



30 September 2019

The Chair
Energy Security Board
C/- CoAG Energy Council

Sent by: email to info@esb.org.au

**Post 2025 Market Design
Response to Issues Paper September 2019**

Major Energy Users Inc (MEU) is pleased for the opportunity to provide its views on the Issues Paper released by the Energy Security Board (ESB) in relation to the post 2025 Electricity Market Design and its long term, fit-for-purpose market framework to support reliability, to meet the needs of future diverse sources of non-dispatchable generation and flexible resources including demand side response, storage and distributed energy resource participation.

The MEU was established by very large energy using firms to represent their interests in the energy markets. As most of the members are located regionally, and are the largest employers in these regions, the MEU is required by its members to ensure that its views also accommodate the needs of their suppliers and employees in those regional areas. It is on this basis the MEU and its regional affiliates have been advocating in the interests of energy consumer for over 20 years and it has a high recognition as providing informed comment on energy issues from a consumer viewpoint with various regulators (ACCC, AEMO, AEMC, AER and regional regulators) and with governments.

The MEU stresses that the views expressed by the MEU in this response are based on looking at the issues from the perspective of consumers of electricity and it has not attempted to provide any significant analysis on how the proposed changes might impact other stakeholders.

The MEU has been a consistent respondent to the various ESB consultations since its inception, but it considers that any review of the market design must reflect the realities of the market we are seeing now, including:

1. The NEM is amongst the highest cost electricity markets in the developed world already so any market re-design must be focused on reducing the costs and risks to consumers; All markets have their own specific

2-3 Parkhaven Court, Healesville, Victoria, 3777

ABN 71 278 859 567

challenges and views are mixed as to which deliver the best outcomes to consumers at the lowest cost;

2. Along with the major disruption that will occur with any proposed significant change to the market, the new design needs in-depth risk assessment and must be harmonised with the changes already made to the NEM rules that have been or are about to be implemented, but where the outcomes and market consequences have not yet been realised (eg 5 minute settlement, Retailer Reliability Obligation (RRO), enhanced demand side response, RERT changes, etc).
3. Government underwriting of new generation has been recommended by the ACCC (under the UNGI program) and the initial indications are that this has the ability to assist in increasing reliability of supply
4. It is clear that storage options (conventional Li-ion batteries, Snowy 2.0, Tasmania's battery of the nation, mini-hydro and others) are being seriously pursued to address some of the shortcomings already being seen and expected in the NEM of the future.
5. Increased interconnection between the regions is being implemented and this will provide increased diversity of supply from intermittent generation (especially wind). It would be prudent to observe how proposed transmission upgrades from priority 1 and 2 projects of the Integrated System Plan (ISP) – such as EnergyConnect, VNI and QNI upgrades, Marinus, WestVic, etc – impact the market before embarking on major structural interventions.

Considerable effort has been devoted to improving the NEM within its basic design structure yet this review has the potential to obviate all of these changes without testing to see if they provide a benefit and better meet the National Electricity Objective (NEO). The MEU sees that it is possible that a number of the investments being made now might well be made redundant by a significant change in the market design, and the cost of these will be borne by consumers for many years to come.

1. How the MEU sees this review

The MEU sees that this review is to address alternative models to improve management of energy supply, capacity, flexibility, frequency, voltage, inertia, system strength, transmission and distribution services and demand response.

The substantive reason for implementing a change in the market design is to accommodate the increasing amounts of intermittent generation that will occur in the medium term to achieve carbon emission reductions planned, recognising that the increase in variable renewable energy (VRE) being used in the electricity grid is causing transitional issues in managing the National Electricity Market (NEM) to meet the needs of consumers.

The MEU has noted that there have been in recent times, increasingly strident calls, especially from generators and supporters of coal fired generation, for there

to be payment for generators to be available (eg payment for providing capacity to generate) and for government intervention in facilitating the building of new thermal generation (eg coal fired generation).

