



COAG
Energy Council

ENERGY SECURITY BOARD Retailer Reliability Obligation

Material Reliability Gap Definition and
Communication
December 2018

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1. Introduction

At the 26 October 2018 COAG Energy Council meeting, Ministers requested the Energy Security Board (ESB) progress development of draft National Electricity Law (NEL) amendments that would give effect to the Retailer Reliability Obligation (the Obligation). The ESB will return to Council with a final draft Bill for decision in December 2018.

The final detailed design for the Obligation was published in August 2018, along with exposure draft legislation, for consultation, providing the framework for key design elements.

This consultation paper is part of a package focused on some more detailed policy issues relating to the Obligation. Other issues on which the ESB is seeking feedback include the framework for determining the firmness of contracts used by liable entities to meet their contracting requirements under the Obligation and the compliance and cost-recovery regime. The ESB has also undertaken consultation on the introduction of a market liquidity obligation as part of the Obligation. Feedback will inform development of the content of the detailed Rules which will implement the majority of the technical detail of the Obligation.

The ESB intends to release exposure draft rules for stakeholder feedback in early 2019 and present a final package to Ministers early in the second quarter of 2019. The intention is that the Obligation will commence on 1 July 2019, subject to agreement by the Council at its December 2018 meeting.

2. Background

2.1 Retailer Reliability Obligation

The ESB's final detailed design proposed that the Obligation would build on existing spot and financial market arrangements in the NEM to facilitate investment in dispatchable capacity. Its proposed mechanism entailed eight steps summarised in the figure and points below.



- AEMO will forecast annually whether the reliability standard is likely to be met or not in each NEM region over a 10 year period.
- If a **material** gap persists or emerges 3 years from the period in question (T-3), AEMO will be able to apply to the AER to trigger the Obligation.
- If the Obligation is triggered at T-3, liable entities (retailers and other market customers, along with entities that choose to 'opt-in' to manage the liability associated with their load) may be required to demonstrate future compliance by entering into sufficient qualifying contracts to cover their share of a one-in-two year system peak demand at the time of the gap.
- If one year out from a forecast material gap (T-1), the AER confirms a material gap remains, AEMO will use its safety-net Procurer of Last Resort function to close the gap. At this point, liable entities will be required to disclose their net contract positions to the AER.
- If actual system demand over the gap period (T) exceeds the one-in-two year forecast, the AER will assess the compliance of liable entities. Non-compliant entities will be charged an amount that contributes to the costs of AEMO exercising its Procurer of Last Resort function.

This will be a proportionate cost commensurate with the level of non-compliance and capped at \$100 million.

2.2 Proposed framework for materiality decisions

The ESB's Final Detailed Design proposed that the Rules set a **materiality test** to determine whether a reliability gap identified in AEMO's annual Electricity Statement of Opportunities (ESOO) is sufficiently 'material' to trigger the Obligation. It further proposed that this test be based on an objective metric, and that whatever materiality test is adopted, the reliability gap be calculated in a way that is consistent with the NEM reliability standard.

NEM reliability standard

The current NEM reliability standard is established in the Rules. It is defined in terms of expected unserved energy (USE), measured in megawatt hours (MWh), and sets the maximum level of regional operational demand for electricity which may not be met in a region in a given year as 0.002 per cent. The Rules also establish what counts towards USE for this purpose.

The standard represents an acceptable trade-off between reliability and cost i.e. it reflects the point at which the marginal benefits of increased reliability equal the marginal cost of the additional generation capacity required to achieve it. The marginal benefits of increased reliability are informed by 'values of customer reliability (VCR)' which establish the (theoretical) maximum amount a customer is willing to pay to avoid load-shedding¹.

Both the form and the scope of the reliability standard may be reviewed by the AEMC Reliability Panel, subject to certain criteria being met, including changes in VCR values. The Panel recently noted in advice to the AEMC as part of the 'Enhanced Reliability and Emergency Reserve Trader (RERT) rule change proposal' process, that any new VCR values established following the AER's review (see below) could trigger the Panel to reassess the reliability standard at or prior to its next four yearly review of the NEM reliability settings². The AEMC is currently considering the role of the reliability standard in triggering a decision by AEMO to exercise RERT through this rule change process.

