearly demonstrates that what occurred in summer of 2007/08 could apply every summer and as demand increases, this ability of TIPS to set prices gets stronger, and the same outcome as seen in summer 07/08 can be expected to be repeated.

The Major Energy Users provided a report to the AER[1] regarding these price events and identified that AGL/TIPS had set the spot price in SA during summer 2008.

The MEU concluded (page 47):

> *"TIPS has set the spot price in SA, both by spiking the price and creating a floor price.*

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[1] MEU, **Investigation Into the Price Spikes in South Australia On 4 and 10 January 2008, February 2008**

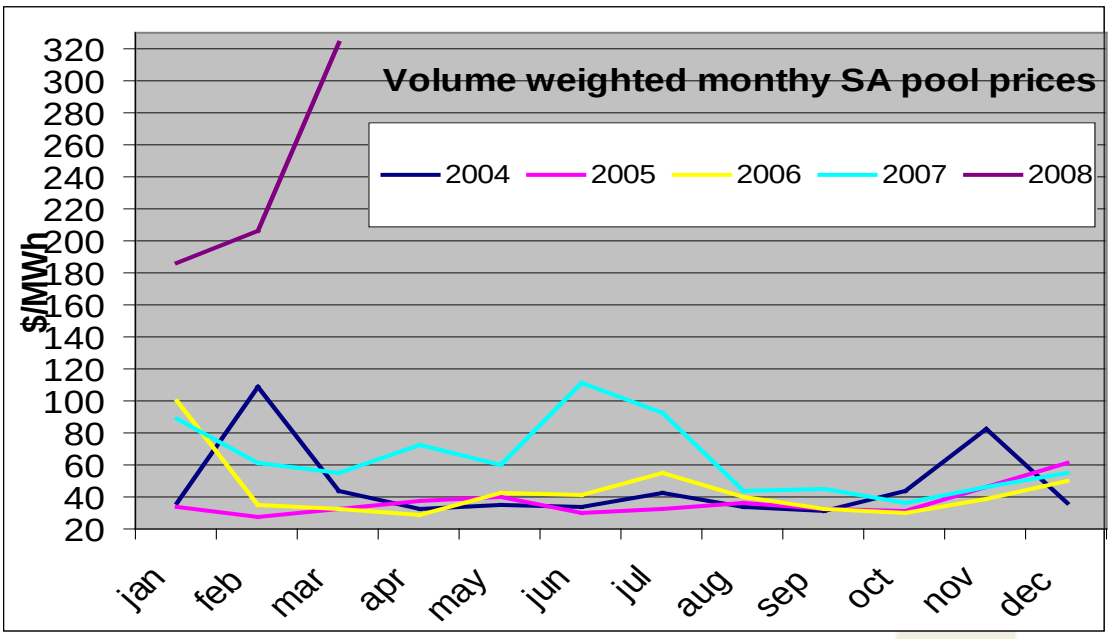
Effectively, TIPS used its undoubted position of market power in the supply arrangements and the Rules to their maximum benefit, in order to create an apparent shortage of supply. Whether this was done through strategic bidding, or even rebidding, the TIPS approach is unique to it, due to its dominance as the largest generator in the SA region.

This approach by TIPS is analogous to any supplier in the market attempting to drive up prices. If the supplier can effectively create an artificial shortage of a needed product with no scope for demand responses then by doing so, it can drive prices up."

The MEU points out that the market power that TIPS has could get even stronger due to constraints in the Heywood interconnector (page 47):

"Flows from Victoria to SA are being constrained by wind farm outputs at Snuggery, in the lower SE of SA, and this is going to get worse as Lake Bonney Stage 2 wind farm is complete, because this will effectively double the intermittent generation connected at Snuggery and constrain Heywood even more."

That a single generator has the ability to set the SA spot price creates a major (even insurmountable) risk for SA retailers (other than AGL Retail). During Q1 of 2008, it is apparent that TIPS used its market power aggressively to increase the quarterly average volume weighted price dramatically above historical levels to nearly $200/MWh. The following graph shows the monthly average volume weighted spot prices in SA for the last 4 years, indicating the outcome of the use of the market power held by TIPS.



Source: NEMMCo data

With outcomes possible such as seen in the first quarter of 2008, retailers would be extremely loath to expose themselves to the spot market.

In fact, the only retailer that could take such spot risk would be AGL, Retail as it has the ability to offset its risk through the revenue it raises through generation at TIPS.

6.7 Conclusions

It is apparent that there is a structural problem in the SA region of the NEM which has caused a significant lack of competition in the supply of wholesale electricity.

1. *There is barely sufficient indigenous firm generation in SA to match the peak demand in the region.*
2. *Taking the risk on interconnection and wind generation exposes retailers to the spot market*
3. *The spot market has shown extreme volatility in summer of 2008, directly related to the sale of TIPS to AGL*
4. *The dominant generator in SA has the market power to set the spot price every summer.*
5. *Retailers must have firm generation offers to avoid the risks inherent in relying on interconnection and wind generation, and must avoid being exposed to the spot market*
6. *In order to make offers, retailers must include in their portfolios of generation, an element of power supply from TIPS, which is owned by a competing retailer.*

This assessment indicates that competition in the wholesale market for generation is heavily impacted by the ownership of the largest generator in the region, and not to include that generator in the portfolio mix, means that the retailer must take some sot market risk.

