Major Energy Users Inc.

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Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

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Attention: Ms Sarah-Jane Derby

Reliability Frameworks Review
Response to Directions Paper
EPR0060

The Major Energy Users (MEU) is pleased to respond to the AEMC Directions Paper for its Reliability Frameworks Review. The MEU represents the interests of large electricity and gas users across the NEM and has been a consistent contributor to the deliberations of the AEMC over the years.

The MEU notes that the Directions Paper addresses four key areas, viz:

- Forecasting and information provision
- Day-ahead markets
- Wholesale demand response
- Strategic reserve

By and large, the MEU considers that the AEMC Directions Paper details the issues regarding each of the four main topics well. With this in mind, the MEU addresses its concerns about each of the issues.

As a general observation, the MEU points out that consumers don't want to get involved in the electricity market and wish to concentrate their efforts on their core activities. The MEU also observes that consumers will get involved in the market in order to ensure that the overall cost to them of this essential service is minimised. However, involvement in the market is not costless to the consumer so there needs to be a convenient way for them to contribute to making it more efficient and for the market to reimburse them the costs they incur in making their contributions.

While the electricity supply chain is segmented and different approaches to management of the supply chain assets are applied in the different sectors, it is important to note that consumers see the service in terms of the delivery. For example,

2-3 Parkhaven Court, Healesville, Victoria, 3777

ABN 71 278 859 567

the reliability of networks is seen differently by the AEMC to the way it addresses the wholesale market reliability, yet consumers see reliability in terms of the electricity delivered to their meter – that is, as a bundled service. MEU members report that they have networks approaching them to limit their demand at certain times and wholesale market aggregators seeking to limit demand at other times. While the MEU understands the reasons for the different approaches, there needs to better coordination of what is required of consumers to ensure that the consumers can better respond in a more managed way to the needs of the market and limit the costs of their demand response.

To maintain the differentiation between competing needs of the different sectors requires the AEMC to examine the issues in a more holistic manner in order to get the best involvement by consumers.

These observations colour the following comments about each of the four topics raised by the AEMC in the Directions paper.

Forecasting and information provision

The MEU sees that there has been a consistent bias to over-forecasting future demand (ie that forecasts tend to be higher than actual). Equally, the MEU considers that forecasting is a very inexact science and that those involved with forecasting are trying their best. Overall, consumers, consider that over-forecasting is a better outcome for them (ie the lights won't go out) than under-forecasting (the lights do go out). The issue lies with the degree to which over-forecasts are made, as these will initiate inefficient investment in network and generation assets and so increase unnecessarily the cost of delivered electricity.

The MEU supports moves to reduce the bias to over-forecast and more and better reporting of the differences between forecasts and the actual outcome

The MEU notes that, as intermittent generation is a price taker, these generators would have a bias to under-forecast what might be generated from their solar and wind facilities. Under estimating output will drive market prices higher which benefits the intermittent generators. With this in mind, the MEU has concerns that moving from the current AEMO approach to one of self forecasting might not deliver the best outcome for consumers. However, the MEU does see the value in intermittent generation providing forecasts of their expected output to AEMO to help inform its deliberations. The MEU considers that AEMO should still carry out its own forecast but use its judgement in the use of other sources of information that is provided (such as from intermittent generation and from networks for embedded generation) to develop the forecasts they make.

While the MEU agrees with the AEMC that there is a role for retailers to be involved in forecasting demand side responses, the MEU makes the point that retailers do not control what consumers will do at any particular time. Further, the MEU also notes that networks also undertake their own forecasts and have contractual agreements with

consumers which detail their peak demand s and when they might load shed on demand. The MEU is aware that its members have significant variations in demand, usually a result of when different products are made, when maintenance activities are implemented and some even vary demand based on what the price is in the wholesale market. So, forecasting demand at an individual user level is not straight forward. Equally, the MEU is aware that, in aggregate, demand reflects actions of one end user which can add to or even offset the actions of another, so the aggregate outcome incorporates a diversity of variations of expected demand across the market. This means that each retailer will make its forecast based on a smaller cohort of end users than in aggregate across the NEM, introducing the likelihood of an over-statement of demand[1] when these smaller cohorts are aggregated.

The only way that retailers can control consumer load shedding is via a contractual obligation, much the same way that networks can provide load reductions when networks get too heavily loaded. The MEU also notes that even if there is a contractual obligation to load shed, a consumer may elect to incur a penalty for its own reasons (eg the need to fulfil an urgent order or to maintain cooling levels). This means that retailers might not be better placed to forecast expected demand than AEMO.

With these thoughts in mind, the MEU is concerned that imposing an obligation on retailers to be the source of forecasting load reductions is not a simple as might appear. In particular, to impose penalties on retailers for poor forecasting is likely to increase costs for retailers which will be passed onto consumers. So there is the potential that the imposition of penalties on retailers could offset the benefits to consumers of the better forecasting.

The MEU does not consider that retailers should alone be responsible for demand forecasting, but should be a contributor to the process, along with networks and, intermittent generation. The MEU considers that AEMO should remain the primary forecaster but that retailers, intermittent generators and networks should be obligated to provide input to the forecasting process.

Day-ahead markets

Based on the information provided in the Directions paper, the MEU remains unconvinced of the need for an ahead market, bearing in mind that much of the information that such a market would provide is already embedded in the NEM design.

The MEU notes that to achieve one of the objectives outlined in the Directions Paper would require end users to provide expected demand information to AEMO as part of the ahead process. The MEU refers to the AEMC decision not to make a rule change requiring end users to provide demand bids into the market (see ERC0189 and ERC0203) and for the reasons provided by the MEU in its response and provided by the AEMC in its final decision, the MEU considers a requirement for end users to

[1] For example, the aggregated peak demands of each substation in a network invariably overstate the system peak demand.

provide ahead forecasts (presumably with some penalty for poor forecasting) would impose considerable costs to end users and provide little benefit to the market.