Enhanced RERT rule change

AEMO is currently working with the AEMC Reliability Panel on the appropriateness of the NEM reliability standard in the face of an increasingly 'peaky' supply-demand balance. This is being done through a rule change request to implement an 'enhanced' Reliability and Emergency Reserve Trader (RERT) scheme. The ESB's intention is that the materiality assessment framework will remain aligned with the reliability standard established in the Rules at the time of any forecast reliability gap.

AEMO submitted the rule change request on 9 March 2018 which (among other changes) seeks to delink the procurement of RERT from the reliability standard and to implement a broader risk assessment framework for *decisions* to procure, and the *volume* of resources procured under the RERT. Specifically, the rule change request proposes these decisions should be linked to an economic cost assessment that takes into account both the cost and risk of resource procurement and residual USE.

¹ VCR values have historically been developed via surveys of customer preferences. The current value of \$33,460/MWh was estimated by AEMO in 2014. The AER is in the process of reviewing the VCR framework and will establish updated values by the end of 2019.

² AEMC Reliability Panel, letter of advice 28 September 2018 to the AEMC in Enhancements to the Reliability and Emergency Reserve Trader rule change process: <https://www.aemc.gov.au/sites/default/files/2018-10/Letter%20of%20Advice%20from%20the%20Reliability%20Panel.pdf>

The AEMC is due to issue a draft determination on the rule change proposal in January 2019.

Review of VCR framework

On 19 October 2018, the AER initiated a review of the VCR framework used in a number of NEM regulatory processes, including AER assessments of network businesses' forecast expenditure, the AER's service target performance incentive schemes and the AEMC Reliability Panel reviews of the reliability standard and wholesale market price settings. The review covers the development of a *methodology* for determining VCR values in the NEM and Northern Territory and calculation of the first VCRs in accordance with the methodology. The methodology includes the *instruments* used to collect data on customer preferences (i.e. the price they are willing to pay for an uninterrupted supply of electricity). As part of the VCR review, the AER is exploring the potential for uses of VCR in regulatory decision making, such as to assist with wholesale market price settings.

The AER is due to complete the review by the end of 2019.

Changes in VCR values could impact the operation of the Obligation in several ways. For example, depending on the materiality metric adopted and the availability of more granular VCR values, VCR values could inform the materiality assessment (either AEMO's request or the AER's consideration of that request) by comparing the costs of closing a material gap with the value customers place on reliability at the gap times specified in the AER's reliability instrument.

Forecasting reliability

As part of its annual ESOO, AEMO assesses whether forecast supply of electricity will be sufficient to meet consumer demand under a range of scenarios in each year of the following 10 year period. In undertaking this assessment, it takes into account a range of uncertainties including the impact of weather events on supply and demand, the variability of renewable generation, the availability of different generation technologies, and the capacity of the transmission network³.

The ESOO quantifies the risk that there will be insufficient electricity supply to meet demand through the calculation of the expected or 'most-likely' level of USE in each region in each year. This is compared with the NEM reliability standard to determine whether a 'reliability gap' exists. The identification of a reliability gap signals to the market that investment in additional capacity – in the form of additional generation, transmission, storage or demand response – is required to cover the gap period. To provide further context, AEMO reports the scale of market response required by translating its estimate of USE into the megawatts (MW) of firm capacity needed to bring USE levels below the reliability standard⁴.

The ESOO is based on stochastic modelling, producing a range of potential USE outcomes which are weighted and aggregated to determine the expected level of USE. Like any form of forecasting, this means that USE estimates are subject to uncertainty, reflecting the range of potential outcomes that could eventuate.

