Major Energy Users Inc.

10 February 2011

Mr Neville Henderson
Chair, Reliability Panel
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Lodged online @ www.aemc.gov.au

Dear Mr Henderson

MEU Comments on Draft Report referencing RERT
AEMC reference: REL0041

The MEU welcomes the opportunity to provide its views on the Reliability Panel (RP) draft report on the future of the RERT program. As the RP is aware the MEU considers that the RERT program has been shown to be a low cost process which can improve reliability, especially in relation to short term supply shortages. Because of this the MEU considers the program should be continued and not closed in June 2013.

The MEU represents a number of the larger consumers of electricity, and amongst the MEU members are a number of large electricity users who already operate in the spot market and reduce demand when the spot price is high. Even within the MEU there are members that are not prepared to reduce demand even when the price is high, because of the negative impact on their businesses or because of the challenges they face with being able to implement load reductions and the recompense they may get for doing so. However, many of these are prepared to consider reducing demand when the alternative might be involuntary and indeterminate loss of supply.

However, the MEU has identified there is a real dichotomy in attitudes in regard to the NEM and this pervades many submissions to the RP draft report (especially energy supply side submissions) as well as the Reliability Panel (RP) draft report itself. If a process is needed to encourage the energy supply side (such as to improve reliability) but that such process will increase costs even at the expense of creating distortions, then it is supported by the supply side, and usually implemented – the proposal last year to increase MPC is one

example and the SENE proposal is another example of this overt incentivisation of the supply side, as it is able to pass on all additional costs to consumers. The rationale behind this is that a relatively small increase in costs for consumers is preferable to the loss of supply with the resultant rolling blackouts.

In contrast, there are recognised barriers to demand side participation (DSP) (and have been since the Electricity Code was in development) which have actively prevented the demand side from providing the necessary countervailing balance to supply side pressures. RERT is an example of where a well designed and low cost option is available to provide some demand side activity to counter balance supply side pressures. Because of this, the market view is the RERT program must be severely constrained and even prevented. Effectively, what is being said is that it is alright to incentivise the supply side to do the “right thing” but not the demand side.

Regularly an observation is made (as in the draft report) that there is little or no DSP, but the question is not asked whether the structures underlying a demand side concept (such as the issue of RERT) contribute to the reasons why there is no DSP. The answer often is that there is either no incentive for DSP or there is an active disincentive. This is contrary to the concept of the incentive regulatory structure that underpins the NEM, but the active incentives are all about ensuring the supply side is incentivised.

What is also overlooked is that consumers do not generally want to be part of the NEM operations, as they have as their core business something that only needs an electricity supply as a support. This means that electricity is not their core business and to get their attention, incentives are needed. In contrast, the supply side participants have electricity as their core business, but are considered to need incentives within the NEM structure.

The RP draft report addresses the issue of RERT in terms of the supply side, which comprises a relative few businesses with a large involvement. Consumers on the other hand are many but each only have a small involvement. This means that, overall, the full voice of consumers is seldom heard. Consumers want electricity but do not want to be (nor are they necessarily capable of being) part of the solutions to the NEM problems. Just as the NEM is designed to actively encourage the involvement of the supply side, so too does the demand side need to be encouraged where it has the ability to provide support to the market. A review of the NEM Rules shows that incentives for DSP are non-existent and in fact there are elements within the Rules that are active disincentives.

That this is the case can be seen from the many reviews over many years by MCE and AEMC to identify why there is little DSP. Little has been achieved so far to engender DSP and these reviews are still continuing.

Despite the lack of DSP incentives, the market has seen there are some consumers who are prepared to reduce demand based on price signals. To do this they have had to establish internal protocols, tools and management structures to reduce demand when the spot price is high. This is a form of demand side response and mirrors the supply side activities.

However, there are many consumers who would voluntarily surrender their rights to supply when there is an identified shortage of supply and would rather close their operations in whole or in part under a controlled shut down regime than to experience an instantaneous black out. Some commercial businesses (such as Energy Response) have recognised this and have aggregated a number of consumers to suffer occasional but necessary outages on a controlled basis rather than lose supply on an occasional but random basis. A properly designed RERT scheme could harness this preparedness of some consumers so that aggregated demand side responses can be implemented for the benefit of those consumers who either are unaware or could not respond to market price signals.

