



COAG
Energy Council

ENERGY SECURITY BOARD Retailer Reliability Obligation

Compliance / Procurer of Last Resort Cost
Recovery
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 definition of a material reliability gap. Feedback on these papers will inform development of the 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 Compliance Framework

The Final Detailed Design proposed the following framework for assessment of compliance, along with the amount (fee) that a non-compliant entity would pay to AEMO based on the entity's contribution to the costs incurred by AEMO in procuring the capacity needed to address a material reliability gap under its Procurer of Last Resort function (i.e. by entering into contracts for reserves through the Reliability and Emergency Reserve Trader (RERT) mechanism).

- If the Obligation is triggered three years out from a forecast reliability gap (at T-3) and is confirmed one year out from the forecast gap (at T-1), liable entities would be required to submit their net contract position to the AER.
- Liable entities would be allowed to adjust their net contract position between T-1 and T when they take on commercial and industrial (C&I) customers with energy demand at or below 30MW.
- The AER would assess the net contract position submitted by liable entities only if peak demand exceeded the one in two-year forecast and AEMO has exercised its Procurer of Last Resort function. It would do so by comparing liable entities' net contract positions with their share of actual demand in each trading interval exceeding the one in two-year system peak forecast. Liable entities' share of actual demand would be scaled back to the one in two-year peak forecast (see example outlined in **Figure 1** below from the ESB's June 2018 Technical Working Paper) according to the following formula:

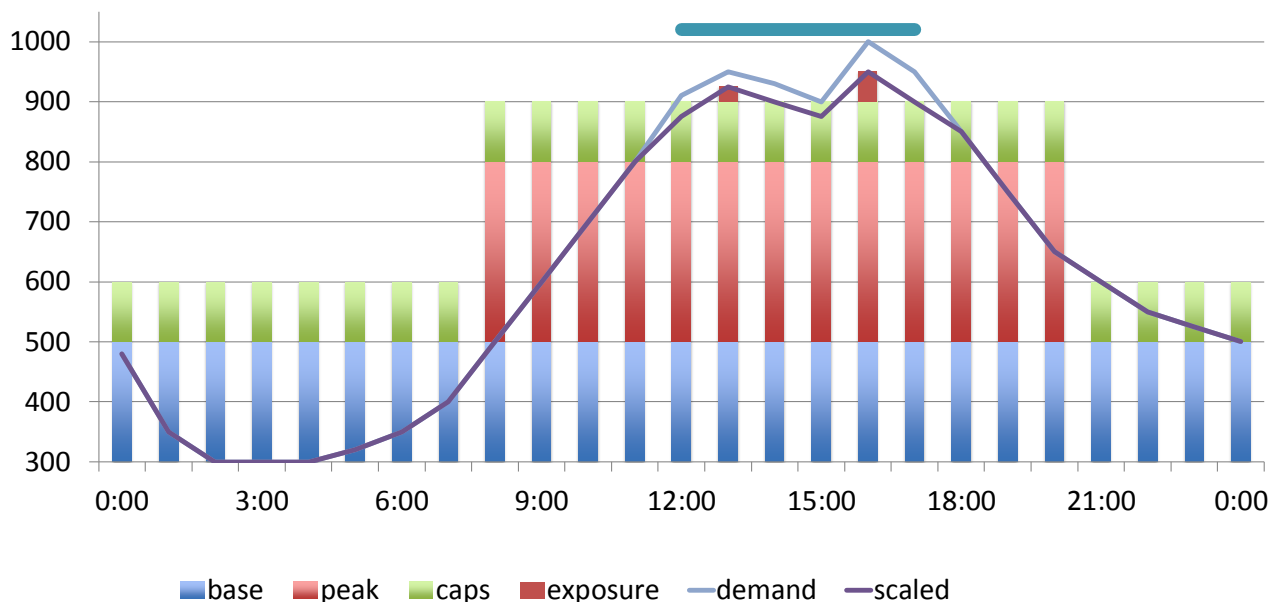
$$\frac{\text{Entity's trading interval demand}}{\text{Operational demand for the trading interval}} \times \text{One in two year system peak demand forecast}$$

- Liable entities found to be non-compliant with their contracting obligations would be charged a fee (up to a limit of \$100 million) based on their contribution to the costs of AEMO exercising its Procurer of Last Resort function.

