

RETAILER RELIABILITY OBLIGATION - CONSULTATION ON THE POLR COST PROCEDURES

ISSUES PAPER

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EXECUTIVE SUMMARY

The publication of this Issues Paper commences the first stage of the Rules consultation process conducted by the Australian Energy Market Operator (AEMO) to make the Procurer of Last Resort (PoLR) Cost Procedures for the Retailer Reliability Obligation (RRO) under Rule 4A.F.10 of the National Electricity Rules (NER).

The draft PoLR Cost Procedures outline the mechanism by which AEMO will calculate and allocate, recover and rebate PoLR costs under the RRO. This Issues Paper focuses on the key areas of:

- (i) the liable share, PoLR cost and PoLR debts calculation methodology
- (ii) the treatment of demand response; and
- (iii) additional processes and responsibilities.

The Issues Paper aims to facilitate informed feedback from National Electricity Market (NEM) registered Participants and other interested parties regarding the PoLR Cost Procedures. AEMO invites stakeholders to suggest alternative options where they do not agree that AEMO's proposals would achieve the relevant objectives. AEMO also asks stakeholders to identify any unintended adverse consequences of the proposed Procedures.

Stakeholders are invited to submit written responses on the issues and questions identified in this paper by 5.00 pm (Melbourne time) on 28 August 2020, in accordance with the Notice of First Stage of Consultation published with this paper.



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1. STAKEHOLDER CONSULTATION PROCESS

As required by the NER, AEMO is consulting on the PoLR Costs Procedures in accordance with the Rules consultation process in rule 8.9.

Note that there is a glossary of terms used in this Issues Paper at Appendix A.

AEMO's indicative timeline for this consultation is outlined below. Dates may be adjusted depending on the number and complexity of issues raised in submissions and any meetings with stakeholders.

Deliverable	Indicative date
Issues Paper published	22 July 2020
Submissions due on Issues Paper	28 August 2020
Draft Report published	24 September 2020
Submissions due on Draft Report	16 October 2020
Final Report published	30 November 2020

Prior to the Issues Paper submissions due date, stakeholders can request a meeting with AEMO to discuss the issues raised in this Issues Paper.

NEM registered Participants and other interested parties are invited to submit written responses on the questions identified in this Issues Paper and any other aspect of the draft PoLR Cost Procedures. Stakeholders are requested to include reasons for their responses and (if applicable), details of any alternative options they consider may better achieve the relevant objectives. Submissions must be made in accordance with the Notice of First Stage of Consultation published with this paper.



2. BACKGROUND

2.1 NER requirements

The RRO framework - the RRO commenced on 1 July 2019. The RRO framework is designed to send early investment signals to the market in relation to impending supply shortfalls, providing time and incentives to invest in new supply-side or demand response capacity to fill the predicted generation shortfall.

Liable entities - are Market Customers, that is, electricity retailers or large energy users that purchase electricity directly from the wholesale electricity market, as well as any eligible large customers who elect to opt-in to the RRO rather than having their retailer manage the obligation on their behalf.

Compliance with the RRO - the RRO requires that, if a reliability gap period is forecast for a NEM region, liable entities enter into sufficiently firm 'qualifying contracts' to cover their share of the one-in-two year peak demand forecast for the region and reliability gap period. This "liable share" is based on the metered energy consumption at the liable entity's connection points in the reliability gap region.

Triggering the RRO - each year, AEMO will identify potential reliability gaps in each NEM region for the coming five years using its Electricity Statement of Opportunities (ESOO). If there is a reliability gap one year and three months out from an identified gap period, AEMO will request the AER to make a 'T-1' Reliability Instrument. Once a T-1 reliability instrument is made by the AER, AEMO may start procuring reserves through the Reliability and Emergency Reserve Trader (RERT) framework to fill the remaining gap.

Compliance trading intervals (compliance TIs) - occur if during the reliability gap period, the peak demand exceeds the one-in-two year peak demand forecast. For each compliance TI during a reliability gap period, AEMO will calculate and provide the AER with each liable entity's liable share.

Liable share - is a liable entity's share of the one-in-two year peak demand forecast for a compliance TI.