Discussions regarding DSP with larger consumers of electricity indicate a number of common themes:

- Regular voluntary load shedding in response to market price signals is possible providing the consumer establishes the necessary internal protocols, tools and management systems. This approach is possible only where the reduction of power does not create safety and other personnel related issues. However, the benefits that accrue to such consumers are based on getting the maximum benefit from the spot market price signals. Establishing the ability to operate in this way is a costly exercise.
- Those consumers prepared to voluntarily load shed as part of a retail contract, have noted that the benefits they get are severely constrained (with considerable benefit accruing to the retailer – often as high as 50% or more) with the call for the load shedding being usually both frequent and in a short time frame preventing the ability for a well managed power reduction. The consumers faced with these options ask the question as to why should a retailer receive such a large proportion of the benefit when the bulk of the costs are borne by the consumer[1].

[1] The MEU sees that the RP confirms this view (and the next dot point) in its observations on page i "The Panel considers that the RERT may currently provide an opportunity for demand side participants to participate in the NEM in circumstances where other avenues, such as through retailers, are unsuitable."
Again on page 19 the RP confirms these views with its observation "The Panel acknowledges that the RERT may be more attractive to some demand side participants ahead of the primary market. For example, these participants may have strict restrictions on availability (such as the timing of the outage, or the length of the notice period) that mean retailers are unwilling to contract with them."

- Regarding consumers who might be interested in a voluntary load shedding program but have a small demand, retailers have advised that the protocols and management the retailers have to implement for so many consumers to get a reasonable outcome, are too difficult and expensive compared to the benefit the retailer gets.
- Most consumers do not want to lose power. Therefore, they have to be certain that there is a real need and a strong likelihood that involuntary load shedding is likely to occur (ie that there is a real need rather than an opportunity to make money). However, if the price the consumer receives covers the costs it will incur, then voluntary load shedding is considered by the consumer
- The costs to a consumer for loss of supply vary considerably depending on the time of the loss, the duration of the loss, and the frequency of the loss[2]. Therefore, the costs a consumer incurs from load shedding are not related to $/MWh[3] which is the basis for an energy-only market[4]. This creates difficulties for DSP.
- Setting up to manage a loss of supply is not costless and is not core business for consumers. Therefore they advise that need to be incentivised for setting up to provide voluntary load shedding. They also advise of contractual concerns as to the impact on them if they are not able to offer the load reduction for any reason.

It is with these views in mind that the MEU provided the following observations regarding the RP Draft Report, which advocates the ceasing of the RERT provisions by June 2013.

1. A view of the submissions on RERT

The submissions received by the RP in relation to the RERT are clearly divided between energy supply side (generator and retailer views) and demand side responses. The two government responses received are also diametrically opposed – Victoria favouring RERT elimination and SA preferring RERT being retained.

The supply side considers the RERT should be stopped because it is inefficient, expensive, difficult to administer, lacks transparency and it is a distortion of the market. The demand side sees that is beneficial and that it is a security of supply issue when there are short periods of relatively small amounts of supply which can be provided more efficiently than by providing a supply side response.

---

[2] AEMO enumerates these in its paper on Value of Customer Reliability (VCR): see http://www.aemo.com.au/planning/0400-0017.pdf

[3] The MEU notes that section 3.12 of the Rules permits AEMO to pay generators their incurred costs for being directed to supply which is not $/MWh related

[4] In contrast the capacity market established in WA and elsewhere has significant DSP in terms of voluntary load shedding.

As usual the supply side has examined the issue from a supply side philosophical aspect, and the Victorian government submission does likewise. The premise is that either the supply side should be further incentivised to provide surplus capacity or consumers should be constrained off and lose supply but the issue of incentives for demand side management is not canvassed or contemplated.

The supply side submissions refer to the market distortions that RERT creates. But is important to note there are already many distortions in the market. For example, a fundamental assumption of the market is that consumers will voluntarily reduce demand when the market price is high as a high price indicates scarcity of supply. Yet on numerous occasions the supply side has arbitrarily increased the spot price of electricity even though there is no scarcity[5]. Thus, a high spot price cannot always be equated to scarcity because of the distortions already extant in the market.

