

SUBMISSION

AEMC VICTORIAN GOVERNMENT DEROGATION – RERT ERC 0283

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AEMC Discussion Paper
Victorian Government Derogation
RERT ERC 0283
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INTRODUCTION

The Energy Users' Association of Australia (EUAA) is the peak body representing Australian commercial and industrial energy users. Our membership covers a broad cross section of the Australian economy including significant retail, manufacturing and materials processing industries. Combined, EUAA members employ over 1 million Australians, pay billions in energy bills every year and expect to see all parts of the energy supply chain making their contribution to the National Electricity Objective.

Our members are highly exposed to movements in both gas and electricity prices and have been under increasing stress due to escalating energy costs. These increased costs are either absorbed by the business, making it more difficult to maintain existing levels of employment or passed through to consumers in the form of increases in the prices paid for many everyday items.

Many of our members have significant operations in Victoria that employ thousands of people across the State. These businesses are facing huge energy cost pressures as they seek to ensure the sustainability of their operations and their employees' livelihood. Our key concern is that any changes to the procurement framework of the Reliability and Emergency Reserve Trader (RERT) that result in ongoing availability/capacity payments to RERT providers would increase electricity costs to our members.

The EUAA played a very active role in the recent comprehensive AEMC RERT Review ("Review")¹ that was only completed in May 2019. Our involvement was driven by our members receiving very large unexpected bills for their share of the \$52m in RERT costs for 2017/18 and then a repeat of this for their share of the \$32m in 2018/19. We were supportive of the final AEMC rule change because, in our view, it determined an appropriate balance between reliability and cost. The Review concluded:

"Crucially, the reliability standard is not zero per cent since this would be too costly for consumers. The reliability standard represents a trade-off between the prices paid for electricity and the cost of not having energy when it is needed: increasing levels of reliability involves increased costs." (para 36 pp. v-vi)

The Review explicitly considered a multi-year RERT that was proposed by AEMO and the Victorian Government as part of the Review and which is now again being proposed by the Victorian Government in this current application.

¹ AEMC "Rule Determination National Electricity Amendment (Enhancement to the Reliability and Emergency Reserve Trader) Rule 2019" 2nd May 2019 <https://www.aemc.gov.au/sites/default/files/2019-05/Final%20Determination.pdf>

The Review concluded that:

*“...the Commission considers that the increased costs for consumers would outweigh ...potential benefits...”
(para 47 p.xi)*

In this current application, the Victorian Government, drawing on the August 2019 AEMO ESOO and other sources, argues that there is evidence of material changes since May 2019 that warrant re-opening of the issue under an expedited rule change process. Our previous submission on this matter focused on whether the derogation should be considered by way of an expedited rule change. We argued against an expedited process because:

- While there has been a material change in conditions since the publication of the 2019 ESOO, these changes are positive meaning the level of expected USE in Victoria in 2019/20 is now forecast to be below the reliability standard
- We understand that AEMO has already procured sufficient RERT contracts to cover the expected 2019/20 USE risk identified in 2019 ESOO
- We are not satisfied that the purchase of additional RERT for 2019/20 meets the NEO

We are pleased that the AEMC has given due consideration to the matters raised in our and other submissions and decided to review this application under the normal rule change process.

This submission, drawing on parts of our earlier submission, examines the substantive arguments advanced by the Victorian Government in favor of a reversal of the AEMC’s May 2019 conclusion declining to allow multi-year RERT. It concludes that these arguments do not support a reversal of the AEMC May 2019 conclusion. In terms of the AEMC assessment framework:

- while it may improve reliability, it may well improve it beyond the reliability standard where a number of previous reviews have determined that the marginal value of such an outcome do not outweigh the additional cost,
- it introduces market distortions that decrease the level of in-market reserves placing too much responsibility on RERT and moves the RERT beyond its safety-net role, and
- increases unnecessary costs to consumers of achieving the reliability standard.

We believe that consideration of the proposed changes – which is a form of standing strategic reserves – are best considered as part of the overall post 2025 market, not in this particular narrow context.

The submission is structured as follows:

- Section 2 presents our view supporting the current reliability standard and discusses the role of RERT in meeting the reliability standard, supporting the Review conclusion that it is a:

“...last resort mechanism to use when the other elements have been exhausted. It is not a primary mechanism for meeting reliability. This is the role of the market.”

- Section 3 comments on AEMO’s approach to forecasting expected USE that effectively leads to RERT being procured on the basis of a tighter standard than 0.002%.
- Section 4 responds to the specific questions asked by the AEMC in its Consultation Paper.