Figure 1: Compliance assessment schematic

The figure below provides an illustrative example (showing hour long trading intervals and a scaled Y- axis for simplicity). The aqua line is the period (midday to 17:00) when the actual regional scheduled demand is greater than the one in two-year system peak demand forecast at (T-1). This is the period where the liable entity's demand – the light blue line – is measured and scaled down to the one in two-year equivalent.

If the regional one in two-year system peak demand is 9000 MW and the actual demand is 10,000 MW, the liable entity's demand is reduced by 10% - the magenta line. This calculation occurs for every trading interval over the period of the aqua line. The liable entity's contract position is represented here simply as base swaps, peak swaps and caps (the blue, red and green columns). There are 2 trading intervals, 13:00 and 16:00 (the dark red column) where scaled demand is greater than the contract position.



2.2 Purpose of this paper

The purpose of this paper is to seek stakeholder views on how the process for assessing non-compliance, and determining the amount non-compliant entities would pay AEMO for their contribution to the costs of AEMO's Procurer of Last Resort function, should be implemented in the Rules; specifically:

- How should non-compliant entities' compliance shortfall be determined for the purposes of determining the amount they have contributed to AEMO's cost of services in exercising the Procurer of Last Resort function? For example, should this be based on the trading interval of greatest shortfall, average of all trading interval shortfalls or otherwise determined (e.g. total of all trading interval shortfalls)?
- To what extent and how should 'shortfall fee' arrangements for non-compliant liable entities offset the costs of AEMO's Procurer of Last Resort?

3. Calculation of compliance shortfall

The ESB's Final Detailed Design proposed that the AER would assess liable entities' compliance with their contractual obligations for *all* trading intervals in which actual demand exceeds the one in two-year forecast. Further, the AER would calculate any compliance shortfall across the relevant compliance period ex-post, using settlement data from AEMO which would be finalised 30 weeks after the trading intervals related to any reliability gap.

Possible methodologies to underpin the shortfall calculation were discussed in the ESB's Technical Working Paper released in June 2018 but a final position has not been settled. Considering the potential for the Obligation to be triggered (i.e. a T-3 reliability instrument issued) as early as late 2019, the ESB's preferred position is to establish the shortfall methodology in the initial rules for the Obligation.

As outlined in the Technical Working Paper, the shortfall could be calculated as the maximum, single trading interval of non-compliance, the average shortfall across the gap (calculated as the total MW for which the liable entity was non-compliant divided by the number of trading intervals of non-compliance), or the average compliance (calculated as the total MW for which the liable entity was non-compliant divided by the duration of the gap period).

A further option (Approach 4 – total non-compliance) in addition to what was set out in the Technical Working Paper is also included below.

In each case the key consideration in determining the appropriate approach to adopt for the purpose of assigning costs is the extent to which each entity's calculated shortfall can be reasonably considered to have contributed to the reliability gap, noting that the reliability gap determines the requirement for AEMO to procure capacity as part of its Procurer of Last Resort function. A further important consideration is the level of incentive the approach would provide to ensure that entities secure adequate contract cover for the gap period.

The shortfall liability of an individual entity may vary substantially between the different metrics (see **Box 1** below, adapted from the Technical Working Paper).

1. Maximum non-compliance trading interval

Using the maximum single trading interval of non-compliance as the basis for shortfall fees would encourage liable entities to fully cover their contractual obligations across the reliability gap period as they would not be able to predict with any confidence in advance in which trading interval the maximum shortfall will occur. This should in turn encourage investment in the new capacity required to close the gap before T-1 i.e. encourage behaviours which negate the need for shortfall charging.

However, if non-compliance is enforced, it could result in large and potentially unmanageable fees being charged to a single or very small number of non-compliant liable entities. This is because (in the extreme scenario and dependent upon the method used to assign costs) a liable entity could be required to refund Procurer of Last Resort costs of up to \$100 million for non-compliance in a single (5 minutes from 2021) trading interval. To manage this risk, liable entities would likely contract conservatively.