PoLR debts and PoLR rebates - if under the AER's assessment, a liable entity's net contract position is less than their liable share for a compliance TI, they are designated as a PoLR liable entity. RERT costs during the compliance TIs will then be recovered from PoLR liable entities through the Procurer of Last Resort cost recovery mechanism as PoLR debts. AEMO will rebate the proceeds from any PoLR debts it recovers, with the rebate going to Market Customers who have paid fees under NER clause 3.15.9 for reserves procured by AEMO during that reliability gap period.

Rules reference - AEMO must develop and publish the PoLR Cost Procedures (Procedures) under clause 3.15.9A of the NER, after consultation in accordance with NER rule 8.9.

2.2 Context for this consultation

This Issues Paper and the accompanying draft Procedures commences AEMO's consultation process. AEMO's aim is to determine and publish the final Procedures by 30 November 2020.

The draft Procedures have been designed to reflect the Rules and to ensure the PoLR cost recovery mechanism and associated processes are as simple, efficient and cost effective as possible.

2.3 Key Rules References

The key Rules references regarding AEMO's responsibilities in drafting these Procedures are outlined below.

3.15.9A Procurer of last resort cost allocation

(k) AEMO must rebate the proceeds from any PoLR debts it recovers in relation to a reliability gap period for a region to the Market Customers who have paid fees under clause 3.15.9 for that reliability



gap period based on their share of the total energy purchased at connection points in that region during that reliability gap period as determined in accordance with the PoLR cost procedures.

(l) AEMO must develop, publish on its website and maintain, in accordance with the Rules consultation procedures, PoLR cost procedures that include:

- (1) the methodology and inputs for calculating aggregate RERT dispatched, aggregate RERT fixed payments, aggregate RERT procured, aggregate RERT variable payments, fixed PoLR costs, variable PoLR costs and PoLR debts;
- (2) the process and timeframes for calculating, invoicing, recovering, rebating and reporting on PoLR debts; and
- (3) any other matters specified in Chapter 4A.

(m) AEMO may make minor or administrative amendments to the PoLR cost procedures without complying with the Rules consultation procedures.

4A.F.10 PoLR cost procedures

The PoLR cost procedures must include the following:

- (a) how a liable entity's measured actual demand response will be determined for a trading interval;
- (b) the records a liable entity must maintain in respect of activating demand side participation contracts or other arrangements which are qualifying contracts; and
- (c) how a liable entity's liable load and liable share for each compliance TI is determined.

4A.F.9 Demand response information

A liable entity must:

- (a) maintain records and documents relating to the operation and use of demand side participation contracts or other arrangements that are qualifying contracts (including the NMIs to which they relate); and
- (b) make these records available to AEMO on request,

in each case, in accordance with the PoLR cost procedures.



3. DISCUSSION

AEMO has developed an initial draft of the Procedures that reflect the Rules, with the aim of clarifying and making explicit the methodology and equations that will be used by AEMO to calculate key metrics for RRO, including the treatment of demand response. The draft Procedures also outline processes and responsibilities that were not explicitly detailed in the Rules but are required for a full understanding of the PoLR cost recovery process.

The discussion on the draft Procedures is split into three key areas:

- i. Liable share, PoLR cost and PoLR debts calculation methodology.
- ii. Treatment of demand response.
- iii. Additional processes and responsibilities.

3.1 Liable share, PoLR cost and PoLR debts calculation methodology

The methodology for calculating liable share, PoLR cost and PoLR debts is clearly articulated in the Rules. The draft Procedures aim to clarify and make explicit the methodology, inputs and equations that will be used by AEMO for these three key calculations.

Questions

- Are there any errors/inconsistencies or other issues in the way AEMO has interpreted the Rules in relation to the calculation of liable share, PoLR costs and PoLR debts, or any of the components of these calculations?
- Is there any additional clarifying information required in the Procedures for the calculation of liable share, PoLR costs and PoLR debts, or any of the components of these calculations?
- Are there any unintended adverse consequences of the methodology/calculations for the liable share, PoLR costs and PoLR debts as described in the Procedures?



3.2 Treatment of demand response

A demand response contract/arrangement is a contract or arrangement under which non-scheduled load is curtailed or, in certain circumstances, for the provision of unscheduled generation. A demand response contract/arrangement may be used by a liable entity, for the purposes of RRO compliance, in one of two ways.

- The liable entity may record the demand response contract/arrangement as a qualifying contract (if it meets the criteria for qualifying contracts as outlined in the AER's Contract and Firmness Guidelines) and is included in the participant's net contract position when they are assessed for RRO compliance by the AER.
- The liable entity can rely on the demand response contract/arrangement to reduce the actual load for which it is liable under the RRO. It is not recorded as a qualifying contract and is not included in their net contract position when they are assessed for RRO compliance by the AER.