Rather than addressing the calls for change in the market design as such, the MEU considers that there is value in identifying the actual issues being seen in the NEM as a result of the change in generation mix being observed, and assessing whether incremental change (as has occurred for the past 20 years of the NEM) should be continued. This is the approach outlined in both the Finkel report released in June 2017 on the future security of the NEM and more recently in the ACCC report released in June 2018 on restoring electricity affordability and Australia's competitive advantage. It is important to note that these two reports still reflect the current conditions in the NEM and the recommendations were made in the full knowledge of increasing amounts of VRE in the NEM.

The MEU recognises the NEM does exhibit a series of significant issues that are arising from the increase of intermittent but lower cost generation, including:

-) A lack of policy about the integration of electricity supply and emissions reduction which is impacting investment in new generation
-) Certainty that there will be capacity provided as and when required to meet expected demand
-) Some intermittent generation being directed "off" and thermal generators being directed "on" when there are concerns about credible risk of loss of supply
-) Declines in inertia and system strength in transmission networks as synchronous generators are retired, to the extent that synchronous condensers are being installed at a transmission network level to make up for the losses of inertia and system strength
-) Closer frequency management due to the reduction of thermal generators providing regulation FCAS
-) Congestion being caused by
 - o the large amounts of solar generation being provided during peak sunshine times (especially 10 am to 2 pm from fixed PV) but also over the longer timeframe for tracking solar (7 am to 5 pm)
 - o by large amounts of wind generation all locating in the same geographic areas which provide high wind availability
-) Concern at the voltage increases seen in distribution networks in the middle of the day caused by the plethora of rooftop solar PV systems
-) Increases in non-scheduled generation (especially rooftop solar) are a long term issue for concern as there are times when the amount of generation from this source is be greater than local and/or regional demand¹

¹ It is expected that this will occur first in SA where the issue of minimum demand is an aspect of increasing concern as embedded generation such as supply from roof top PV is not controlled by AEMO. It is already being considered that there will be a time when rooftop PV output exceeds the regional demand (eg on a very sunny Christmas Day) and has to be exported

-) Increases in distributed energy resources within distribution networks has also caused significant reductions in demand creating issues caused by minimum demand at times in some regions.

As many of these issues are already being addressed within the current market design so the question arises as to what issues will **not be adequately addressed** without a design change. Intriguingly, none of the recommendations of the Finkel and ACCC reports identify any need for a market design change although the Finkel Review went further (page 85).

“A capacity market is a significant market reform, which would require a long-term and costly departure from the existing market framework. Such a reform should only be considered in circumstances of irresolvable failure of the energy-only market to bring forward sufficient new capacity to ensure reliability. Given the more immediate nature of the reliability concerns facing the NEM, as well as the adequacy of other policy reforms available, the Panel does not believe a move to a competitive capacity market to be appropriate at this time.

Instead, to ensure a smooth energy system transition, reforms should focus on providing long-term investment confidence and direction to the electricity sector, and affording greater control to AEMO to ensure that a reliable and secure system is maintained.”

The Finkel Report makes a very important statement – to what extent will a market design change make improvement to the NEM that could not be achieved by other means bearing in mind the massive cost and disruption that will ensue from a fundamental change to the NEM design.

The MEU has been an active participant in the various refinements to the rules to address the issues seen in the NEM that have arisen over time. What is a clear standout about the NEM rule change process is that a number of changes made over the years have exhibited “overshoot” to the disadvantage of consumers with subsequent changes needed to provide better balance. The MEU has a concern that changing the market design could be another example of overshoot that will cause considerable harm to the long term interests of consumers that the market is supposed to focus on.

2. Lack of policy direction

The MEU is most concerned that the decision to enter into this review of whether the NEM rules are adequate for the need is being made in an environment where there is no clear and widespread agreement amongst governments as to how best manage the cause of the changes being seen in the generation mix. The MEU notes that whilst the initial move towards more VRE generation was driven by a desire to minimise carbon emissions into the atmosphere from thermal generation sources (especially from coal), there has also been a more recent shift in that the cost of VRE generation provides the lowest cost for new generation, and even lower than the cost of existing thermal generation.