- Section 5 notes the option available to the Victorian Government is to fund the construction of additional generation, which was raised in the Review. It is similar to what the South Australian Government implemented following the 2016 blackout.

OUR VIEW ON THE RELIABILITY STANDARD AND THE ROLE OF RERT

The EUAA supports the form of the reliability standard and that it is set at a level where the expected unserved energy for a given region in a given year does not exceed 0.002% i.e. there is sufficient generation and transmission interconnection in a region such that at least 99.998 per cent of forecast total energy demand in a financial year is expected to be supplied. We agree with the Review concluded in May 2019:

“Crucially, the reliability standard is not zero per cent since this would be too costly for consumers. The reliability standard represents a trade-off between the prices paid for electricity and the cost of not having energy when it is needed: increasing levels of reliability involves increased costs.” (para 30 pp v-vi)

The Review noted that AEMO had raised concerns about the appropriateness of the reliability standard and whether it reflects community risks around the changing nature of the generation mix. Advice from the Reliability Panel reaffirmed the importance of the existing standard and the need to anchor RERT on that standard. The Review concluded:

“...In considering the appropriateness of the reliability standard, as noted above, a non-zero reliability standard is crucial because of the trade-off between affordable power and the cost of not having energy when it is needed. Not only could it be prohibitively expensive to try to maintain a 100 per cent level of reliability, practically, it is impossible as there will always be the possibility some unlikely combination of events could occur such that there is insufficient supply to meet demand. (para 43 p. x)

This same conclusion in the Draft Determination received overwhelming support in submissions from stakeholders. RERT is one part of a broad framework of instruments to meet the reliability standard. This framework includes the NEM reliability settings, the new Retailer Reliability Obligations, normal market incentives, AEMO market directions and wholesale demand response incentives. The Review described it as:

“Reliability outcomes in the NEM are largely driven by market participants making investment and operational decisions, taking into account expectations and information that is provided on future demand and supply. Generators and retailers have strong financial incentives to provide in-market reserves in order to support the operation of the power system in a reliable manner.” (para 7, p. ii)

“As part of the broader reliability standard, the RERT is a safety net, a last resort mechanism to use when the other elements have been exhausted. It is not a primary mechanism for meeting reliability. This is the role of the market. This is further reinforced by the introduction of the retailer reliability obligation, which builds on existing spot and financial market arrangements in the NEM to facilitate investment in dispatchable capacity and demand response in order to support the reliability of the power system.” (para 10 p.11 – emphasis added)

“The core objective of the existing reliability framework in the NEM is to deliver desired reliability outcomes through market mechanisms to the largest extent possible. In a reliable power system, the expected level of supply in the market will include a buffer, known as “in market” reserves. Expected supply will be greater than expected demand. In the event that the supply / demand balance tightens, spot and contract prices would rise, which will inform operational decisions and provide an incentive for entry and expansion, addressing any potential reliability problems as or before they arise. This allows the actual demand and supply to be kept in balance, even in the face of shocks to the system. (para 30 p. v)

So RERT is a safety net. It is only required after all in-market reserves are exhausted. The aim is to have as much as possible as “in-market” reserves, especially as the cost of these reserves is controlled by the existing market price cap while the available data on RERT indicates values well in excess of the market price cap have been paid. As a safety net, this may be appropriate but should be avoided where possible.

OPERATIONALISING THE RELIABILITY STANDARD AND DETERMINING THE LEVEL OF RERT

In operationalising the standard through the reliability standard implementation guideline (RSIG - a process developed and controlled by AEMO), AEMO’s current approach appears to be very conservative such that standard is effectively lower (i.e. tighter) than 0.002%. While we understand the desire of AEMO to ensure sufficient resources are available to manage reliability, it must be recognised this approach is likely to result in a higher level of expected USE and higher RERT procurement than might have been the case a few years ago.