³ See AEMO, 2018 Electricity Statement of Opportunities, August 2018 available at:

<http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/NEM-Electricity-Statement-of-Opportunities>

⁴ AEMO has already begun to present this information in its ESOO forecasts to inform market participants' investment decisions. The most recent ESOO, for example, includes estimates of the firming capacity required to meet the reliability standard under different demand conditions, including extreme peak demand events which are plausible but expected to be realised only one in every ten years.

Chart 1 below (taken from AEMO’s 2018 ESOO) illustrates this with reference to forecast USE outcomes in Victoria in 2018-19. While the average or most likely USE outcome is just below the reliability standard, there is a 20 per cent chance that USE levels will result in a breach. As highlighted by AEMO in its recent submission⁵ and reflected in the chart, its forecast distributions of potential USE outcomes are increasingly characterised by a long ‘tail’ reflecting the potential for low probability but high impact (duration and severity of USE) events, corresponding to extreme weather, generation/transmission outages and/or lower than expected wind or solar output; that is, there is less certainty (or it is becoming harder to predict with a high level of confidence) what level of USE will be realised.

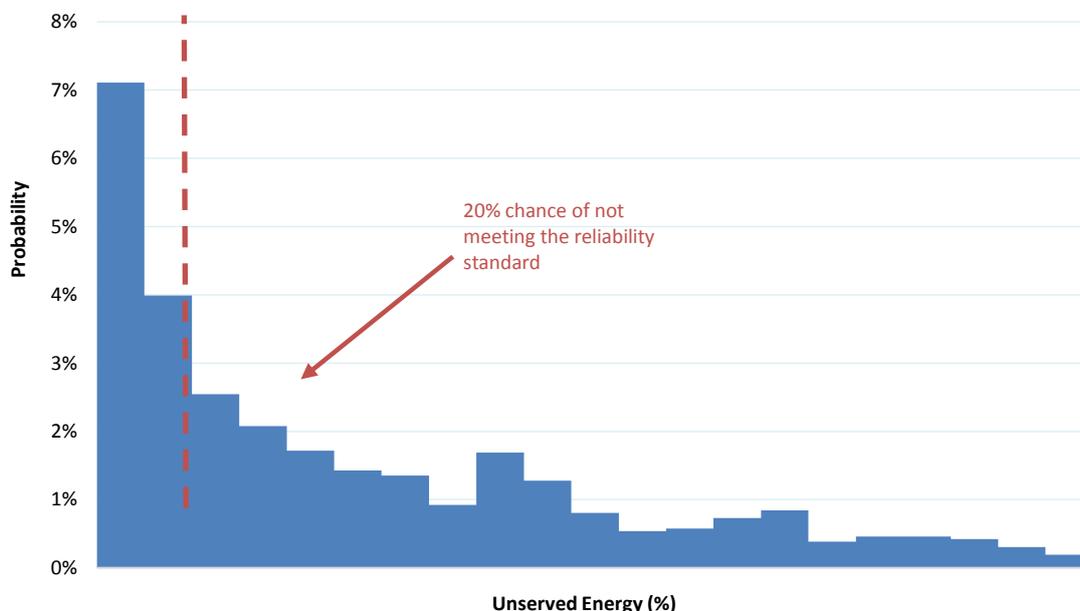
Deciding whether a reliability gap is material

In broad terms, the materiality assessment will operate as follows:

- At year T-3, a forecast material gap will lead to AEMO requesting the AER to issue a reliability instrument. If issued, this instrument will outline the *period* along with the indicative trading intervals over which liable entities will be required to maintain a net contract position, should the gap not be closed by T-1, along with indicative trading intervals.
- At year T-1, confirmation of a material gap will result in a further reliability instrument being issued by the AER. This instrument will confirm the *trading intervals* for which liable entities must submit a net contract position and against which compliance may be assessed.

The basis of the materiality test at T-3 and T-1 will be the same. As proposed in the final detailed design, the AER will have some discretion (detailed in the Rules) to decide not to trigger the Obligation, even if the materiality test is met objectively, having regard to the National Electricity Objective (NEO) and matters set out in the Rules.