However, proponents of VRE do not consider the fact that on a capacity factor adjusted basis the current cost of “firming” the VRE supply does reduce the cost differential, as the CSIRO shows in its report GenCost 2018 figure 4.2.

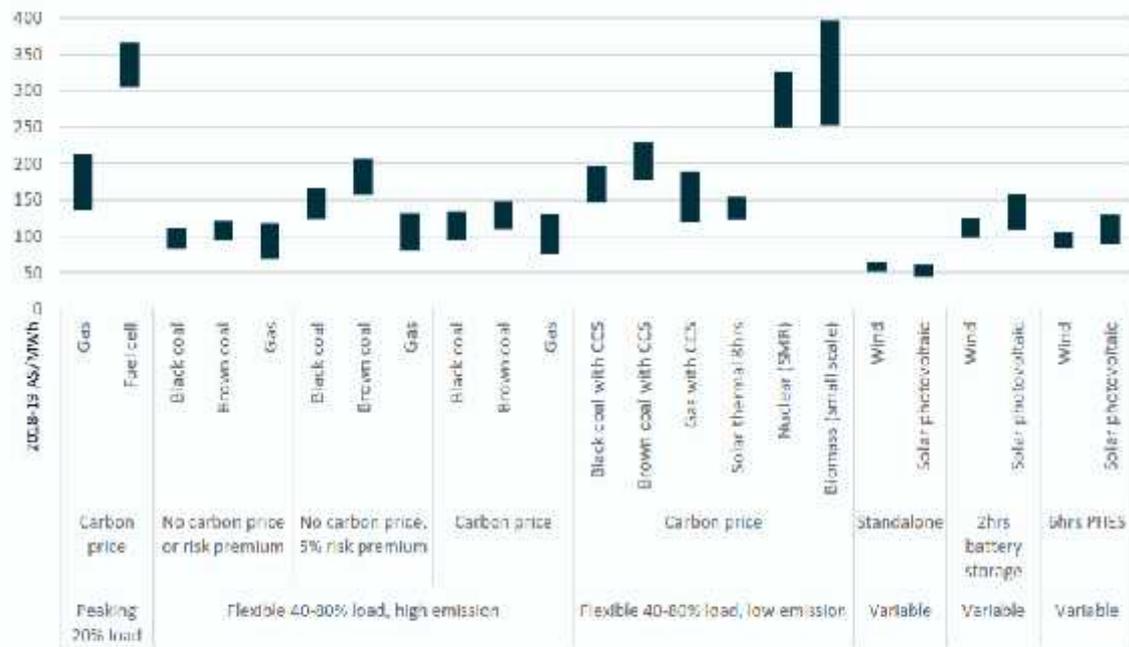


Figure 4.2: Collocated LCOE by technology and category for 2020.

Notes: Ranges are primarily based on differences in carbon prices, capital costs, fuel costs and capacity factors (see Apx Table 6.2 in Appendix B). PHES is pumped hydro energy storage; CCS is carbon capture and storage; SMR is small scale modular reactor. The gas peaking technology is an open cycle turbine, other flexible gas refers to a combined cycle gas turbine. Flexible coal refers to a supercritical pulverised fuel plant.

This report also highlights that the cost of “firm” supply from VRE, while currently much the same as the cost of supply from thermal sources that in future, VRE with storage back up will further reduce in cost.

This concern about a lack of policy direction was also highlighted in the Finkel Report where Finkel reinforces the MEU concern about the lack of policy (page 85)

“The Panel recommends a policy package to facilitate an orderly transition for the electricity system. This package is envisaged to form the backbone of the strategic energy plan, recommended in Chapter 7. The orderly transition package should include:

- A long-term emissions reduction trajectory for the electricity sector.
- An obligation for all large generators to provide at least three years’ notice of closure.
- A credible and enduring emissions reduction mechanism”

The MEU considers that a sensible approach to a review of the NEM design cannot be properly carried out in the absence of any clear guidance as to the environment in which the new design is supposed to operate and deliver the best outcome for consumers.