Both the ESOO and MT PASA use a probabilistic modelling process whilst the ST PASA and pre-dispatch process use a hybrid probabilistic/deterministic model. AEMO fully controls the input assumptions to the modelling including:

- demand forecast – 10% and 50% probability of exceedance (POE)
- scheduled generation supply forecasts – generator availability submissions adjusted for probabilistic unplanned outage modelling
- uninterrupted intermittent generation forecasts – wind, solar PV, etc. output
- potential demand side response

AEMO’s conservative approach can be seen in, for example:

- The 10% POE forecast for the Victorian region have never been exceeded by adjusted actual demand² in the history of the NEM. By contrast, demand has fallen short of the market operators 90% POE demand forecast for the Victorian region in 25% of years. It should also be noted that whereas until the 2011 ESOO the gap between the 10 and 90% forecasts was approximately 12% over the last 7 years, this gap has now increased to 18%. Had the gap remained at the original 12% level, then 35% of years would fall below the 90% POE forecast.
- While AEMO use historical demand traces in their modelling, each of the historical year demand traces are scaled up to achieve a maximum yearly demand equivalent to the conservative 10% POE demand forecast. The historical traces are also scaled to the 50% POE forecast. This means no inherent range of maximum yearly demand possibilities is represented in the modelling.

² Adjusted actual demand includes the addition to the recorded demand of both RERT dispatch and the impact of any instructed load shedding to derive a counterfactual demand

- The probabilistic modelling of unplanned outages is currently weighted to provide an overly pessimistic view of scheduled generator availability. This was seen in the 2019 ESOO availability assumptions for Loy Yang A2 and Mortlake. The methodology and analysis was not discussed with stakeholders prior to the publication of the ESOO and was finally provided nearly three weeks after publication of the ESOO following a specific request from the EUAA.
- For demand side response, AEMO uses the 50th percentile of what AEMO determines to be historically observed demand response. Stakeholders have commented that the demand response values used in the modelling represent only a small fraction of the level of demand response observed in the NEM and fall well short of demand response values submitted to the demand response register.
- The actual modelling methodology for intermittent generation output at this stage remains somewhat unclear; however, given the conservative approach taken with regards to other key input assumptions, we can only assume that a conservative approach is also taken in this area.

Stakeholders continue to raise concerns with AEMO regarding the current highly conservative nature of a number of input assumptions to the reliability forecast modelling. To date, AEMO’s response is to highlight the increased risk of high impact low probability (HILP) events where an entire region loses power caused, for example, by a combination of extreme temperatures, low or volatile intermittent generation output and multiple simultaneous failures of thermal plant. This catastrophic, multi-factor event is used as justification for its more conservative approach. It then argues that it needs to have additional instruments like multi-year RERT contracts because they are lower cost measures, in terms of \$/MW/day of capacity, to procure the higher levels of RERT their conservative modelling indicates is required.

However, consumers are supposed to get comfort from the Victorian Government’s argument that:

“It is not proposed that AEMO would be obliged to enter contracts for multi-year RERT capacity reserves. Rather, AEMO will be empowered to use its discretion within the parameters articulated in the NER and the RERT Guidelines to achieve best outcomes for consumers, balancing reliability and costs.” (p. 8)

We believe a fundamental flaw in this argument is that Victorian Government (and perhaps AEMO) have more incentive to minimise disruptions to the power system than they have to minimise costs associated with that activity. It appears that the preference is the creation of a strategic reserve that essentially guaranteed zero unserved energy. If a strategic reserve is the desired outcome, then our preference would be for AEMO and the Victorian Government to undertake a deliberative process, including stakeholder engagement and robust cost benefit analysis. It may be that a well-designed strategic reserve is the best way to manage system reliability, but in the absence of proper process and analysis, stakeholders do not have sufficient information to arrive at that conclusion.

Currently, the nature of the RERT cost recovery process for residential customers – no explicit cost (compared with large C&I consumers which receive a specific invoice) - means the cost is hidden. If there is some transparency around the residential costs, it is usually expressed in terms of a “cups of coffee” equivalent which is considered low. For large C&I customers however, the costs of availability (capacity) payments are significant, particularly when they will be paid for every day for a 3 year, or more, time period.

We draw attention to the Brattle Groups review of HILP events and reliability frameworks commissioned as part of the Review where they discussed this issue in more detail. Their examination of four overseas jurisdictions (US - PJM, ISO-NE, ERCOT - and Great Britain) found that:

“the reliability frameworks ultimately resulted in the system operator procuring more resources than system modelling shows is needed to meet the reliability standard.”³

Possible explanations offered by the report’s authors were:

“...system models may not capture the full range or extent of HILP events; system operators may be using these reliability resources to address system security risks; and/or system operators and policy-makers may have a bias towards delivering additional reliability, for example because these institutions do not themselves bear the costs of purchasing additional reserves.”⁴

As the Review noted, when discussing the Brattle report’s conclusions:

“...system operators may have an incentive to over-procure, since over- procurement is costly for consumers but not for system operators (whereas under-procurement would be costly for system operators and consumers).