The MEU considers that, as stated above and in the responses to ERC 0189 and ERC0203, end users of electricity have significant variances in their operations that such a forward forecast would invariably be incorrect as there are many different elements that make up the actual total demand at each site.

The MEU considers that although the AEMC has attempted to provide reasonably detailed proposed changes, the work included by the AEMC is to a high degree quite hypothetical and lacking in clarity as to what the costs and benefits of an ahead market might deliver. The MEU notes the first sentence of the final paragraph of chapter 4 and comments it summarises perfectly the MEU position.

> "The Commission notes more targeted changes and improvements to the current market arrangements could be made to achieve some of the objectives of an ahead market."

The MEU considers that there has yet not been made a case for the introduction of an ahead market. The MEU is keen to see the outcomes of the proposed further work by the AEMC and AEMO before commenting further.

Wholesale demand response (WDR)

In its response to the Interim Report, the MEU provided a view that the AEMC does not have a good understanding of the way the demand side could provide wholesale demand response (WDR). The Directions Paper recognises this and also recognises that the current rules might not allow third parties seeking to aggregate WDR the ability to deliver third party aggregation..

Equally, MEU members have observed that dealing with their retailers to negotiate a WDR mechanism is less than satisfactory as members comment that there is no competition to assist in getting the best deal for the WDR they might provide. An end user selects its retailer for the provision of electricity and, as this is by far the major cost element, the value of any WDR involvement will be modest in comparison. The MEU considers that having the ability to have a third party offer a WDR service (such as with an aggregator or as negotiated directly with AEMO for summer 2017/18 under the RERT) allows end users to adequately price the provision of WDR to offset the significant costs involved. MEU members have observed that retailers take a considerable share of the benefit from the WDR proposed, but incur little cost.

The MEU restates comments above and in previous submissions, that end users have a preference for focusing on their core activities rather than providing WDR. So while the MEU can see the merit in providing WDR for the wider benefit of the NEM, end users are not altruistic and so WDR and the processes for implementing it have to be made attractive to end users to get their involvement and made easy to implement from an end user point of view.

The other key aspect about end users and WDR is that there are times due to the activities of the end user, that even though they might normally be prepared to offer WDR, they might not be able to comply at a specific time or to the level they normally might be able to deliver, because they are not using as much electricity at the time, the cost of load reduction is greater than the benefit that might ensue, or critical operations must continue. This means that whatever is established with regard to incentivising and/or making possible greater amounts of WDR, the approach has to recognise that each end user might not be able to offer some or all of the WDR proposed when it is needed. The value of an aggregator of WDR is that the aggregator will "sell back" to the market less than it might have contracted to accommodate potential shortfalls in WDR caused for these reasons.

The MEU considers that the AEMC analysis of the options fails to recognise that end users have a primary desire to use electricity for their core activities and that WDR is at best, a "side activity" consideration which might reduce the overall costs of electricity needed.

While important at the margin, WDR should never become a significant feature of the electricity supply system as this would imply a major failure of the market. With this in mind, it is not expected that end users will have an expectation that they will be called to provide WDR on a regular basis and so to implement changes that are based on the expectation of regular calls for WDR is not appropriate. This means that to implement a solution for increased WDR should not introduce innovations that result in changes to the normal conditions of supply for the end user's ongoing operations, implying that proposed option 2 is not the better solution of the two options discussed.

The MEU considers that option 1 reflects the reality that WDR is required occasionally and that the normal operation of the market is where the vast majority of end users access their electricity via a retailer.

The MEU is also interested in seeing what the cost of the RERT for summer 2017/18 was to see if that this approach might deliver the overall lowest cost to the market for the occasional need for load reductions. In this regard, the MEU sees that AEMO could contract with WDR aggregators to provide pricing for the RERT. The benefit of this approach is that an aggregator is incentivised to accumulate WDR; in contrast, AEMO is not well set up to be an active searcher for WDR – this was apparent as AEMO sought WDR for the 2017/18 summer period.

Strategic reserves

The MEU considers that strategic reserves will provide a greater level of certainty about certainty of supply and supports the concept of an enhanced RERT with the ability to contract reserves for longer periods than just for the next summer, as this could result in overall lower costs for consumers because the cost of new assets can be amortised over several years.

The MEU also points out that different technologies have different concepts of certainty of supply. For example, a battery can provide large amounts of electricity instantly for quite limited times whereas a gas turbine generator needs time to synchronise and reach full capacity. Coal fired generators take many hours to get to full capacity and recent experience (eg over summer 2017/18) shows that these generators can trip off line and due to their size, have very major impacts on the system and the market.

Strategic reserves can include WDR but this form of reserve also has time limitations on start up times and duration of availability, and the price for its provision has to account for the costs that the end user incurs which might be greater than the saving they make from not using electricity.

The MEU considers that the RERT provides the most appropriate approach to providing strategic reserves (despite the drawbacks) and that AEMO should have the flexibility in contracting for these reserves to employ a mix of sources, generation types and durations for the reserve and to contract over extended years in order to minimise the overall costs for consumers. The MEU notes that the times, durations and amount of reserve needed vary considerably meaning that to minimise cost, different mixes of supply might be needed at different shortages. This need for flexibility means that it will be difficult to standardise on strategic reserve options.

The MEU is happy to discuss the issues further with you if needed or if you feel that any expansion on the above comments is necessary. If so, please contact the undersigned at davidheadberry@bigpond.com or (03) 5962 3225

Yours faithfully

David Headberry
Public Officer