Chart 1: Range of USE outcomes, Victoria 2018-19⁶



⁵ See - <https://www.aemc.gov.au/sites/default/files/2018-11/Additional%20information%20from%20AEMO%20to%20support%20its%20Enhanced%20RERT%20rule%20change%20proposal.pdf>

⁶ Source: AEMO, 2018 Electricity Statement of Opportunities

2.3 Purpose of this paper

While acknowledging interdependencies with broader processes examining reliability frameworks, this paper focuses on the materiality decision framework under the Obligation. It seeks stakeholder views on how key elements of that framework should be implemented in the Rules; specifically:

- Which metric should be used to assess materiality?
- How much discretion should be provided to the AER in confirming or rejecting a recommendation from AEMO to make a reliability instrument?
- What mandatory principles and/or factors should the AER be required to have regard to in exercising its discretion?
- What constraints, if any, should be placed on the relationship between T-3 and T-1 requests from AEMO and reliability instruments made by the AER? Should the gap period confirmed at T-1 be required to be the same as that which was observed at T-3 and led to the Obligation being triggered?
- What information should be included in requests from AEMO to the AER to make a reliability instrument?

3. Materiality of a forecast reliability gap

3.1 Metrics for determining materiality

As outlined in **section 2.2**, the final detailed design proposed that materiality decisions would be based on an objective metric, linked to the NEM reliability standard. Possible approaches consistent with this position are discussed below.

Examples of possible metrics for assessing materiality

As outlined in the Final Detailed Design, a suitable metric would define an acceptable level of exceedance of the reliability standard that triggers the Obligation (set at X% below). Possible approaches include:

- A. Annual regional expected USE exceeds the reliability standard⁷
- B. Annual regional expected USE exceeds the reliability standard by X% (for example, by 10% or USE greater than 0.0022)
- C. The level of confidence that the reliability standard will not be met is greater than X%
- D. The loss of load probability (LOLP) is greater than X%.

Table 1 provides a comparison of the four metrics.

As discussed in **sections 2.2** above and **3.2** below, regardless of the metric adopted, the AER would retain some discretion to not trigger the Obligation even if the metric were objectively met. The circumstances in which this was exercised would be expected to relate to the robustness of the calculation of the metric rather than departure from the metric per se but might also involve consideration of the costs of triggering the Obligation. Critically, this will provide an additional layer of scrutiny of AEMO's forecasting outcomes and a qualitative assessment of the risk of imposing compliance obligations on liable entities.

⁷ Expected USE would be determined in accordance with AEMO's existing ESOO probability weightings.

TABLE 1	Metric A	Metric B	Metric C	Metric D
What is being measured?	Expected USE (MWh)	Expected USE (MWh)	Probability of USE (measured in MWh)	Loss of load probability (LOLP)
How is the materiality threshold defined?	Is expected USE above the reliability standard?	Is expected USE above the reliability standard by more than a % margin?	Is the level of confidence in whether the reliability standard will be met greater than X%?	Is the likelihood of lost load occurring in a region greater than X%?
Practical example	<p>Expected USE in NSW is 0.0021%.</p> <p>This exceeds the reliability standard</p> <p><i>The Obligation is triggered</i></p>	<p>Expected USE in NSW is 0.0021%.</p> <p>This exceeds the reliability standard by less than the materiality threshold (10% or 0.0002)</p> <p><i>The Obligation is not triggered</i></p>	<p>The level of confidence that the reliability standard will be breached in Victoria is 70%.</p> <p>This exceeds the threshold confidence level of 66%.</p> <p><i>The Obligation is triggered</i></p>	<p>The likelihood of load shedding in Victoria is 31%.</p> <p>This exceeds the target threshold level of 25%.</p> <p><i>The Obligation is triggered.</i></p>

Each of these metrics could have benefits and drawbacks as outlined below.