The MEU notes that in the Issues Paper, there are questions asked about what scenarios should be used in which to guide the review. The scenarios suggested in the Issues Paper to be included as part of the review process to test sensitivity – slow change, central scenario, High DER, Fast Change, Step Change – were developed by AEMO to assist in its planning functions². What is entirely missing from the scenarios is any clear direction as to what the governments agree on what the final outcome for the electricity market should reflect.

For example, the market design will be different for a range of potential government policies, such as:

-) the NEM should emit no net carbon (by 2050 compared to one where carbon emissions are of little consequence;
-) wholesale electricity prices are to be no more than \$60/MWh compared to one where the market decides what the efficient price for electricity is;
-) the NEM will remain as a series of interconnected regions to one which reflects geographic diversity of supply with little price separation at regional borders;
-) the need to export gas from the east coast is a major requirement, compared to one where domestic gas supplies must be used to maximise the power generation and export limited to minimise the gas price³;
-) reliability of supply is paramount, regardless of cost, compared to one where reliability is to cost no more than \$xx/MWh⁴; and
-) is price volatility permitted and if so, what degree of volatility is permitted and for how long

The MEU recognises that a number of the options that fall from these policy directions will result in increased costs to consumers and have different impacts on supply investment signals, requiring a clear commitment at a policy level along with adequate funding to enable them to occur.

The MEU considers that making fundamental changes to the market design cannot be assessed without clarity on future policy changes by government and, in the absence of clear government policies on the energy market, the MEU cannot see how the market design can be optimised to deliver the NEO.

It should be emphasised that with a chronic lack of an integrated policy, it would be preferable on a risk basis to maintain NEM design as it is a known and tested market design that has shown resilience over the years.

² As noted below, the MEU considers that the AEMO scenarios are not appropriate to inform the design review

³ The domestic gas price is one which sets the price for electricity in the NEM for much of the time

⁴ The MEU notes that even though there is a Reliability Standard (where consumers might lose 11 minutes of supply each year) that applies to the wholesale market, effectively AEMO is required to act so that there is never any loss of supply

3. Gas policy on the east coast

Australia has abundant supplies of natural gas which is also a fuel that is ideally matched to VRE as it can provide a fast start back up source of supply. There is no coherent gas supply policy across the NEM, with some governments incentivising exploration for sources of new gas while others have taken actions to minimise this exploration. At a federal level, there are rules (the Australian Domestic Gas Security Mechanism) which might limit export of gas from the east coast when there is a shortage for domestic use but this has little impact on gas prices.

Gas transportation ownership is highly concentrated and new capacity is only provided when fully underwritten by a counterparty, resulting in significant constraints in gas transportation between regions. Low levels of competition result in high costs for gas transport. Whilst the Vertigan Review recommendations such as pipeline capacity trading among others have been implemented it is still too soon to see how this will increase competition in the sector.

Natural gas is the fuel needed as the primary source of fast start generation to provide back up for VRE as the transition to increasing levels of low cost VRE in the NEM occurs. The absence of a coherent gas supply and transportation market precludes this being the primary source of a fuel to enable this transition at low cost to consumers.

In the absence of a coherent gas supply policy⁵ the MEU has difficulty in seeing how a sensible review of the NEM structure can be undertaken, especially if the drive is a move to a capacity market. The MEU sees that overseas capacity markets primarily use gas as the source of fuel to provide the dispatchable supply to back up VRE yet, as the MEU sees at the moment, the high cost of delivered gas for power generation has driven the price of electricity in the NEM to unacceptable levels which threaten the competitiveness of Australian trade exposed industries. To maintain high gas prices and impose additional costs for dispatchable (gas fired) generation to be available, merely adds to the cost of electricity to consumers and will reinforce high power prices and cause them to continue for longer.

4. The main issue

At the most fundamental point, any review of the electricity market must address is whether to change from the energy-only market to a capacity market is needed – a decision that the UK made in 2014 to ensure reliability of supply in a market exhibiting a significant increase in VRE into its generation mix – a situation similar to that faced by the NEM.

