

SUBMISSION

Reserve level declaration guidelines – March 2024

The Clean Energy Council (CEC) is the peak body for the clean energy industry in Australia, representing over 1,000 of the leading businesses operating in renewable energy, energy storage, and renewable hydrogen. The CEC is committed to accelerating the decarbonisation of Australia's energy system as rapidly as possible while maintaining a secure and reliable supply of electricity for customers.

The CEC welcomes the opportunity to comment on the Draft report on the reserve level declaration guidelines.

This submission has been prepared as the Forecast Uncertainty Measure (FUM) and the Reserve Level Declaration process more generally, is having an increasing impact on the effectiveness of market function and renewable investment.

For example, lack of reserve (LOR) notices are relevant to network operator decisions to take outages, flowing through to application of incentive mechanisms such as the market impact component of the Service Target Performance Incentive Scheme.

We are also seeing this process influencing the development of the Capacity Investment Scheme, where LOR notices are being proposed as operational triggers for assets with CISAs.

More generally, the number of LOR2 notices issued, and then recalled, is having an impact on policy maker perceptions of NEM system reliability, and therefore the degree of government intervention necessary to ensure reliability is maintained.

It follows that the RLDG and underlying processes should be reassessed, given their increasing impact on overall market function.

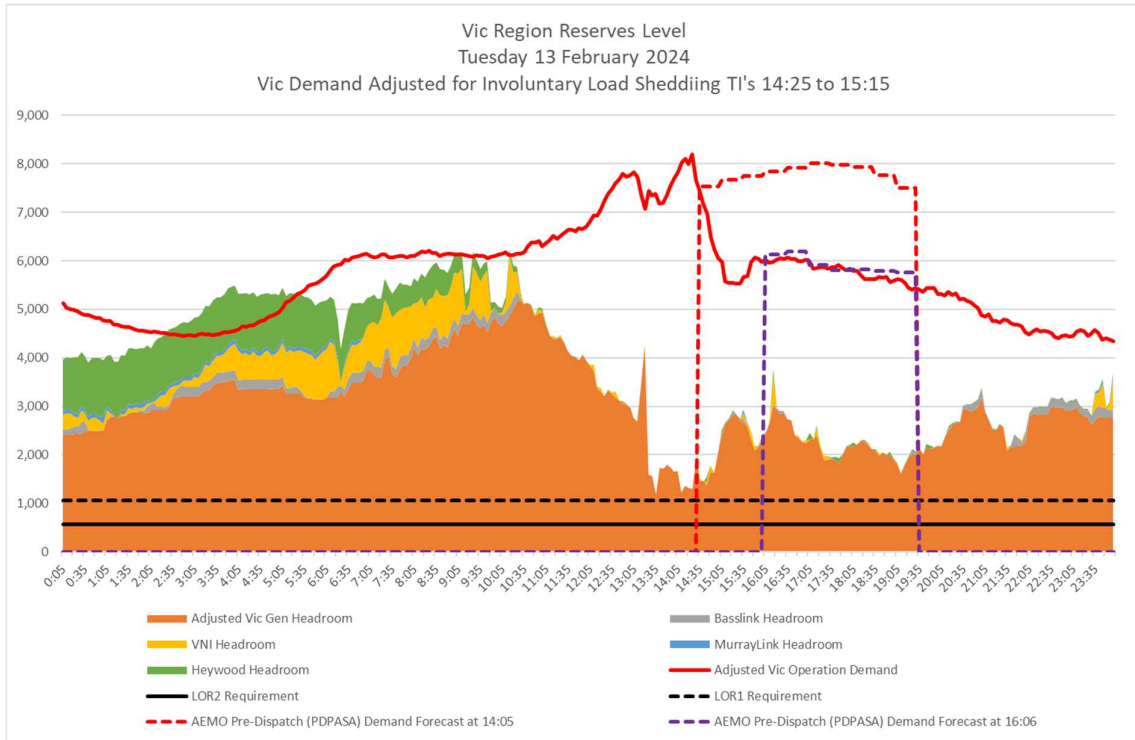
The CEC welcomes further engagement with AEMO regarding how the processes for forecasting and declaration of reserve shortfalls can be enhanced, to ensure more effective investment and market operation.