This risk of spot market exposure is very high as AGL/TIPS has the market power to set the spot market price every summer. In turn, this drives the price level of hedge and other contracts in SA. The merged AGL/TIPS, a vertically integrated business with dominant generation and retail reduces the liquidity in the market place, thereby limiting competition at the retail level, including deterring new entrants at both the generation and retail sectors."

Much more recently, QCOSS and CCIQ in their joint submission to the Queensland Productivity Commission have also raised concerns about the potential for the exercise of market power in the Queensland wholesale market, they say:

"It is clear that Stanwell is the dominant generator in Queensland and it has the installed capacity to provide nearly 4000 MW of generation. The combined capacities of all other generators in Queensland is just over 8000 MW. an actual recorded peak demand of 9097 MW recorded on 1 February 2016, it is clear that with some 8000 MW of regional generation (excluding Stanwell's notional generation capacity) coupled to an import limit of about 600 MW, Stanwell 9 is in the position of having, at times, market power to set spot prices in Queensland because it must be dispatched in order to meet Queensland demand.

While in theory, the calculations might indicate that Stanwell has market power when the regional demand exceeds about 8600 MW, in practice, the trigger point for being able to exercise market power is significantly lower than this, because:

- *Not all generation will be available at all times;*
- *Not all generators will be able to be dispatched to their maximum capacity; and*
- *The maximum capacity of the interconnectors might not be available for flows into Queensland.*

However, even if we assume a trigger point of 8600 MW, we can see that, based on Queensland demand and the Queensland generation available excluding Stanwell, Stanwell would have had a number of periods when it had market power in the past 10 years (in 2009, 2010, 2011, 2012 and 2015), but that these periods of having market power only occurred infrequently and usually for only around six or seven trading periods in the year.

However in the first two months of 2016, Stanwell has already had clear market power for a total of 43 trading periods where the peak demand exceeded the 8600 MW trigger point. The clear conclusion is that even with the actual demand recorded in 2015-16 being lower than what was forecast, there has still been a massive increase in the number of trading periods when Stanwell had market power.

There is also an expectation that Stanwell will have market power more frequently in future years as AEMO is forecasting that peak demand in Queensland will rise significantly in future years.

Of further concern is that the above analysis is based on the assumption that all gas fired generation will be available for dispatch. Should rising gas prices result in reduced availability of gas generation, the market shares of generation will change significantly with Stanwell further increasing its ability to exercise market power.

The new rules implemented by AEMC are untested. However, under the rules, when there is the exercise of market power, the AER can only monitor its use and the market impacts. There is no ability for the AER to provide redress for consumers or to prevent it being repeated. We therefore agree with the QPC that intervention by the Queensland Government is warranted, above and beyond what is required under the National Rules.

We support the QPC's Recommendation 7 to require the government owned generators develop a public Code of Conduct that acts to support consumer interests. We also support Recommendation 8 to impose a process of self-reporting to the shareholder on actions that the generators have taken related to the exercise of market power. We consider that both of these recommendations should not only highlight the activity related to rebidding, but should include any actions where the use of market power is abused. This should be reported on in detail to the shareholder, including an assessment of the impacts these acts have on the wholesale market.

Market power can be exercised in a number of ways to the detriment of consumers. While the QPC has focused its analysis and recommendations specifically on rebidding, we consider there is a strong need for the QPC to widen the scope of its investigation and recommendations to also consider the impact of:

- *Volatility*
- *Economic withholding of capacity*
- *Tacit collusion*
- *Bidding of low ramp rates and*
- *Use of network congestion."*

These are but two examples from two jurisdictions spread over eight years that indicate consumer concern about the potential for the exercise of market power in Australian wholesale electricity markets, at least in some (smaller) jurisdictions.

This is a problem!

We recognise that the potential for wholesale market power has been the subject directly and indirectly of previous rule change proposals one of which from the MEU is likely to result in greater wholesale market monitoring and reporting by the Regulator (AER), this current development is most welcome.

The issues most at play for this rule change proposal are about perceptions of efficiency of the wholesale electricity market and transparency. The subsequent question, no doubt, then becomes at what price can existing wholesale energy market efficiency and transparency can be improved and whether there is net long-term benefit to consumers in making such moves?

On 15 June 2016, a major national retailer, AGL, announced price increases for electricity in the jurisdictions in which it operates in Australia, with a price increase of about 12% for the average South Australia customer with annual use of near to 5 Mwh per annum. Energy Australia has increased prices for this financial year by nearer 15% while Origin's increases

are closer to 6%, and at a time of an annual CPI of 1.7%. The main reason given for this latest substantial price increase is uncertainty in the wholesale market, the retailers citing the much higher forward contracts being offered to large business customers as evidence of growing uncertainty about wholesale prices for the immediate future and so all customers, including small customer's are being burdened with very high prices as a result of uncertainty in the wholesale market.