We appreciate the difficult job of managing reliability of a changing energy system falls disproportionately on AEMO. However, this does not dilute our concern that AEMO’s conservative approach to modelling expected USE combined with greater incentive to achieve 100% reliability than to minimise cost, means that multi-year RERT contracts are highly likely to be utilised more often than we think is consistent with the intent of the reliability standard – and this would not meet the NEO assessment framework.

RESPONSE TO SPECIFIC QUESTIONS IN THE CONSULTATION PAPER

Question 1: Assessment Framework

(a) Is the proposed assessment framework appropriate for considering the changes proposed in the derogation proposal?

b) What, if any, other relevant considerations should be included in the assessment framework?

The EUAA agrees with the proposed assessment framework – promoting the reliability of the power system, minimizing market distortions and minimizing direct costs.

³ The Brattle Group “High-Impact, Low-Probability Events and the Framework for Reliability in the National Electricity Market” Report prepared for the AEMC February 2019 p. vi <https://www.aemc.gov.au/rule-changes/enhancement-reliability-and-emergency-reserve-trader>

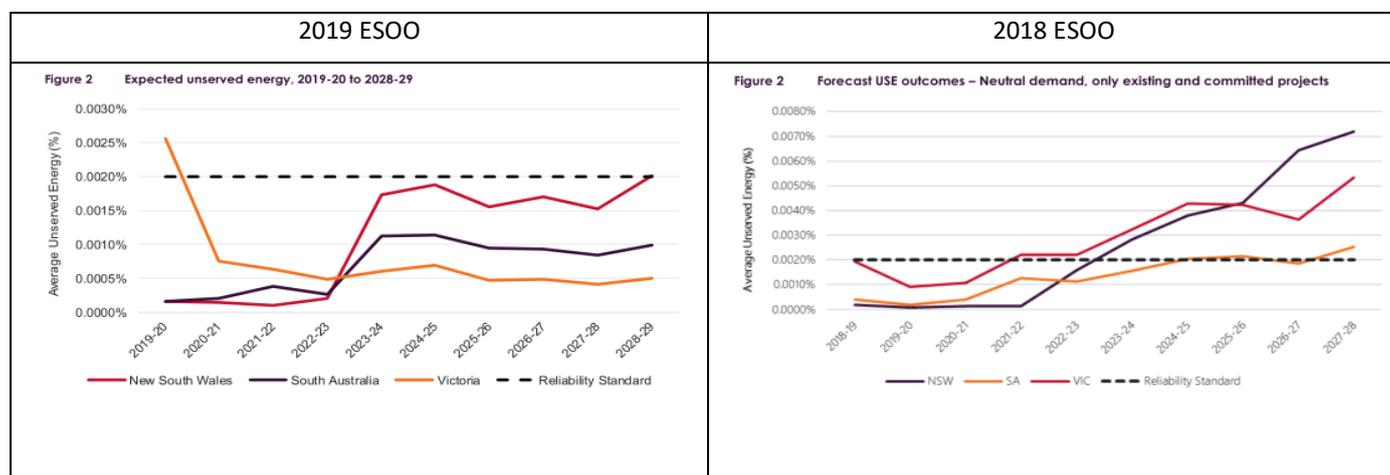
⁴ *ibid*

Question 2: New Information about the demand and supply balance in Victoria

- (a) What are stakeholders’ views on Victoria’s set of reliability challenges amongst NEM regions and the risks of load shedding that would necessitate allowing for multi-year RERT contracting in that state?
- (b) Are stakeholders aware of any other information that the Commission should consider in relation to the demand and supply balance in Victoria over the short to medium term and/or the availability of emergency reserves that would be relevant to this derogation proposal?

The Victorian Government argues that the August 2019 ESOO shows there have been material changes in the Victorian demand supply balance outlook since the Review declined to approve multi-year RERT. These included the unreliability of thermal plant and the absence of additional demand response. In our earlier submission, we argued that there have been material changes since August 2019 but they point to much stronger supply for 2019/20 and expected USE below the reliability standards given the availability of Torrens Island, Loy Yang A2 and Mortlake shown in MTPASA.

When we look at subsequent years, it is worth comparing the outlook for 2020/21 and beyond in the 2019 ESOO vs 2018 ESOO.