NER clause 4A.F.10 leaves it explicitly to AEMO to develop the methodology by which demand response registered as a qualifying contract for RRO will be treated, focusing on:

- How liable entity's measured actual demand response will be determined (i.e. the baseline methodology to be used); and
- What records a liable entity must maintain in respect of activating demand side participation contracts or other arrangements which are qualifying contracts.

3.2.1 Baselines and determining measured actual demand response

AEMO needs to determine the measured actual demand response for liable entities with demand response as qualifying contracts during compliance TIs under the RRO, in order to determine liable entity, liable share.

The measured actual demand response during a compliance TI is based on the difference between the baseline, representing what would be expected to have happened without a demand response, and the actual metered consumption, which reflects the demand response.

3.2.2 Proposed default baseline methodology

The proposed default baseline methodology in the draft Procedures draws on approaches developed under AEMO's Demand Response Mechanism (DRM) proposals in 2013, which was based¹ on methods used internationally (i.e. the CAISO "10 of 10" baseline methodology) and assessed for application within a NEM context. This methodology is also currently used for determining baselines under the Reliability and Emergency Reserve Trader (RERT) mechanism. It can be broken down into the following high level steps:

- 1) Unadjusted baseline calculation - appropriate historic data is used to calculate an unadjusted baseline.
- 2) Adjustment factor calculation - data from the day of the demand response used to calculate an adjustment factor to the baseline.
- 3) Adjusted baseline calculation - baseline adjusted by the calculated adjustment factor.
- 4) Measured actual demand response calculation – measured actual demand response is calculated as the difference between the actual demand and the adjusted baseline.

¹ AEMO, July 2013. Demand Response Mechanism and Ancillary Services Unbundling - High Level Market Design. Available at: https://www.aemo.com.au/-/media/Files/PDF/DRM_High_Level_Market_Design_Final.pdf

Step 1 - Unadjusted baseline calculation

To calculate the demand response for a compliance TI under the RRO, an unadjusted baseline consumption is derived for the participant from meter data from the previous 10 prior “qualifying days”. Qualifying days are calendar weekdays within the baseline window which are not public holidays (in that region) and on which there are no compliance TIs for that region. The set of qualifying days is taken from a baseline window period of 45 days. This time range is long enough to allow for a significant number of qualifying days but not so long as to create serious distortions due to changing seasons.

The decision to exclude compliance TIs is based on the assumption that any days that have compliance TIs are more likely to have demand response activated and hence would not be a good representation of a participant’s actual baseline electricity usage.

