

28 July 2017

The Commissioners
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Sent by: online lodgement

Dear Sirs

National Electricity Amendment (Non-scheduled generation and load in central dispatch) Rule 2017

ERC 0203

Major Energy Users Inc (MEU) is pleased to provide its views on the AEMC Draft Decision on the rule changes proposed by Snowy Hydro and Engie requiring loads greater than 30 MW and all generators greater than 5 MW to be centrally dispatched.

The MEU agrees with the AEMC that there is no need for the rule changes proposed as the benefit would be immaterial (in relative terms) and the costs to implement the requirements of the changes would be significant. The MEU also notes there are other potential options which might achieve similar or greater benefits with less cost to all concerned.

The MEU points out that the comments it has made in earlier submissions are still valid and provide significant support for the reasons provided in the draft decision. With this in mind, the MEU only addresses aspects which might not have been included in its earlier submissions rather than reiterate the concerns and points made in those submissions.

Overall, the MEU considers that the Draft Decision defines the issues well and identifies many of the aspects that should be considered in the assessment of the proposed rule changes.

The assumption underlying the two proposed rules is that through better forecasting of demand, pricing in the market will provide more accurate signalling for generators and consumers to better interact with the electricity market. The view posited by the

proponents was that with better input data, more accurate forecasting by AEMO will result, leading to more efficient outcomes and ultimately to more efficient investment.

For a rule change to be implemented there has to be a material net benefit that will result from the change. The analysis by the AEMC and its consultant EY indicates that the materiality of the issue **might** be significant but that there is so much other “noise” surrounding inputs to forecasts (and reactions to those forecasts) there is no certainty the materiality of the proposed changes would be significant.

For example, EY comments in its report (second page executive summary)

“Furthermore, the complexity of price responsive behaviour also makes it challenging to conclusively determine whether dispatch demand error is caused by, correlated with, or unrelated to dispatch and predispach price outcomes. [EY] analysis suggests that some facilities that frequently contribute to dispatch demand error are highly variable in their operation at all times. It is a matter for further consideration whether a rule change to schedule these facilities would result in improved dispatch accuracy”

The MEU agrees with this observation, as its members report that their demand does vary considerably as a result of production activities, regardless of any changes they might make in their demand in response to the forecast price of electricity. To impose on these operations a requirement to report on expected demand when the variation in demand is so frequent and, in vast majority of cases, having little impact of price would be onerous and deliver little benefit to the market.

The MEU notes the AEMC comment (page vi)

“If the opt-in nature of the market design was changed to require large price responsive loads to be scheduled, loads would have to incur the costs of establishing and operating communication and telemetry systems for bidding into the market and receiving dispatch instructions. ...The Commission recognises that many businesses are already under financial pressure from high energy costs, and does not consider it reasonable to add additional costs when the benefits that may accrue from scheduling are uncertain.”

The MEU concurs and points out that those large users (mainly industrial) who would be exposed to the costs arising from the rule changes are already incurring energy costs at such a high level that they have the potential to cause those industrial users to cease operation and no longer provide employment. Adding to those costs merely increases the potential for such closures.

While the MEU accepts that the AEMC is not responsible for implementing rules that ensure the continued viability of large industrial users of energy, it is responsible to include in its assessments the impact on the wider electricity market resulting from the loss of this industrial usage as any loss will mean that remaining users (including

residential and small business users) will have to carry the standing costs of the infrastructure previously used to provide supply to these larger end users.

The MEU considers that the NEO requires the AEMC to recognise that it has a responsibility to consider the impact of rule changes which would result in the loss of the financial contribution made by consumers forced out of business due to higher costs, when costs remain which would then become a cost to all remaining consumers, increasing their prices.

While the actions of scheduled generators are in part driven by the forecasts of demand made by AEMO, the MEU agrees with the AEMC that the actions of scheduled generators also have a significant impact on the outturn pricing of electricity. So while the assumption inherent in the proposed rule change proposals that more efficient pricing **might** result from better forecasting, the MEU also points out that the scheduled generators themselves also act in ways that are result in less than efficient outcomes for consumers. The MEU therefore considers that direct actions by generators have as much (if not greater) impact on the loss of more efficient dispatch than might be gained from including large loads and small generation in the dispatch process.

The MEU observes that the market impact of generation assets less than 5 MW (especially micro generators such as PV rooftop solar) has increased considerably in recent years with the expectation there will be further increases in these installations. The impact of these many micro generators has already had a considerable impact on the demand in the NEM and with the expectation of the numbers of micro generators doubling (even tripling) in the next 5 years implies that the impact of these will have greater influence on forecasting (and any inherent errors) than the variations in demand from the large loads driven by prices and by the dispatch actions by the relatively few generators sized between 5 MW and 30 MW. When these many micro generators are coupled with batteries, this will further impact forecasting and potential errors.

However, the MEU also notes the report provided by the University of Wollongong which implies that forecasting by AEMO could be significantly improved by implementing newer technology than used by AEMO in its forecasting. In particular, the MEU notes the University's view that implementing a neural network model for forecasting has the potential for a forecasting model can "learn" how to better foretell the way the market is changing and to build into the forecasts the impacts of

-) how generators are responding to market signals,
-) how large (and smaller) loads respond to their production needs and market signals,
-) to better integrate the impacts of increased micro generation and battery storage,

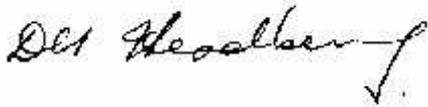
) the changes in operation of these micro generator/storages from assisting in managing market variations

The MEU sees that introducing such neural network models as identified by the University of Wollongong has the potential to address the concerns noted by Snowy Hydro and Engie without the need to impose arduous requirements on smaller generators and large loads.

The MEU recommends that the AEMC seek advice from AEMO as to the potential to introduce such a neural network model into the forecasting process, what costs might be involved for its introduction and the benefits from the better forecasting that might result. The MEU notes that the University of Wollongong appears to consider that such introduction (based on the experiences of overseas market operators) could deliver significantly improved forecasting at a modest cost.

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

A handwritten signature in black ink, appearing to read "David Headberry". The signature is written in a cursive style with a long horizontal stroke extending to the right.

David Headberry
Public Officer