We submit that the two examples that we have given of consumer concerns about wholesale electricity markets in Australia, from 2 different states and with a gap of 8 years, coupled with current, significant price increases to end consumers of electricity for 2016-17, means that there is a problem with Australian wholesale electricity markets.

We are consequently interesting in exploring the 5 minute settlement rule change proposal since it has the potential to improve wholesale market transparency and efficiency.

Issue 2 SCADA

5. Is using SCADA measurements a viable alternative to replacing existing metering equipment in order to implement five minute settlement?

6. What changes would be required so that SCADA measurements could be used for profiling energy in the settlement process?

Concerning the question about data sources, from what we understand we support the Sun Metals proposal of using data from SCADA systems. The advantages bringing that SCADA systems are in use already to monitor and manage power systems in real time with a typical more measurement interval of four seconds, according to table 5.1 from the discussion paper. A measurement interval of seconds is appropriate for a market settlement proposal involving five minute intervals.

Regarding changes, accuracy of the SCADA system could be improved, but we are unsure about the technical implications and costs of seeking this improvement.

Issue 3: 5 minute metering and other options

7. *What changes would be required to metering infrastructure so that five minute metering data could be used in the proposed five minute settlement regime?*
8. *What changes to participants systems would be required to accommodate a five minute data format?*
9. *Could five minute settlement be implemented without changing the existing data format*
10. *Are there any other data sources such as dispatch targets, that would be preferable to SCADA profiling or five minute metering?*

We are not well placed to answer this set of questions as we are not a market operator or direct participant in market settlement arrangements. We are interested in customer implications and so would be most interested in the cost implications of any metering infrastructure upgrade requirements and subsequent implications, particularly for smaller end-use customers.

Issue 4 settlement residue

11. *should the full value of the settlement residue be recovered from demand-side participants remaining on 30 minute settlement?*
12. *Would it be feasible to merge the new residues with existing intra-regional settlement residues? Are there any alternative mechanisms that would be preferable?*
13. *Should five minute settlement instead be compulsory for all demand-side participants? If so, what threshold would be appropriate for compulsory demand-side participation*

We are tending to the view that if a move was made to 5 minute settlement's it should apply for all market participants, to reduce the potential for gaming and to enhance system transparency. We also recognise that the market is going through a period of rapid change at the moment with third-party providers, metering providers, small medium and larger size renewable generation increasingly part of the generation input, the rise of the 'prosumer', and increased desire from demand aggregators and other demand-side measures to be more active players in the market. So any move to a five minute settlement regime, on top of all these other changes which are occurring, mainly through market mechanisms, means that if 5 minute settlement were to be adopted there would need to be a transition process leading to an end game where all participants are subject to the same rules.

It has also been suggested that a potential benefit from five minute market settlement would be for improved access to the market for renewable generation and demand side management opportunities. We do not know enough about the detail associated with these sorts of claims, but would be supportive of any moves which increase market efficiency and transparency and enable demand side measures and new technologies to be 'seamlessly' integrated into the market.

Issue 5. Contracting

14. *how would the proposed move to 5 minute settlement affect existing contractual arrangements?*
15. *Would the proposed optionality for demand-side participants affect the ability of participants to contact with each other? Would a generator settled on a five minute basis be able to contract with a consumer settled on a 30 minute basis?*
16. *What impact would move to 5 minute settlement have on contract market liquidity?*

The question of contracting and implications of this contracting if a 5 minute settlement proposal was accepted is an interesting one, and one that we cannot be definitive about. However, as with the previous set of questions. We recognise that the changing market will of necessity need to see changes to forward contracting arrangements and forecasting, irrespective of whether five minute settlement is applied.

The reality is that there are new players in the market, in comparison to the players when the NEM was established, with new system management and services also been provided into and through the NEM. We suggest that all market participants will need to adjust to any rule change that applies across the market, this one being no different.

Issue 6 other solutions

17. *having regard to the issues raised in the rule change request and in the event that there is a problem found to be present, do you consider there to be any alternative solutions that are preferable to the proposed solution?*

We recognise that we have limited capacity to respond to the technical questions and the detail behind this rule change proposal at this time, and suggest other consumer groups are similar position. Consequently we cannot be definitive about all the pros and cons of the five minute settlement proposal. It is our understanding that there is potential for improved benefits to consumers, large and small, through greater transparency in the market and less potential for 'gaming' the market, particularly in smaller jurisdictions, if a five minute settlement proposal was implemented.

Therefore we are keen to see the proposal explored in more detail with a little more time and capacity for consumer groups, including UnitingCare, to be engaged in a deeper understanding of the issues at play and consequently to form a clearer view about the merits or otherwise of this proposal.

Conclusion

So our position, in summary, is to agree that there is a problem with the wholesale market, within the NEM, at the moment. We are therefore supportive of the five minute settlement proposal, conceptually, recognising that more work needs to be done to better understand the mechanisms and consequences, including end impacts for customer bills. UnitingCare Australia is keen to be part of the next steps of exploration.