Metric A

As outlined in the Final Detailed Design, this would be a straight-forward comparison of AEMO's calculation of expected USE in a region in a given year with the reliability standard, consistent with the current reporting methodology of AEMO's ESOO.

Given the ESOO methodology and reporting framework for this metric has been tested and is well understood by industry, such an approach should provide a relatively predictable basis for materiality assessments.

However, such an approach would be relatively inflexible. AEMO has highlighted, for example, that as the system exhibits greater variability in peak demand, expected USE is becoming highly sensitive to weather driven variations in input assumptions⁸. Small changes can have a significant impact on whether expected USE falls above or below the reliability standard.

Metric B

As outlined in the Final Detailed Design, this would be a relatively straightforward extension of existing ESOO reporting methodologies, effectively locking in a percentage 'buffer' above the reliability standard for the purposes of the materiality assessment which reflects an accepted level of confidence in AEMO's forecast expected USE.

As the metric would remain based on the expected value of USE calculated by AEMO for a region over a given year, the same drawbacks identified with metric A regarding the sensitivity of USE to input assumptions would hold (albeit mitigated to some extent by creating a 'buffer' around forecast outcomes). Further drawbacks associated with this metric would be that the choice of the optimal percentage 'buffer' band could be challenging and the Obligation may not trigger when required.

Metric C

AEMO has commenced reporting against a probability of exceedance metric in its most recent 2018 ESOO to provide greater transparency around the increasingly 'long tail' of modelled USE outcomes i.e. the increasing sensitivity of USE to weather driven variations in both supply and demand (see **Chart 1**).

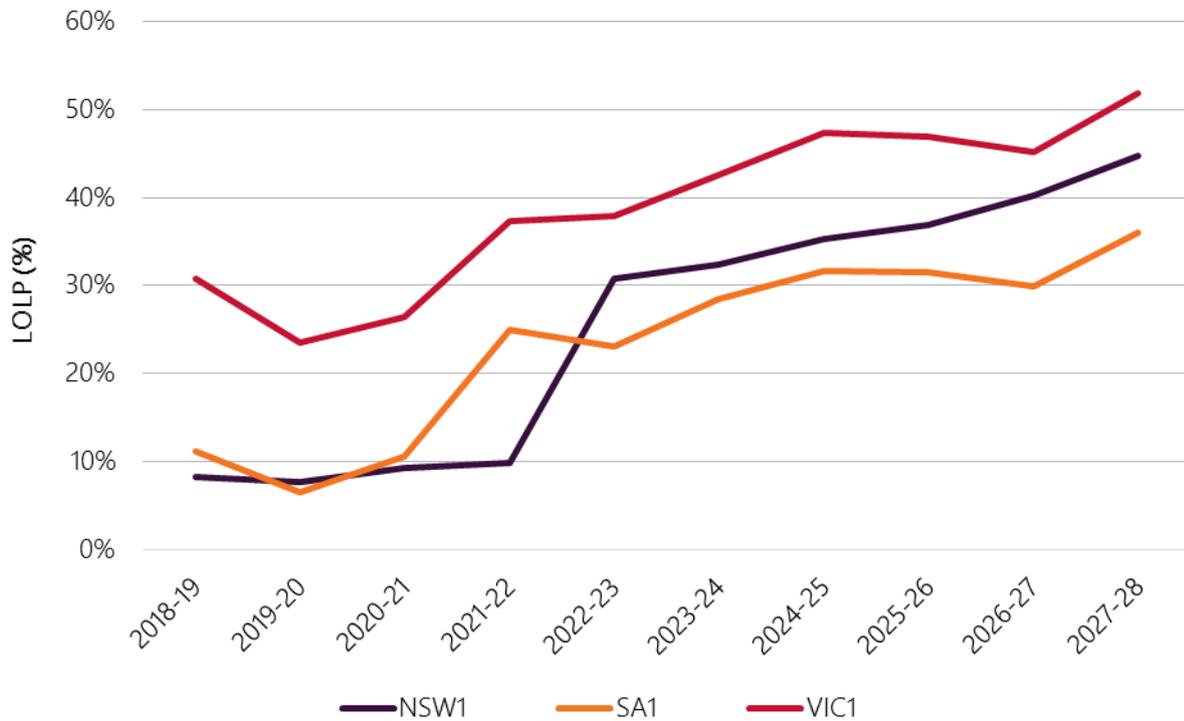
The metric would allow for more explicit consideration of the shape of the distribution of USE outcomes over a given period, while retaining a direct link with the reliability standard. The primary drawback (as with metric B) would be that optimising the percentage exceedance adopted as the materiality threshold would be challenging. Further, it would likely be difficult for liable entities to predict when the Obligation was likely to be triggered and meet relevant contracting requirements at least cost.