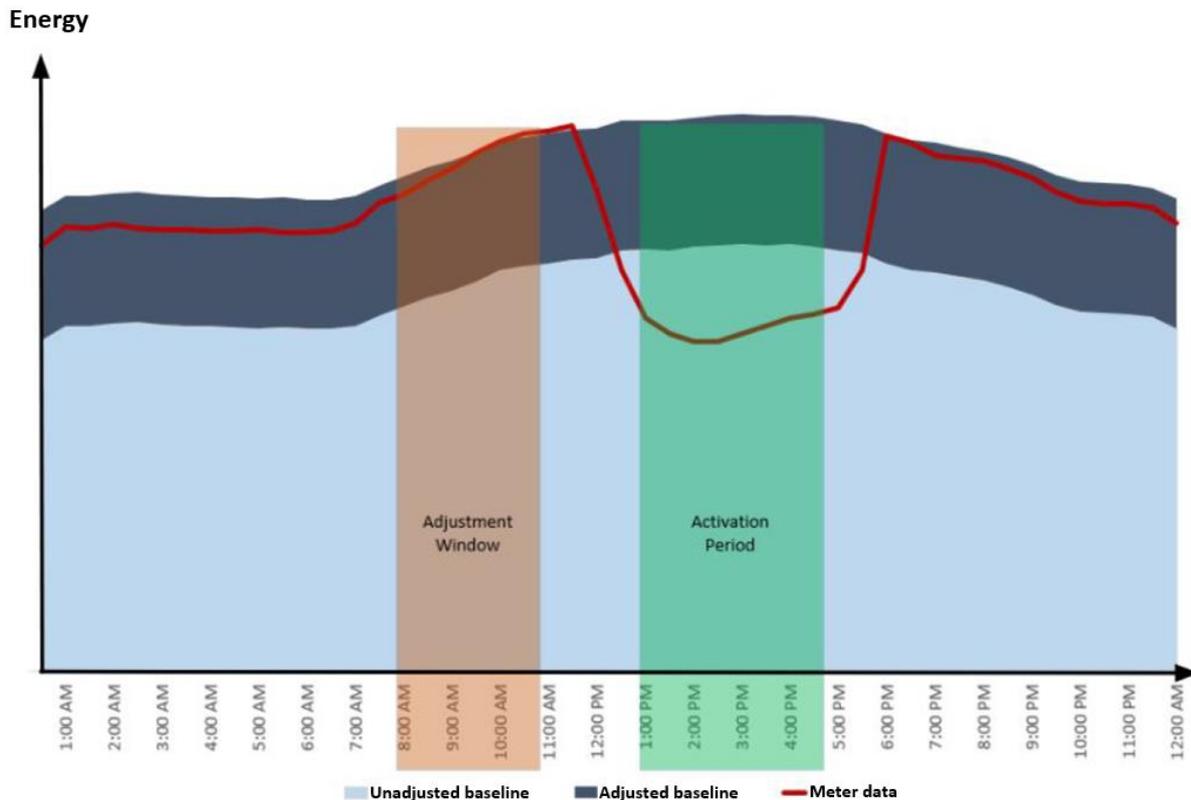
Step 2 - Adjustment factor calculation

To account for the possibility that the day on which the compliance TI occurs is different from the average day, an adjustment factor is calculated for the day and applied to the unadjusted baseline derived in step 1. This adjustment factor is based on the average difference between predicted and metered energy during a three hour period ending one hour before the start of the first compliance TI for that day.

Step 3 - Adjusted baseline calculation

An adjusted baseline for the compliance TI is determined by adding the adjustment factor (which may be positive or negative) to the unadjusted baseline, as shown in Figure 1 below.

Figure 1 – Adjusted and unadjusted baseline example





Step 4 - Measured actual demand response calculation

The actual measured demand response during a compliance TI is based on the difference between the adjusted baseline, representing what would be expected to have happened without a demand response, and the actual metered consumption, up to the value of the lodged demand response contract for that TI. Where the demand response for a compliance TI is less than zero (i.e. demand is higher than the adjusted baseline) then demand response is assumed to be zero.

3.2.3 Reasoning for AEMO approach to baselines

Considering that demand response is only one type of qualifying contract liable entities can use under the RRO, the aim of the proposed approach is to make the default baseline methodology simple and straightforward both for participants to use for RRO if they wish, and also for AEMO to implement. As the proposed methodology is based on a proven methodology already used by AEMO for RERT, it minimises additional process and system development.

AEMO recognises that circumstances may change. Should the high use of the demand response as qualifying contracts for RRO warrant additional investment in systems and process, AEMO will revisit the demand response baselining methodology design and procedures in consultation with industry.

The way that participants seek to use demand response under the RRO may also change over time. AEMO will monitor use of the demand response under the RRO and consider feedback from participants, as well as regulatory requirements, when evaluating future development of the baselining methodology.

3.2.4 Participant information requirements

Under NER clause 4A.F.9(a), a liable entity must maintain records and documents relating to the operation and use of demand side participation contracts or other arrangements that are qualifying contracts and provide them to AEMO if requested.

As demand side participation contracts for RRO need to be registered with AEMO's Demand Side Participation Information Portal (DSPIP), the liable entity must maintain records that provide reasonable evidence to verify the information required by the DSPI Guidelines for each demand side participation (DSP) arrangement registered in the DSPIP and applied as a qualifying contract.

3.2.5 Wholesale demand response

Any wholesale demand response which is a qualifying contract, will be subject to the baselining methodology (or methodologies) approved by AEMO for wholesale demand response. These may differ from the default baseline methodology outlined in the Procedures. A description of the baseline methodology for calculating wholesale demand response quantity will be available in AEMO's Wholesale Demand Response Guidelines.

Questions

- Are there any errors/inconsistencies or other issues in the way AEMO has described the treatment of demand response, including the proposed baseline methodology?
- Is there any additional clarifying information required in the Procedures on the proposed baseline methodology?
- Are there any unintended adverse consequences of the proposed baseline methodology as described in the Procedures?