The 2018 ESOO shows expected USE in Victoria exceeding the reliability standard every summer from 2021/22, getting to quite high levels in later years of the forecast period. This exceedance disappears in the 2019 ESOO with expected USE significantly lower than the reliability standard for all the forecast years, reflecting the considerable level of committed new generation due to come on line in Victoria.

It is also worth noting that while the 2019 ESOO modelling includes the installation and commissioning of Snowy 2.0s 2,040 MW of pumped hydro capacity from 2025/26, the ESOO did not include the significant network upgrades that are expected to accompany the commissioning of this capacity. Inclusions of these transmission upgrades, (even prior to the expected commissioning date for Snowy 2.0), in future ESOO’s will further reduce the potential for USE to occur.

The Victorian Government’s argues that the rule change is still required despite this forecast:

“While the short-term outlook in years 2020-21 and 2021-22 does not currently indicate the same shortfall in USE, it should be recognised that these forecasts are volatile. They depend on the state of availability of

an ageing baseload thermal generation fleet at any given point in time. As an example, the 2018 ESOO did not forecast a shortfall in Victoria during summer 2019-20 and yet the 2019 ESOO did, drastically reducing the time available for the market to respond.” (p. 4)

We agree that the ESOO forecasts can be volatile. The 2019 ESOO forecast of a shortfall in 2019/20 disappeared a short time after publication. Whilst the 2018 ESOO did not forecast a breach of the reliability standard for Victoria in 2019/20 it did indicate forecast USE of approx. 0.001%. Excluding the conservative assumptions on generator availability in the 2019 ESOO reduces the forecast 2019/20 USE to a similar level forecast in the 2018 ESOO.

We also argue that the inclusion of the RRO reliability forecast in future ESOOs will decrease that volatility given it will, when required, increase in-market reserves. Market participants will have a very strong financial incentive (shortfall penalty capped at \$100m) and a share of RERT procurement costs to procure their share of the required in-market reserves.

While the Government argues:

*“indications are that maximum market availability for demand-side contracts has been materially reached”
(p.6)*

no evidence is provided. We believe that the incorporation of more realistic forecasts of demand response following the implementation of the AEMC wholesale demand response mechanism will also service to increase in-market reserves and decrease volatility in ESOO forecast outcomes.

Question 3: Implications of RERT contract periods for Victoria

- (a) Do stakeholders consider that introducing multi-year RERT contracts would remove a barrier to participation for potential providers of emergency reserves in Victoria?*
- (b) What do stakeholders consider to be the benefits of introducing multi-year contracting in Victoria up until 30 June 2025?*
- (c) What do stakeholders consider to be the costs associated with introducing multi-year contracting in Victoria up until 30 June 2025?*
- (d) What are stakeholders’ views about the proposed contract duration of up to three years?*
- (e) What are stakeholder views about the proposal that multi-year contracts entered into prior to the commencement of the Enhanced RERT (on 26 March 2020) would not be subject to the requirements of the enhanced RERT framework?*

The Review explicitly considered what the Victorian Government is now proposing and concluded:

“The Commission considers that, on balance, standing emergency reserves would not be appropriate. While allowing for standing reserves (where reserves could be procured for multiple years at a time) could potentially result in cheaper emergency reserves being provided, the Commission considers that the increased costs for consumers would outweigh these potential benefits since:

- *Consumers would pay for emergency reserves every year regardless of whether or not the emergency reserves are required – thereby increasing electricity costs.*

- *In addition, allowing standing reserves would likely disincentivise investment in all forms of generation (and demand response) in the market which would lead to higher wholesale market prices – further increasing costs to consumers.” (para 47 p x-xi)*

The Victorian Government argues the contrary:

“...the nature of the RERT, as it is currently designed, makes it a reactionary mechanism that imposes higher costs on consumers and does not deliver sufficient reserves to support reliability during the energy transition. Extended duration contracts are required to attract new reserve capacity generation and minimise the cost on consumers.” (p.3)

This seems to have the cart before the horse. Offering extended contracts with guaranteed capacity payments for three years is obviously more attractive to the providers than those resources than taking wholesale market price risk as an “in-market reserve”. It is not surprising that the Government says:

“Based on preliminary discussions with potential RERT supply side providers, the Department of Environment, Land, Water and Planning (DELWP) is aware that several parties have stated that they are unable to offer in resources below the value of customer reliability within the constraints of a one-year RERT contract. However, these same parties have indicated that they are able to provide substantial new energy generation resources at significantly lower annual cost if multi-year contracts were available.” (p.6)

But that is not a reason to support 3-year RERT contracting. The maximum cost to consumers of in-market reserves is the market price cap. The maximum price to consumers of 3-year RERT contracts is the value of customer reliability which, on existing estimates, can be 3-4 times the market price cap. Also, whilst consumers might pay some level of premium for a 3 to 4-month RERT contract, under the proposed change consumers would be locked into ongoing payments for a 3-year period. How can the Government’s proposal be a better deal for consumers?