Further, what has also been totally overlooked is that the rule makers are prepared to increase the costs in the NEM (by increasing MPC and CPT) to maintain reliability yet deny the demand side the costs associated with them providing improved reliability. The MEU points out there is an essential inconsistency (and imbalance) between the preparedness to accept increased costs to improve supply side reliability but to deny the costs associated with RERT to improve reliability from the demand side, on the grounds that this would be a market distortion and therefore unacceptable.

In its submission, AEMO highlights a number of issues they have with implementing RERT. On closer examination, many of these relate to the **design** of the RERT scheme rather than the **principles** behind it. Specifically, they report on the interference from outside the NEM (eg jurisdictions) and the complexities inherent in the current RERT design.

What they specifically identify is the need to accept that there is no “one-size-fits-all” ability to provide voluntary load shedding due to the large variation in individual consumer needs. This indicates that possibly the reason for a modest take up of RERT contracts is caused by the proscription imposed, rather than a lack of willingness.

2. An overview of the RP draft recommendation

On page i of the draft report, the RP notes:

[5] See for example the actions of Alinta Energy in SA on 31 January 20011, where the output of its Northern Station was deliberately priced well above the cost of supply, even though it had ample capacity available.

> "... that there is ongoing work on the role of the demand side in the NEM. When these work programs are complete, they should have addressed any reasonable constraints on efficient demand side participation which should provide another avenue for this demand side response and hence remove the need for the RERT."

The MEU concurs that there is ongoing work (it has been ongoing since before the NEM commenced), but observes that those programs are not focused on using the demand side to assist in achieving system reliability. Under the Rules, the RP is tasked with this aspect, so to assume that the current MCE review will provide DSP as part of achieving reliability of supply in the NEM, is probably incorrect. Therefore, it is wrong of the RP to assume that their responsibility to use DSP (amongst other tools) can be abrogated and therefore dismiss DSP from their deliberations.

It is quite clear that the main driver of reliability used by the RP, is the Market Price Cap (MPC) setting. The Electricity Statement of Opportunities (ESoO) prepared annually by AEMO also assists in the achievement of reliability, through its provision of information – this is used by supply side entities to assess the likelihood of receiving sufficient revenue on which to support a case for investment in new generation. These two tools primarily are focused on ensuring the reliability of supply at least 18-24 months hence, but provide little or no support for the need to provide reliability in the short term or even for supply for the next summer. To assume (as the RP does) that there will never be a short term shortage of power because there will always be a surplus of capacity flies in the face of common sense.

RERT is primarily a tool to provide a fast response to an unexpected shortage of supply. In the longer term the MPC and CPT are designed to encourage investment where there is perceived a longer term shortage of supply. The question then arises what tool is available to AEMO to address a shortage of supply (most likely caused by an unscheduled outage of an existing generation unit or loss of a transmission line concurrent with a high demand) other than to schedule involuntary and geographically based load shedding when peak demands occur.

There is obviously a gap in the provision of reliability between the now and up to 12 months out and the only tools available for shortages in the next 12 months, are RERT, direction by AEMO to an existing generator or involuntary load shedding.

If RERT is eliminated, there will be one less tool available for addressing short term reliability.

In this regard the RP noted (page ii):

> "...that in the longer term, given the performance of the NEM to date, the strong reliability outlook, the current investment signals, and the fact that the RERT typically elicits a response that is relatively small in the context of those events that may result in unserved energy (USE), the RERT mechanism is not likely to be required ... [as] the market has continued to invest in new capacity, notwithstanding [the] uncertainties."

That this may be the case is not denied, but it does not address the concerns that there could well be short term shortages that the supply side cannot address in the necessary timeframe. In fact, the RP assumes that involuntary load shedding is acceptable because (page ii)

> "...under the current definition of the Reliability Standard, some USE is likely to occur occasionally."

This may be true, but if the RP can provide an ability to prevent involuntary load shedding at a low cost then should it decide that regardless consumers should be unnecessarily impacted. The RP makes light of this in its comments that (page ii):

> "...AEMO has powers to intervene in the market which could be used in some circumstances to assist with any supply shortfall..."

What this disregards is that there is a presumption that when involuntary load shedding is to be implemented, most if not all supply side options have been incorporated. Already the market has experienced involuntary load shedding on occasions, indicating that there already have been times that AEMO powers of direction are insufficient. This observation also excludes the fact that AEMO direction is not costless and the costs involved maybe higher than the MPC and makes the presumption that AEMO directions to generators will be less expensive than continuing a RERT program.