Use of the FUM and reserve level declarations

The use of the FUM is a critical component in the declaration of a forecast lack of reserve in the ST PASA and pre-dispatch (PD PASA) timeframes. However, we understand that the majority of forecast LOR2 declarations do not arise in dispatch – positive declarations generated by the FUM value which then do not move to actual LOR2 conditions at dispatch. Rarely do they move to actual LOR1 declarations at dispatch.

Analysis from CEC members shows that in February 2024, AEMO issued 160 individual market notices declaring a forecast lack of reserve in the ST PASA and pre-dispatch timeframes. Many of these were forecast LOR2 generated by high FUM values. 21 Forecast LOR2 notices were issued for the NSW region and 5 for the QLD

region for 29 February 2024. No actual LOR2 due to reliability issues were declared during February 2024. One actual LOR2 was declared for the VIC region on 13 February 2024 following a major power system security event. This LOR2 was not forecast in the ST PASA or pre-dispatch timeframes. The event public data indicates that this LOR2 was generated due to overly conservative demand forecasts for the region with actual demand falling well below AEMO’s forecast (Figure below)



NER 4.8.4A(b)(4) requires the Reserve Level Declaration Guidelines to be reviewed by AEMO at least once every four years. This includes the method and inputs for the FUM value calculation. The FUM calculation methodology has remained basically unchanged since December 2018.

The CEC appreciates that AEMO is considering only one part of the RLDG in this consultation, noting that a more recent internal AEMO review of the RLDG was undertaken in August 2023 with no subsequent changes proposed. While this is acknowledged, recent developments as noted above, suggest that further reconsideration is necessary.

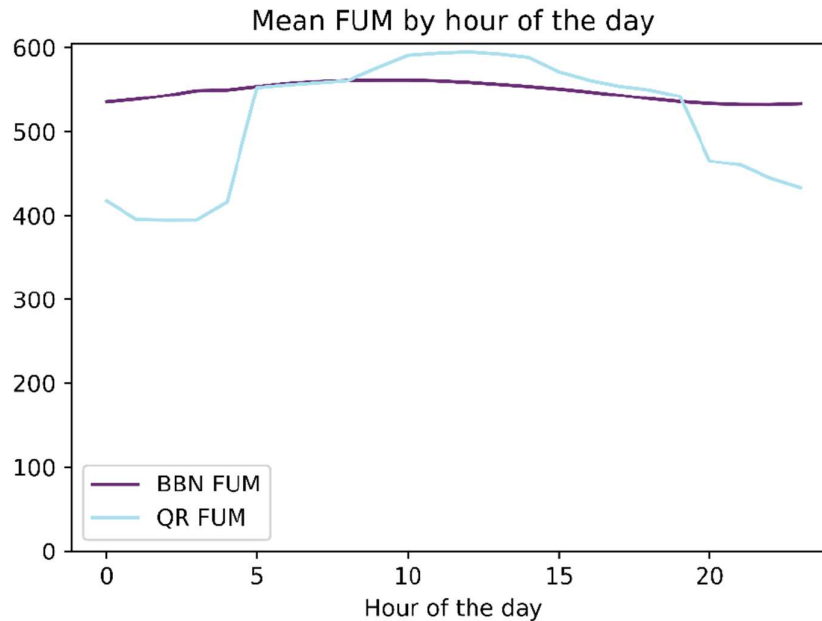
Proposed change to RLDG is supported, with clarifications

The proposed change to add an additional time of day and seasonal impacts was proposed by participants back in the 2018 consultation but was rejected by AEMO at that time.

The proposed change should be supported. However, it’s unclear from the consultation paper if it includes seasonal or monthly impacts in its calculation.