⁵ Dating back to the first decade of this century where there was little or no policy assessment on what the impact of export of natural gas from the east coast would be, and this demand shock still has not been addressed

A capacity market provides incentives to provide firm dispatchable generation and/or storage; this payment is effectively a payment to be available on demand by the market operator, but an energy-only market provides its incentive for new supply via high spot prices.

There are differing expert views as to the effectiveness of capacity markets but it is interesting to note that since the UK made its transition to a capacity market 75% of the capacity payments have been made to existing coal, gas and nuclear generators and only 10% to modern assets⁶ such as interconnection, battery storage and demand response. This first hand experience introduces a concern as to whether a significant change in the market will result in increased costs to consumers with the benefits of this increased cost going to existing generation, providing little incentive for new dispatchable generation and not addressing the core concern.

In contrast to the UK approach, the NEM has introduced the Retailer Reliability Obligation⁷ (RRO) which imposes an incentive on the main buyers of electricity to ensure that they have adequate access to sufficient dispatchable generation to ensure there will be reliable supply. As a major distinction to the UK approach, the RRO follows the core premise of the NEM since its inception, that incentive regulation rather than prescription should be the driver of the NEM.

The MEU considers that sufficient reliability of supply can come from a number of approaches, viz:

1. Introduction of payment for providing availability of dispatch (eg a capacity market which pays a generator for being available even if not dispatched).
2. Introduction of an obligation on market participants to ensure that there is sufficient firmness of supply to ensure the "lights stay on" (eg the RRO)
3. Increasing storage to release supply when intermittent generation is not providing which already occurring (eg Snowy 2.0, Tasmania's battery of the nation, mini-hydro storage options, batteries, etc) which will occur partly as a result of the introduction of 5 minute settlement
4. Augmentation of the transmission network to increase diversity of supply injection points (eg through the Integrated System Plan already in place) as diversity of supply improves reliability
5. Increasing demand side participation to reduce demand when system demand is high and VRE is not providing sufficient to the market.
6. CoGaTi and the implementation of dynamic regional pricing to optimise locational decisions for generators and investment
7. A combination of the number of these (eg already rule changes are occurring to improve reliability through a combination of points 2 and 4) and increased storage is occurring as is increased interconnection.

⁶ See <https://energypost.eu/uk-capacity-market-review-reform-rethink/>

⁷ The RRO process is due to commence in the NEM from July 2019 but the 2019 forecasts by AEMO are that there will be no shortage of reliable supply for the next decade

The fact that so many other changes are already occurring raises the question as to whether changes already in hand should be allowed to proceed in order to allow the testing of their efficacy before assuming a fundamental change is necessary.

5. An inherent bias

There is an inherent bias in the discussion about reliability and to an extent this is replicated in the Issues Paper. This bias reflects a view that “reliable supply” is by definition “dispatchable” and meaning a generator that can be started on demand. There is an assumption that a gas or coal fired generator is 100% reliable and will always start up when needed. In practice, this is not the case and this issue has been the focus of considerable debate (such as in the AEMO forecasting reference group). Furthermore, recent evidence shows that for example reliability of brown coal generation in Victoria is increasingly exhibiting less availability creating supply shortfalls and reliability risks.

In practice, reliable supply could just as easily be provided by a mix of solar, wind and relatively small batteries which have a diversity of supply locations such that the “down time” of the VRE is relatively short and the make up can be provided from batteries or pumped hydro for the limited time before the VRE recommences delivering.

It is quite clear that “dispatchable” and “reliable” are not interchangeable terms when considering the needs of the NEM yet throughout the Issues Paper, there is the clear implication that reliability will only be provided from dispatchable generators – a view widely expressed by the commentariat.

6. The MEU responses to the ESB Issues Paper

The MEU responses to the questions and observations raised in the Issues Paper reflect the points made above.

5.1 Scenarios and modelling

The Issues Paper asserts that its assessment for the market structure will be based on the five AEMO ISP scenarios, but seeks input as to what other scenarios might be considered. The MEU points out that these AEMO scenarios are used to develop AEMO forecasting of future needs of consumers – not for assessing what might be the best structure of the market.