2. Average shortfall across the gap

Using a non-compliant entity's average shortfall across the gap (i.e. total MW shortfall divided by the number of trading intervals in which the liable entity was non-compliant) would ensure that it is not required to pay an excessive fee for AEMO's Procurer of Last Resort procurement as a result of its failure to meet its contractual obligations in a single trading interval. On average, it

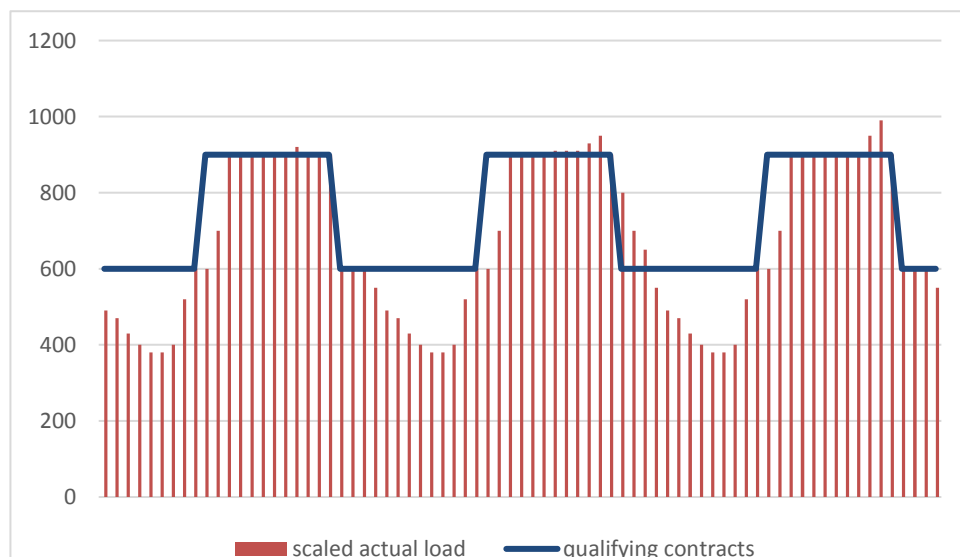
Box 1: Shortfall calculation example

The figure below provides an illustrative example (showing hour long trading intervals again for simplicity). The Obligation has triggered and demand exceeded the one in two-year forecast for 2pm – 9pm on 4-6 February 2023. The figure outlines qualifying contracts, scaled load and 5 periods of non-compliance for a liable entity over this 3 day period. This includes a 20 MW shortfall on the Wednesday, two shortfalls on the Thursday (10MW and 30 MW) and two more extensive shortfalls on the Friday (50 MW and 90 MW).

- Approach 1 - If the maximum single non-compliance trading interval is applied for causer contribution, the entity is liable on the basis of a 90 MW shortfall.
- Approach 2 - If for example, the average shortfall across the gap is used as the MW criteria for cost allocation, a much smaller 40MW shortfall is used. This corresponds to the entity's total shortfall of 200MW divided by the number of trading intervals in which it was short.
- Approach 3 - If the average non-compliance is used, then the entity has a 200 MW shortfall over 21 hours. Therefore, the average non-compliance is 9.5 MW (i.e. 200MW divided by the total period of the gap for which it was liable to hold an adequate net contract position).
- Approach 4 – If the total non-compliance is used, then the entity's shortfall liability is 200MW.

This simple example highlights different approaches for non-compliance estimation.

Outline of compliance assessment over a gap period



might be expected that over and under contracting by different liable entities would not compromise the objective of securing firm cover for the one in two-year forecast across the gap period. However, dependent upon the distribution of shortfalls across the gap period, it may result in a much lower shortfall liability for each non-compliant entity (see **Box 1**), leading to insufficient incentives for investment in the capacity required to close the gap before T-1. In addition, there is risk that a liable entity could seek to minimise its average non-compliance by increasing the number of trading intervals for which it has a small MW non-compliance.

3. Average compliance

Using a non-compliant entity's average non-compliance (i.e. its total MW shortfall divided by the total duration of the gap period) would have similar benefits and drawbacks to using the average shortfall but would be more sensitive to the total duration of the gap period. A liable entity would pay AEMO an additional fee commensurate with the extent of its non-compliance but would face a diminishing cost attribution as the length of the gap period increases. It would thus be less consistent than approaches 1 or 2 above with the principle of determining fee payments in accordance with the extent to which a non-compliant entity has contributed to the reliability problem. It would furthermore potentially involve a more substantial risk than approach 2 of providing insufficient incentives for liable entities to secure contract cover for the gap period.

4. Aggregate non-compliance

As an additional option to what was included in the Technical Working Paper, aggregate non-compliance could be used as a basis for calculating the compliance shortfall. Using a non-compliant entity's total non-compliance (i.e. its total MW shortfall) would have the benefit of holding non-compliant entities accountable for the full extent and all trading intervals in which it was non-compliant. However, similar to approach 1 and dependent upon the methodology used to determine the proportion of Procurer of Last Resort costs which a non-compliant entity is required to pay, it could result in a single non-compliant entity paying an unmanageable fee.