Metric D

As with metric C, AEMO has commenced reporting the loss of load probability or LOLP in its most recent 2018 ESOO. LOLP describes the likelihood of at least some USE occurring in a region in a given year. Chart 2 (taken from the 2018 ESOO) illustrates its use below.

⁸ AEMO, 2018 Electricity Statement of Opportunities, August 2018, <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Planning-and-forecasting/NEM-Electricity-Statement-of-Opportunities>

Chart 2: Forecast LOLP, Neutral demand, committed projects only⁹



The advantage of this metric is that it is easily understood and less sensitive than average USE to weather driven variations in input assumptions. But a key drawback would be that the link to the reliability standard would be the least transparent of the metrics discussed in this paper i.e. it does not capture the scale or duration of USE experienced.

The ESB's preferred approach is that the Rules require materiality assessments be conducted based on **Metric A**. While acknowledging AEMO's concerns regarding the sensitivity of expected USE to input assumptions, it considers this metric would be simple, well understood and reproducible and maintain a clear and transparent link with the reliability standard.

The ESB interested in stakeholder views on this approach.

Questions

- What objective metric should be used to assess the materiality of a forecast reliability gap?

3.2 Principles and factors to guide materiality assessments

The ESB's Final Detailed Design for the Guarantee stated that the AER would have some discretion not to trigger the Obligation, even if the materiality test is met objectively, having regard to the National Electricity Objective (NEO) and matters set out in the Rules.

⁹ Source: AEMO, 2018 Electricity Statement of Opportunities

Provision of some discretionary power to the AER will ensure that it has sufficient flexibility to take into account the wide range of factors which may influence AEMO's modelled USE outcomes and critically assess the costs of imposing contractual obligations on liable entities against the benefits (i.e. ensuring the regulatory response to any identified reliability gap under the Obligation is proportionate). However, it will be important that the Rules provide adequate structure and boundaries on the use of discretion to ensure liable entities are able to predict and plan for their contractual obligations under the Obligation as effectively as possible.

The Rules could establish mandatory consideration factors similar to those applying to reliability assessments conducted by the Reliability Panel along with additional tests or mandatory actions which must be undertaken in certain circumstances. For example, AEMO has noted that expected USE is highly sensitive to small changes in the supply-demand balance when it is at a level close to the reliability standard. In such circumstances, the Rules could require the AER to undertake further consultation with stakeholders on the sensitivity of key variables to change.

Alternatively, the Rules could simply require that the AER has regard to a set of guiding principles and the NEO in forming a judgement as to whether a reliability instrument should be issued.

The ESB's preliminary position is that the Rules require that the AER have regard to a range of principles and criteria in determining whether to accept or reject a request from AEMO to issue a reliability instrument. Criteria might include, but not necessarily be limited to, whether the AER considers that:

- There is a material error in AEMO's calculations or input data
- AEMO has made an assumption in underpinning forecast data that is inaccurate and this has had a material impact on USE outcomes
- The costs imposed in issuing a reliability instrument (thus 'triggering' the obligation at T-3 or compliance process at T-1) outweigh the benefits, when considered against the NEO,

The Rules would require the AER to issue a guideline on its planned approach to reviewing the process and procedures which AEMO has followed in coming to its decision to make a request to the AER, and consult with stakeholders on whether a request from AEMO should be confirmed or rejected, having regard to these criteria. The guideline would be published prior to any request from AEMO to issue a reliability instrument regarding a reliability gap identified in its ESOO process.