In summary the RP advises that:

- The current reliability settings have provided adequate generation in the medium to long term to meet the reliability standard
- There is a gap in the market's ability to meet reliability standards in the short term (such as between now and next summer) so there is potentially a need for a mechanism to provide for any shortage of supply for these periods.
- Under the currently design of RERT, DSP provision of has been modest but even so the bulk of responses to RERT have been from the demand side
- AEMO can pay a generator directed to supply, more than the MPC for the power generated.

When seen in this light, the RP is again recognising that the supply side is being incentivised to provide reliability (under the cost structure AEMO is permitted to pay to directed generators) but an incentive for a DSP response to achieve the same outcome is considered to be unacceptable. But it is also clear that the constraints the Rules impose regarding AEMO ability to access significant amounts of DSP under the RERT program are so heavily proscribed so as to make it virtually impossible for DSP responses to potential shortfalls.

Yet at the same time the RP acknowledges that management of short term shortages is best provided by the demand side.

2. Providers of RERT

The draft report and some submissions observed that RERT is a market distortion as it places RERT outside the normal operation of the market. This is true. Just as AEMO calling a generator on to provide for a shortfall outside the normal market is already permitted, so too should AEMO be permitted to call on RERT to provide DSP capacity outside the market. It is difficult to see why there is a disparity considered between a supply side response and a DSP response, when both are called by AEMO when there is a need. After all, AEMO is only permitted to use its powers of direction or RERT, when the market has failed. Under market failure conditions, non-market approaches should be used.

Respondents to the RP Issues Paper noted that the main provider of RERT was DSP. They also noted that some supply side providers to RERT considered effectively "robbing Peter to pay Paul" by removing from the market to be a part of RERT and there was no net benefit in increasing supply. Because of this there is a view that RERT is flawed. This means that RERT should be primarily considered to be a DSP issue.

The report states (page iii) that RERT:

> "...is not an appropriate mechanism to directly address major power system events, such as the short notice closure of major baseload plant. Primarily, this is because of the limited amount of capacity available under the RERT."

This observation is somewhat disingenuous. There has never been a contention that Reserve Trader (an original feature of the Electricity Code), and its successor RERT, was intended to replace baseload generation. The AEMO powers of direction are intended to address such circumstances – in fact AEMO could direct a power station proposing to close to continue to operate until adequate replacement supplies were in place. Such a direction would reimburse the power station for all the costs involved[6].

[6] See Rule 3.12

Further, the closure of baseload generation would not be carried out in the short term but would perforce be a managed closure carried out over time. RERT has always been a program to address short term shortages. The expectation of replacement of a baseload generator is that the MPC and ESoO would provide the signals for the replacement.

The report also notes (page iii) that:

> "...the RERT may be effective in addressing relatively small, location-specific, supply shortfalls."

Although the MEU agrees that RERT can provide such outcomes, again the RP makes a presumption that as RERT has so far been able to provide only small amounts of capacity, that this means such a program could not be re-crafted to provide much larger amounts. This would seem to be another disingenuous statement. In other jurisdictions (such as in WA) significant amounts of DSP capacity have been sourced and contracted; companies like Energy Response have advised they could even access similar proportions of capacity in the NEM, if the RERT rules were made more appropriate.

There is no doubt that with a better designed RERT, there could be significant and viable DSP response to address even large short term shortages, and one which could provide considerable volume under the right conditions, if needed. If the alternative was for consumers to face extended rolling blackouts, many consumers have advised they would be prepared to provide voluntary demand reduction for appropriate recompense.

The draft report equates RERT to normal supply and opines that any RERT should be seen as a normal part of the NEM and therefore that that DSP offers for RERT must be costed in terms of the MPC. This is incorrect. RERT is an exceptional response to the market caused by an exception set of circumstances; RERT can therefore only be called by AEMO. Under exceptional circumstances AEMO can direct a generator to supply. When AEMO directs a generator there is no upper limit to the price AEMO might have to pay, so why should RERT which is also only exercised at AEMO direction constrained by MPC?

A direction to provide supply when all costs are covered is surely an incentive to a generator under exceptional circumstances. Why then cannot the same be provided to consumers undertaking voluntary load shedding when called by AEMO?