The MEU does not consider that the selection of the scenarios is a critical element of the analysis for what market structure is needed. When the NEM was first designed, it was not on the basis of a range of scenarios but a fundamental identification for the structure that would best provide the most efficient supply of electricity for consumers.

While the MEU recognises that scenarios are needed when forecasting future outcomes of the NEM, the MEU notes that most rule changes are assessed on their merits. For example, the AEMC decision to move to 5 minute settlement was not made after assessing a range of scenarios but when assessing the merits of the change and the impacts that the change would make to the market in the interests of consumers (as required by the NEO). Whilst scenario testing about plausible future states may be useful in forecasting, the core methodology must be an economic risk assessment of market design options.

As with any changes proposed for the market design or rule changes, modelling is an essential step to provide some confidence that the change will deliver better outcomes for consumers compared to the status quo. The MEU expects that the ESB will use the current energy only market approach as the basis for measuring the benefits of any change, but the MEU expects that the base model will not only include for an energy only market, but the rule changes made in recent times to improve reliability of supply such as the RRO, 5 minute settlement⁸ and demand side response as well as the expected benefits arising from ISP, CoGaTI and other government underwriting of new generation. To do otherwise would introduce selective bias and material error in any ensuing analysis.

5.2 Assessment framework

As noted above, the MEU considers that the assessment framework must be based on clear government policies, and should not be carried out based on perceptions of what government policies might be in the future. With this in mind, the MEU considers that the ESB must seek clarity on what the various government (state and federal via the CoAG Energy Council) policies are for the ESB to base its market design review. The MEU considers that in the absence of any coherent and consistent policy advice, examining market design options cannot be effectively carried out. .

Other than this, the MEU considers that the principles included in annex A of the Issues Paper provide a sound starting point for the review

5.3 Innovation

The MEU considers that section 4.1 of the Issues Paper outlines well the aspects that need to be included in the review with regard to innovation and the approach to the retail sector. Specifically, the MEU agrees that how the retail sector interacts with consumers is an important aspect that must be included in the review process.

⁸ While the MEU is not a supporter of 5 minute settlement, it does recognise that this change will be implemented and this will have considerable impact on the dynamics of the market post its implementation.

Equally, the MEU points out that there are already a number of changes occurring in the retail/consumer interface that are already in train and the outcomes of these changes needs to be seen before major changes are made to the market design.

5.4 Investment signals

The MEU agrees that there need to be incentives to ensure there is adequate and sufficient generation available to ensure there will be a reliable supply of electricity. However, these incentives need to be structured so that the market decides on what is the most efficient outcome. In contrast, changing the market design can lead a bias for any outcome.

For example, introducing a capacity payment will provide an incentive to build new generation of a specific type, or, at worst, just for existing generation to be granted additional revenue. In contrast, the RRO provides the incentive to deliver a market based outcome which reflects a much wider range of possible solutions.

The MEU notes that the Reliability Standard sets the amount of unserved energy in each region as 0.002% and this level has served the NEM well for its two decades of operation. When this standard is combined with the Market Price Cap, the MEU notes that there has been more than sufficient new generation added to the market to deliver reliability of supply at levels well below the Reliability Standard.

The MEU also notes that despite the NEM providing adequate signals for new investment, it is clear that investment in new coal fired generation has been minimal in the NEM for a number of reasons, including:

-) a world view that investment in coal fired generation is risky due to a widely held belief that there will need to be significant reductions in carbon emissions
-) capital costs for new coal fired generation are higher than for other forms of generation (eg gas fired)
-) recovering the capital costs of a coal fired generator is measured in terms of 40-50 years. The shorter the time the asset has to recover its investment, the higher the price for its output. There is no certainty that a coal fired generator will have the commercial life to recover its capital cost
-) the price of coal is increasing such that power prices would be higher than from other sources
-) financiers and insurance companies are applying a different lens to these investments
-) 'green investment' activism
-) future regulatory and policy risks, such as the risk of an introduction of carbon pricing mechanisms on the economics of the investment

A logical form of dispatchable generation to match VRE as a transition is gas fired generation which is the dominant form of dispatchable generation used in many competitive electricity markets as it is not only a lower capital cost but has the ability to start up very quickly⁹. Despite this, as noted above, governments have acted such that gas is now the highest cost fuel¹⁰ used in the NEM and this has led to the high prices for power now being seen in the NEM¹¹.