The ESB notes that a cost assessment may be challenging, given the difficulty in establishing the counterfactual and uncertainty around forecast USE outcomes and (at T-1) the limited time available to the AER to undertake the assessment but could be informed by VCR values developed by the AER as part of its current review (see **section 2**), advice from the AEMC's Reliability Panel and consultation with stakeholders. It further notes that the costs of meeting the Obligation are likely to be minimal relative to the costs involved in procuring resources through the RERT, considering the Obligation will operate to ensure that liable entities engage in a level of contracting which they should already be implementing as part of an efficient risk management framework.

The ESB welcomes stakeholder feedback on these issues and how the criteria are framed.

Questions

- What level of discretion should be provided to the AER in deciding whether to issue a reliability instrument? What minimum consultation requirements should be established in the Rules to support such decisions?

4. Forecast reliability gap period

4.1 Defining a material reliability gap period

The ESB's exposure draft legislation for the Obligation requires AEMO to specify the period of a forecast material reliability gap in any request to the AER to make a reliability instrument at either T-3 or T-1. The legislation also requires AEMO to specify indicative and final trading intervals at T-3 and T-1 respectively within that gap period for which liable entities may be required to demonstrate contract cover.

The gap period specified in a T-3 or T-1 reliability instrument would be based on AEMO's most recent ESOO forecast (typically released in August of each year unless additional updates are deemed appropriate). USE outcomes in this forecast are modelled down to the hourly level with further disaggregation possible but computationally very costly to produce.

As discussed in **section 2.2**, the ESOO is based on stochastic modelling, producing a range of potential USE outcomes which are weighted and aggregated to determine a 'most likely' or 'expected' level of USE in each region in each year. USE estimates are indicative only, reflecting the probability that USE will occur based on (among other factors) historic generation availability and demand conditions. USE estimates may change significantly between ESOOs as key variables change; for example, in response to developments in the pipeline of committed capacity or announced withdrawals from the market.

The Rules could provide flexibility to AEMO in how it defines a reliability gap period when requesting a T-3 or T-1 reliability instrument from the AER or introduce constraints on the duration and timing of the gap period specified (for example, season/weeks, peak/off-peak timing constraint).

'Locking in' the reliability gap period at T-3 may assist liable entities to meet their contractual obligations (should they bind) at least cost and support the effective operation of the Market Liquidity Obligation between T-3 and T-1. However, the definition of the gap period would need to balance the benefits of this certainty with flexibility to accommodate changes in the timing and duration of USE which may arise between ESOO forecasts. For example, AEMO's T-3 request to the AER might identify the gap period as 3 weeks over summer between 4pm and 7pm on weekdays, but subsequent forecasts which feed into a further request at T-1 might highlight the need to extend or modify that period due to unforeseen changes in forecast consumption patterns and/or plant availability.

The ESB's preliminary position is that the Rules provide flexibility to AEMO in how it defines a reliability gap period in its T-3 request to the AER but that gap period is 'locked-in' from T-3, with changes only allowable to trading intervals within the specified gap period. It considers this will provide the necessary regulatory certainty to bring on investment in new capacity to close a gap prior to T-1, and if one persists at T-1, ensure that the compliance burden associated with meeting contractual obligations is minimised. The ESB welcomes stakeholder views on this position.

Questions

- How should a reliability gap period be defined? Should there be flexibility for this period to change between T-3 and T-1? In what circumstances should this be allowed?

4.2 Process for determining and communicating a material reliability gap

The ESB's exposure draft legislation for the Obligation provides for the Rules to establish a communication framework for any identified reliability gap, including:

- The timeframes and process for requesting and making reliability instruments,
- The process for updating reliability requests and instruments, and
- The information to be provided in any reliability instrument.