3. Who says there is no need for RERT?

On page 7, the report notes:

> "The Panel considers that in the longer term, the RERT mechanism is not likely to be required given the strong reliability outlook and the current investment incentives in the market and the relatively small level of response it elicits compared to the typical events that impact on system security and reliability.
>
> To date, market performance has been sufficient to ensure the security and reliability of electricity supply. The outlook for reliability shows that the majority of the NEM regions are expected to have sufficient reserves up to 2015/16. Historically, when the SOO has forecast a supply deficit, the market has delivered sufficient capacity."

This observation relates to the long term. RERT addresses forecast **short term** needs where there is insufficient time to build new capacity.

When there is a shortage, consumers are essentially arbitrarily denied supply on a rolling geographic basis. This process denies supply to consumers in the geographic area where load shedding occurs regardless of the cost of that impact on each consumer[7].

AEMO in its review of VCR clearly recognises that two consumers in the same area have different values of reliability, yet involuntary load shedding does not differentiate. On this basis it is better that the consumer prepared to load shed because its costs for supply loss are lower than another's, should be given both the opportunity to offer its capacity and at the same time recover some of its costs for doing so.

However, accidental loss of supply for individual generation units is always possible as is the loss of transmission. It is accepted that it is inefficient to always provide a supply side response to both peak demands and the occasional loss of some generation.

A RERT program has been demonstrated as being able to provide increased reliability at a small cost.

4. The gas market STTM example

In the development of the STTM, a key element is the use of "Contingency Gas" (closely analogous to RERT) whereby large gas consumers register to provide their gas to be used when there is a shortage. Historically, the same large gas users are always those required to cease use of gas when there is a shortage.

[7] AEMO sees that different consumers in the same geographic area might have differing values for reliability, but the scheduling of denial of supply disregards this

It is recognised that in the gas industry, increased supply options when there is a shortage cannot address an immediate need for gas due to the properties of gas flow. Therefore, the only option for addressing a shortage is load shedding[8].

When the gas market was vertically integrated, the gas business would provide these large gas users likely to be called to surrender their gas supplies, with a gas supply costed as "interruptible" which was a lower price than that available to those consumers who would not be interrupted if there was a gas supply shortage.

With the transition to the new disaggregated gas markets, these large gas consumers paid the same price as all other gas users but were still required to cease gas usage when there is a shortage. Effectively the same large gas consumers were not only not getting a benefit for their interruptability, but then incurred large costs when they were interrupted were not reimbursed. To offset this, "Contingency Gas" (CG) was introduced which pays large gas consumers for the gas they effectively give back to the market when called by AEMO. AEMO manages this process.

The gas STTM has identified that demand side involvement is essential in the gas market and has implemented the CG scheme which replicates the RERT. However the CG scheme is not beset by the complexities the AEMC and RP has imposed on RERT. The CG scheme concept and implementation was developed by the gas industry (including consumers, gas transporters, retailers and gas producers) and there was minimal problem in achieving the current outcomes without the complexities inherent in RERT imposed on it.

Contingency gas is the gas market equivalent to RERT. What a well designed RERT would do, would be to encourage some consumers of electricity to sell their rights to electricity (ie be interruptible)

5. The MEU proposal

The MEU considers that there is a substantive reason to retain RERT. This is to provide voluntary load shedding in order to achieve short term reliability, in preference to involuntary load shedding; the substantive reason is the same as that used by the gas market for the same purpose.

- The RERT scheme should be designed to provide reasonably small amounts of power for relatively short periods of time and have an outlook period of between a few hours an up to 1-2 years.
- The RERT should only seek demand side involvement and mirror the permitted reimbursement approach of AEMO when it directs generation (Rule 3.12)

[8] The electricity market shows similar constraints in that providing new generation takes time to implement.

- The RERT should be designed to incentivise DSP in a similar way to Contingency Gas or when a generator direction
- RERT should only be triggered when AEMO sees there is a need (like contingency gas)
- AEMO should have direct control although it would be permitted to work through retailers
- The RP should set the envelope for the RERT and AEMO should design the protocols for it.
- Oversight of AEMO operations for the RERT should replicate those used for CG
- AEMO can discuss RERT provisions with actual consumers and not be constrained to address just market participants. AEMO would pay for consumer establishment costs but retailers would be needed to verify that demand reductions had occurred before any ongoing payments had be made.

Yours sincerely

David Headberry
Public Officer
Major Energy Users Inc