The MEU is concerned that incentives for supply of dispatchable generation can lead to much higher prices for consumers, especially if the new generation is gas and/or coal fired. The MEU agrees that incentives need to be technology neutral, so incentives need to be structured so that the market decides on what will deliver the best outcomes for consumers. In this regard, the MEU supports the RRO as a tool for maintaining reliability as it not only provides an incentive for new “dispatchable” generation but also an incentive for other forms of supply that can deliver the same levels of reliability¹².

Despite the fact that the RRO has not been given the chance to prove that it can deliver the necessary reliability for the NEM, the implication of the design review is that the RRO will not be effective and that change is needed to the market structure to ensure there will be continued reliability.

The MEU also points out that as well as seeing signals for investment, an investor will need to have sufficient certainty that the output of its investment will be needed for the life of the asset provided. Absent this confidence in longevity, the investment signal from a market design change might deliver a less than optimum outcome. In this regard, the MEU points to the UK experience, where the incentive provided by a capacity market has not delivered new investment but merely provided additional revenue for existing generators.

5.5 Distributed energy resources (DER)

The MEU agrees with the importance of DER to both consumers and the NEM more widely and recognises the benefits DER can provide. Equally, the MEU notes that there are detriments of DER and that these must be managed.

What is not clear from the Issues Paper is that the detriments from the significant amounts of DER are already being addressed with changes being made to the existing rules within the current market structure. The import of this, is that while DER does have impacts on the NEM, the Issues

⁹ in contrast to coal which takes much longer

¹⁰ Other than liquid fuels

¹¹ As well as the high cost of gas, the MEU notes that the introduction of 5 minute settlement in the market has made redundant many of the existing gas fired generation plants

¹² For example, hydro generation, increased interconnectivity, batteries, greater diversity of location

Paper does not present a clear case that the increase in DER being seen (with further increases in the future) warrants a change in the design of the NEM structure.

Having said this, the MEU does identify that the increase in DER introduces four very clear detrimental impacts to the NEM where a review of the design might be warranted.

-) Solar generation provides considerable amounts of electricity between the hours of 10 am and 2 pm, to the extent that prices in regions where the prices are less than zero and can fall to the market floor price
-) A high incidence of DER can lead to periods of very low demand, creating instability in the NEM
-) The large amounts of DER are limiting the volume of output needed by some generation (especially coal fired) to recover their capital cost, causing early closure of coal fired generation.
-) Consumers see DER as their solution to the high costs of electricity being delivered by the NEM

While being considerations for the a review of the NEM, the MEU does not consider that the impacts of DER as outlined in the issues paper, warrant a review of the NEM structure and that the issues raised in the Issues Paper and those the MEU has raised above, can be accommodated within the current NEM design with modest “tweaks” to the current rules¹³.

5.6 System security and resilience

The MEU agrees that these issues must be taken into account as part of the NEM design and the Issues Paper provides a good assessment of the issues and concerns.

What is not clear from the Issues Paper, is where the current market design is not providing an adequate allowance for the market to be adjusted to reflect the identified needs. For example, the current market structure already provides the ability to introduce more rotating capacity in the form of synchronous compensation to address some of the issues identified.

If the current market structure already provides the tools to be able to address the issues, where is the need for major change?

5.7 Integration of VRE into the NEM

The Issues Paper highlights a concern that much new VRE is locating at the periphery of the NEM where there is limited connection. This imposes costs

¹³ For example, should the market floor price be increased to \$0/MWh? Probably not because the MEU has seen some VRE already shuts down when the spot price reaches zero

on the investors for the VRE in terms of increased connection costs and low marginal loss factors (MLF).