These issues are addressed in turn below.

Timeframes and process for requesting and making reliability instruments

As outlined in the ESB's exposure draft legislation, the Rules will need to establish the time allocated to, and consultation requirements applying to, AEMO and the AER in requesting and making a reliability instrument respectively.

There are a number of factors which need to be considered in establishing such timeframes and processes, including:

- The likely gap between release of AEMO's ESOO and T-1 (between 3 and 6 months, assuming a gap period over the summer months from November to February)
- The extent of consultation conducted in the lead up to a request/making of a reliability instrument (noting AEMO has committed to significant enhancements to its forecasting development process and that the AER will be more actively engaged in this process in the future)
- The lead-time and any actions by the AER (as regulator) required to support commencement of market making obligations under the MLO (noting the intention these would commence from T-3)

The key trade-offs are between the benefits of providing as much 'notice' as possible to market participants versus the benefits of providing longer consideration and consultation time to AEMO and the AER.

The ESB's preliminary position is that the Rules establish a minimum notice period of 3 months between a request from AEMO at T-3 and T-1 and a maximum of 2 months between receipt of a request from AEMO and the issuing of a reliability instrument by the AER at T-3 and T-1.

Process for updating reliability requests and instruments

As outlined in section 4.1, USE expectation may change significantly between ESOOs as key variables contributing to the USE assessment change, including the committed pipeline of new generation capacity and rated capacity of generation in the market. For example, the 2017 ESOO forecasts USE levels well below the reliability standard in Victoria, NSW and South Australia from

2018-19 through to 2026-27, whereas the 2018 ESOO forecast breaches of the reliability standard from 2021-22, 2022-23 and 2024-25 respectively.

The ESB's Final Detailed Design stated that AEMO would be required to update reliability forecasts on an annual basis but more frequently if there was a material change to the supply-demand outlook, such as an announced retirement or significant changes in demand. The objective of more frequent updates (prior to commencement of MTPASA reporting 2 years ahead of a forecast gap, in accordance with AEMO's current practices) would be to build market confidence in the level of reliability risk which needs to be managed and help liable entities target investment effectively.

Information to be provided

Finally, as discussed in section 4.1, the ESB's exposure draft legislation established that, in addition to AEMO's one-in-two year forecast, a T-3 request by AEMO (and associated reliability instrument made by the AER) must specify the period of a forecast reliability gap and indicative trading intervals, while a T-1 request (and associated instrument) must specify final trading intervals for which compliance will be required. The Rules could mandate further information to supplement these requirements.

At a minimum, the Final Detailed Design envisaged this would include a translation of any forecast reliability gap into the MW of additional capacity required to close the gap, along with the pipeline of potential generation projects over the forecast gap period.

The ESB considers that further information requirements should include, but not necessarily be limited to, sensitivity analysis for projects outlined in AEMO's Integrated System Plan (as captured in the 2018 ESOO) and the estimated costs of AEMO exercising the RERT to maintain reliability in the absence of adequate market investment. It is interested in stakeholder feedback on other information which would assist liable entities in managing their potential compliance obligations.

Questions

- What time constraints should be placed on a request from AEMO to the AER to make a reliability instrument and for the AER to consider such a request?
- In what circumstances should updates to AEMO's reliability forecasts be required? Would extending the MTPASA to 3 years support this process and if so how should AEMO treat outages that are moveable?
- What mandatory information should be included in requests from AEMO to the AER to make a reliability instrument and reliability instruments issued by the AER?

5. Consultation timetable

The ESB invites comments from interested parties on the issues and questions set out in this paper by **21 December 2018**. Feedback received will inform the ESB's advice to the COAG Energy Council on implementation options.

Submission close date	21 December 2018
Lodgement details	Email to: info@esb.org.au
Naming of submission document	[Company name] Response to Material Reliability Gap Definition and Communication paper
Late submissions	Late submissions will not be accepted
Publications	Submissions will be published on the COAG Energy Council's website, following a review for claims of confidentiality.

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