The Victorian Government goes on the argue:

“The derogation will not adversely impact investment in the NEM, given its limited scale and duration (to 2025).” (p.8)

Firstly, as we note below, it is not short term. Secondly, while the Government does not define what it means by “not adversely impact investment in the NEM”, we define it by “not adversely impacting on investment in ‘in-market’ reserves”. Or in terms of the AEMC assessment framework – minimises market distortions and minimises direct costs. The Government provides no evidence for its statement.

Bringing reserves out of the market or delaying what would have been in-market investment and incentivising these to move into RERT, distorts the market and the purpose of RERT as a safety net. Consumers are paying up to the VCR for a reserve that they should only have a capped cost of the MPC. The more the barriers to 3-year RERT are reduced, the higher the overall cost to consumers – not just the cost of RERT itself, but the impact on wholesale market prices with lower in-market reserves.

And then there is the distortionary impact the 3-year RERT will have on the operation of the RRO. As the Review noted:

“The RRO is designed to incentivise retailers, on behalf of their customers, to support the reliability of the power system through their contracting and decisions. The RRO will incentivise more reserves into the market. If the RRO is triggered, retailers will be required to enter into contracts, which will have the aim of unlocking new investment, improving liquidity and increasing demand response. This will increase market reserves.” (para 27 pp.)

Question 4: Length of derogation

What are stakeholder views on the proposed expiration date for the derogation of 30 June 2025?

The application argues:

“The derogation is designed to address a short-term reliability problem. It is therefore proposed that this arrangement continue for five years to 30 June 2025. Long-term resolution of supply reliability is anticipated to be resolved by other measures including:

- *on-market investment in generation and transmission augmentation;*
- *the Retailer Reliability Obligation; and*
- *the Energy Security Board’s Post 2025 Market Design for the NEM.” (p. 8)*

But as the Consultation Paper notes:

“The Victorian derogation proposal requests that multi-year RERT contracting be in place in Victoria from the 2019/20 summer until 30 June 2025. This would mean in effect that multi-year contracts entered into in 2025 would be in place through to 2028.”

This is not short term. It is 9 years after the start of the RRO. It is 5 years after the closure of Liddell. It also means that the excess inefficient costs imposed on consumers will continue for many years.

THE VICTORIAN GOVERNMENT HAS THE OPTION OF PROVIDING ITS OWN RESERVES

Given we do not see the cost benefit case in the context of the NEO for the costs to be passed on to electricity consumers, there is still one other option open to the Victorian Government if it is still so concerned about reliability – the Government provides the reserve generation itself.

This is what the South Australian Government did some years ago following the 2018 State wide blackout.

The Review noted:

“The Commission recognises that some jurisdictions consider there needs to be interim measures in place in order for them to have higher levels of emergency reserves to assist in managing the system as the transition takes place. In particular, the Commission understands that some jurisdictions have concerns around the upcoming summers, due to the lack of investment in dispatchable capacity occurring in their regions. Some jurisdictions have suggested that it would be beneficial to have strategic reserves, in order to minimise the risk of any load shedding occurring during this transition period, over the next couple of summers. (Para 48 p. xi)

“In addition to the above, there are a number of other options for jurisdictions to have more emergency reserves if they consider these are needed, particularly in the short-term. This includes jurisdictions providing funding to emergency reserve providers to sit on, and so be available through the RERT panel, or by participating in emergency reserves themselves, e.g. by purchasing capacity that is then offered into RERT, or by subsidising the costs of participating in the RERT for participants. (para 50 p. xi)

It is not clear if this option has been considered by the Victorian Government.

However, we are not saying that we support this approach. If it involved the Government procuring reserves from third parties then it has the same flaws as highlighted above – it will take generation out of the market just as a 3-year RERT will and have the same negative impact on pool prices. If it was the Government building or underwriting new capacity itself and making that available to be bid into the market, then the impact may be different depending on the nature of the commercial arrangement.

As always, we would welcome further consultation if so desired.

Kind regards



Andrew Richards
Chief Executive Officer
Energy Users Association of Australia