While the MEU does see these are issues of concern, the MEU is not convinced that they are reasons for a change in the market design. As the Issues Paper highlights, there are already discussions being held as to how to minimise the impacts of the increasing VRE in the market¹⁴. The very fact that some new VRE is being built in locations where there is insufficient connection capacity and low MLFs highlight that there is not sufficient transparency in the information provided to investors rather than a flaw in the market design¹⁵.

The MEU notes that the market does have limits on how quickly changes can be implemented but the MEU highlights that these limits are an essential step to ensure that consumers are not required to pay for long lived assets that cease to provide an economic benefit to the market in the future and become stranded assets, or that consumers are levied with a cost that should rightly be carried by investors in new generation.

For example, why should consumers be levied with a cost for increasing the capacity of transmission assets needed by new VRE where the transmission network is adequately sized for the needs of the consumers that are served by those transmission assets? It is logical in these circumstances that the causer pays principle should apply¹⁶.

The current rules provide a very intensive analysis for transmission augmentations so that augmentations deliver a net benefit to those that pay for the assets. The MEU considers that there is a very good case for either:

-) Transmission assets being paid for by generators just as other producers provide for transport to their markets, or
-) Consumers should only be required to pay for the transmission assets they use as distinct from the assets needed to allow generators access to the shared network, with augmentations to allow increased generation access, to be paid for by the beneficiaries (ie the generators that gain access). This is an aspect that is currently being investigated by the AEMC under its CoGaTI review.

The MEU considers that investors in new generation need access to information about the implications of their locational decisions (in terms of transmission augmentation costs and line losses) and this information is held by AEMO. If investors are making their investments in locations where there are costs and they are made aware of these costs, then that is an outcome for the investors, just as occurs in other competitive markets. The

¹⁴ For example through the ISP and renewable energy zones (REZ's) which are trying to alleviate some of these issues and concerns

¹⁵ This aspect is the focus of a current rule change

¹⁶ This is the focus of the CoGaTI review

MEU does not support providing an electricity market structure that requires consumers to pay for the bad locational decisions made by investors in new generation.

6. Conclusions

The MEU is aware that increased VRE in the generation mix does impose some challenges to AEMO in operating the NEM in a secure and reliable manner. What is obvious is that these challenges are different to those that occur in a more conventional/traditional system but they are not insurmountable as is evidenced by the continual refinement of the rules and procedures as the increase in VRE has occurred. There is no evidence that a change in the market structure will make operating the NEM less challenging compared to introducing modifications to the existing structure on an incremental basis as each new issue is identified; conversely a major change may even increase the complexity and risk in operating the NEM.

In contrast, the MEU is aware that a fundamental change to the market structure will come at a very high cost to consumers so there have to be extraordinary reasons for making a change merely to make operating the market less challenging. Change must always be measured by the NEO with the constraint that investment must be efficient with regard to the long-term interests of consumers.

What the MEU sees is that the electricity market is evolving and responding to changes as the transition away from conventional large generation occurs. There is no certainty that a new market structure will better provide for this transition yet there is significant concern amongst end users that major changes to the structure of the NEM will result in leading to a specific outcome, one which increases costs for end users in an already highly priced market.

As noted above, the MEU sees that a review of the market structure initially devolves to a decision about reliability of supply coupled to the costs involved for enabling more generation to connect to the transmission network. These two questions are addressed by a decision on whether to:

-) maintain an energy only market or move to a capacity market, and/or
-) whether generators or consumers pay for the transmission network

However, what concerns consumers, is that as change is occurring, issues are already being addressed within the current market structure and new rules have been or are being made. Despite these changes being implemented or about to be implemented, there has been no ability to test whether the changes made deliver the outcomes sought.

The MEU accepts that the review of the market structure should occur but is very concerned that there are preconceived views already underlying the approach outlined in the Issues Paper and, indeed, amongst the wider market and its

stakeholders without proper rigorous assessment compared to the 'base case' NEM design.

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 "D.H. Headberry". The signature is written in a cursive style with a checkmark at the end.

David Headberry
Public Officer