Questions

How should a non-compliant entity's compliance shortfall be determined?

4. Procurer of last resort cost recovery

The ESB's Final Detailed Design proposed that a liable entity found to be non-compliant with its contractual obligations will be charged a contribution to the costs of AEMO exercising its Procurer of Last Resort function which is commensurate with the degree of its non-compliance, determined after the event.

In practice, this process would operate as follows:

1. AEMO would draw on the RERT framework to procure the necessary resources to cover the reliability gap period and would socialise the costs of that procurement among market customers in the region(s) in which the resources were required according to the processes set out in the Rules (**s3.15.9**).
2. At the end of the reliability gap period AEMO would advise the AER of the \$ costs associated with procurement linked to the Procurer of Last Resort function after the event. This calculation would need to exclude RERT procured under other mechanisms e.g. short-notice.
3. The AER would calculate the compliance shortfall of each non-compliant liable entity to determine the proportionate fees to be paid by non-compliant entities to cover AEMO's Procurer of Last Resort procurement. This would be finalised ex-post using 30 week settlement data from AEMO. These costs would be paid to AEMO.

4. AEMO would be responsible for the distribution of additional fees collected from non-compliant entities to compliant entities.

There are a number of implementation issues associated with this approach which will need to be addressed in the Rules.

Step 1 – procurement of resources through the RERT framework and socialisation of associated costs

Where a reliability gap is identified in a region, AEMO would continue to use the RERT framework to address that gap in accordance with the requirements set out in the Rules, RERT guidelines issued by the Reliability Panel, and AEMO's Reliability Standard Implementation Guidelines. The costs of resources procured by AEMO would be socialised across the relevant region(s) through fees imposed on market customers in accordance with the Rules.

Should the AER issue a reliability instrument at T-1 and the Procurer of Last Resort function be triggered, this would have the effect of establishing a different cost-allocation process for the resources procured through RERT that AEMO directly attributed to its exercise of the Procurer of Last Resort function. The process by which this would occur is stepped out below.

Step 2 – calculation of the total RERT costs attributable to the Procurer of the Last Resort

The total costs attributable to the Procurer of Last Resort function will not necessarily be a direct translation of the total costs associated with exercise of the RERT between T-1 and T. For example, AEMO may need to procure resources to address operational issues through short-notice RERT to address an identified reliability gap and/or ensure adequate levels of inertia or frequency control ancillary services are available in a region. While there may be a link between the T-1 reliability gap and these services, it is also possible that they are unrelated to the gap at T-1 (e.g. if the gap increases after T-1).

These issues were not explicitly dealt with in the Final Detailed Design but would need to be addressed in additional technical detail covered in the Rules to implement the Obligation. In effect, there could be two types of fee payments for resources procured through the RERT. As part of this step, AEMO would advise the AER after the event of the total costs which are attributable to Procurer of Last Resort. The Rules (along with related guidelines) would establish the criteria to support this advice.

Step 3 – calculation of additional fees to be paid by non-compliant entities and 'rebates' to compliant entities

In this step, the AER would use the shortfall calculation methodology discussed in **section 3** to determine what proportion of the total RERT costs attributable to the Procurer of Last Resort function a non-compliant liable entity is responsible for covering in its fee payments to AEMO.

The ESB is interested in stakeholder views on possible approaches for this calculation.

The ESB notes that a process would need to be established in the Rules to assign RERT costs to entities which are not market customers but 'opt-in' to self-manage their load under the Obligation.

Step 4 – adjustment costs to reflect compliance/non-compliance

As outlined previously, the costs of AEMO’s procurement through the RERT would be socialised across all market customers at the time the resources are procured, regardless of compliance outcomes under the Obligation.

In this step, which would be undertaken after the compliance process is finalised based on final metering data 30 weeks after the relevant period, AEMO would be responsible for collection of costs from non-compliant entities and distribution to compliant entities to partially refund the earlier payment for RERT.

Questions

How should the \$ costs linked to AEMO’s Procurer of Last Resort function be distinguished from other RERT costs?

How should Procurer of Last Resort function costs be assigned to non-compliant liable entities?
How should costs recovered from non-compliant entities as fees for AEMO’s Procurer of Last Resort service be allocated to compliant entities?

How should non-compliant entity default be dealt with?

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 Compliance / Procurer of Last Resort Cost Recovery 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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