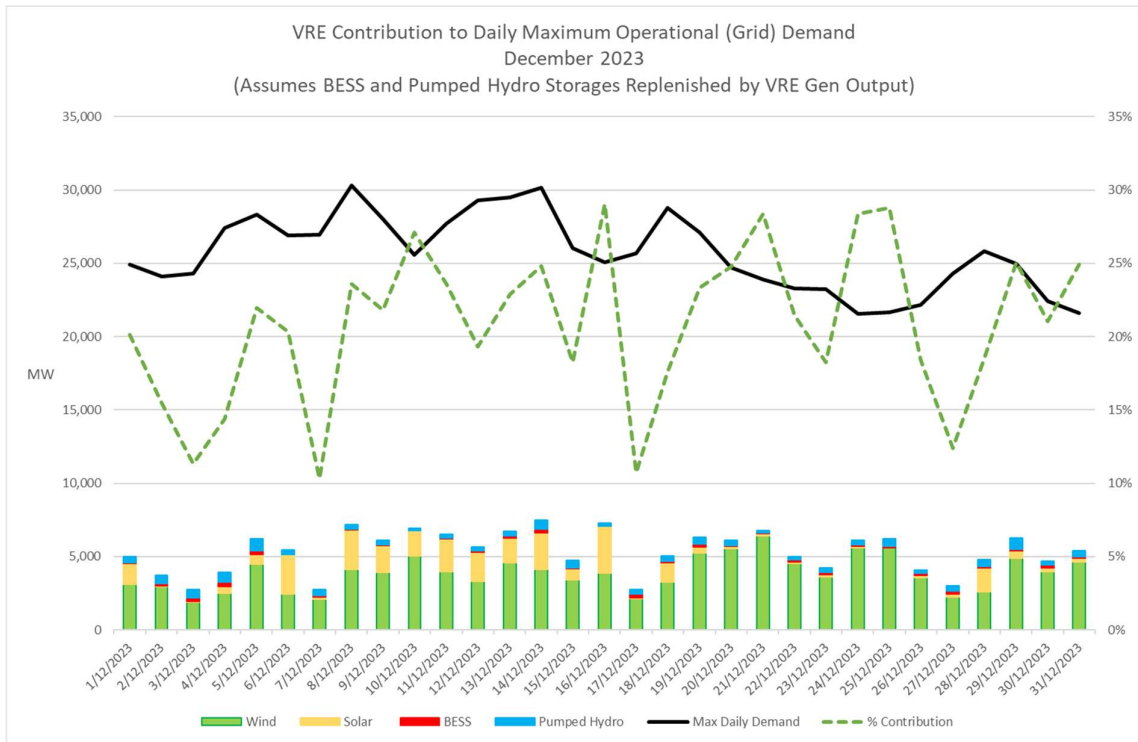
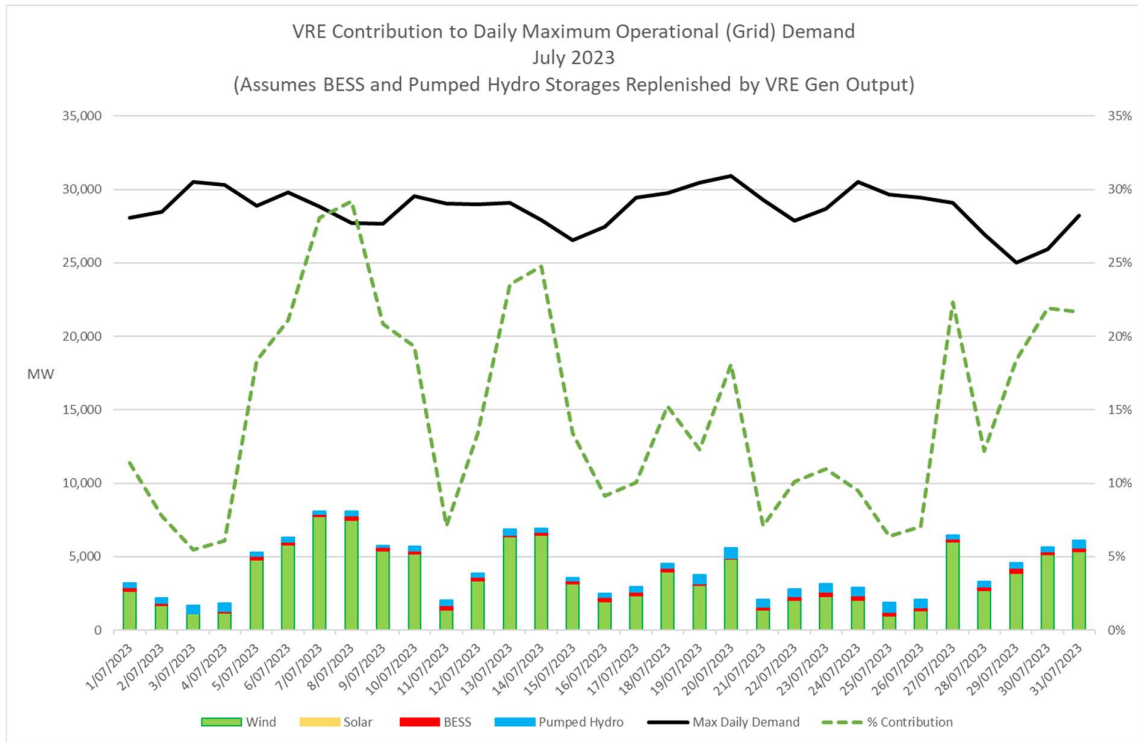
We understand that AEMO has indicated verbally that the calculation does contain a day type or date as well as time of day input. However, Figure 1 in the consultation paper and section 3.1 does not indicate this to be the case.

Figure 1 Mean FUM value (in MW) across all NEM regions by hour of the day in 2023.



Including for seasonal impacts in the calculation would ensure that the impact of uncertainty of solar PV output would be removed from those months – May to August - where solar PV output provides less contribution to meeting consumer peak demand periods and overall output is generally lower.

In months November to March, where solar PV output may have some impact on meeting the consumer peak demand periods and overall output is generally higher.



The CEC therefore supports the addition of a time of day input and suggests that in addition to time of day, the calculation should also include for seasonal impacts.

FUM issues

The other critical area of the FUM value is the use of a 95% certainty factor.

CEC members have advised that use of this certainty factor is inconsistent with other input variables for the ST PASA and pre-dispatch process, where inputs to the reliability assessment are based on the most probable of likely 50% POE value.

Whilst AEMO does publish 10% and 90% POE values as well for demand and the uninterrupted intermittent generation forecast active energy output values, the reliability assessment is then based on the 50% values. For the FUM AEMO in effect change from the most probable to a 5% POE value. Only 5% of the time is the level of uncertainty expected to exceed the value in the FUM.

The use of the 95% certainty value also weights the impact of over forecasting of demand and under forecasting of semi-scheduled and scheduled generation availability (UIGF for semi-scheduled) by AEMO at basically 5% whilst weighting the impact of under forecasting of demand and over forecasting of semi-scheduled and scheduled generation availability effectively at 95%.

To ensure that under and over forecasting are weighted equally, as both should be equally likely, we recommend AEMO consider whether another value – perhaps beginning with the 50% certainty value - be used, instead of the 95% certainty value.

Using the 50% certainty value will result in a reduction of the overwhelming majority of false-positive forecast LOR2 declarations that are currently being declared by AEMO. These false-positive forecast LOR2 declarations are creating the perception that the NEM has lower reliability than is truly the case and influencing the willingness of jurisdictions to intervene.

AEMO may pre-active or activate longer lead time RERT or IRR contracts based on these overly conservative false-positive forecast LOR2 declarations. It may also lead to a lower focus by market participants to the provision of additional generation resources due to it being viewed as “a FUM LOR2” and concerns by consumers and market bodies such as the AER and AEMC that demand response is not being deployed as effectively as it could be because AEMO is forecasting LOR2, and demand response is not being pre-activated to respond.

As noted above, these issues are also likely to impact on developments such as the CIS and the STPIS, flowing through to higher costs for consumers.

The CEC recognises these issues strictly fall outside of scope of this review, however we want to get them into the public record as they will need to be addressed in the near term.

As always, the CEC looks forward to working with AEMO to support development of these issues. If you require any further information, please contact Christiaan Zuur at czuur@cleanenergycouncil.org.au.



Kind regards

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