3.3 Additional processes and responsibilities

There are some processes and responsibilities that are not explicitly detailed in the Rules but are outlined in the draft Procedures to allow all relevant parties to have a full understanding of the PoLR cost recovery process.

3.3.1 Information sharing

To complete the PoLR cost recovery process, a significant amount of information needs to be shared between the AER and AEMO in order to determine:

- Which TIs in a reliability gap period the RRO obligation applies to (i.e. are compliance TIs).
- The liable share for liable entities (including for opt-in customers and taking account of demand response).
- Who the non-compliant liable entities are and their share of RRO liabilities.
- PoLR debts for non-compliant liable entities and RERT rebates for relevant market customers.

The key information sharing points between AEMO and the AER and associated proposed timing are outlined in Table 1 below.

Table 1 – Information sharing between AEMO and the AER

Information flow	Information	Proposed Timing
AEMO to AER	Compliance TIs during a reliability gap period.	15 business days ² after the end of the reliability gap period.
AEMO to AER	AEMO Compliance Report (comprised of liable share data).	40 weeks ³ after the end of the reliability gap period.
AER TO AEMO	Opt-in customer information.	20 business days after the opt-in cut-off day.
AER TO AEMO	Demand response contract information.	30 business days after the end of the reliability gap period.
AER TO AEMO	AER PoLR Report (non-compliant liable entity information).	To be set out in AER's Reliability Compliance Procedures and Guideline (to be completed by 31 December 2020).

3.3.2 Implementation of Five Minute Settlement and the Global Settlement Framework

In recognition of the current pressures on industry due to COVID-19, the implementation date for Five Minute Settlement (5MS) and Global Settlement (GS) is to be delayed to 1 October 2021. AEMO will continue working on the implementation of both programs. The draft Procedures have been written in a way to comply with both 30 and 5 minute trading intervals (although it is most likely that any PoLR cost recovery would happen once 5MS implemented).

In terms of the treatment of unaccounted for energy in a liable entities liable load calculation, once GS is implemented, the adjusted gross energy for connection point will include an adjustment for unaccounted for energy, thus a liable entity's liable load will include its share of unaccounted for energy without the

² Specified in the Rules.

³ Specified in the Rules.



need for further adjustment. When calculating actual demand repose there will be no adjustment for unaccounted for energy.

Questions

- Is there any additional clarifying information required in the Procedures regarding processes and responsibilities for POLR cost recovery?
- Is there any additional clarifying information required in the Procedures regarding the interaction of PoLR cost recovery with either 5MS or GS?
- Are there any unintended adverse consequences of the described processes and responsibilities as described in the Procedures?



4. DRAFTING OF PROCEDURES

To help stakeholders and other interested parties respond to this Issues Paper, AEMO has published a draft of the PoLR Costs Procedures incorporating the all the areas prescribed explicitly or implicitly in the Rules under section 3.15.9A.

The draft Procedures are available at:

<https://aemo.com.au/consultations/current-and-closed-consultations/polr-cost-procedures-consultation>



5. SUMMARY OF MATTERS FOR CONSULTATION

In summary, AEMO seeks comment and feedback on the following matters:

1. The proposed approach to the liable share, PoLR cost and PoLR debts calculations.
2. The proposed approach to the treatment of demand response, including the proposed baseline methodology.
3. The proposed approach to additional processes and responsibilities for the RRO.

Submissions on these and any other matter relating to the proposal discussed in this Issues Paper must be made in accordance with the Notice of First Stage of Consultation published with this paper by 5.00 pm (Melbourne time) on 28 August 2020.



APPENDIX A - GLOSSARY

Term or acronym	Meaning
5MS	Five Minute Settlement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator Limited
AER	Australian Energy Regulator
DSP	Contracted demand side participation (NER clause 3.7D(a)) and arrangements for unscheduled demand or generation response described in NER clause 3.7D(e)(1)(ii)
DSPi Guidelines	The demand side participation information guidelines defined in NER clause 3.7D(a)
DSPiP	The demand side participation information portal referred to in the demand side participation information guidelines (NER clause 3.7D(a))
ESOO	Electricity statement of opportunities
GS	Global Settlement
NEM	National Electricity Market
NER	National Electricity Rules
PoLR	Procurer of Last Resort
Procedures	These PoLR Cost Procedures
RERT	Reliability and emergency reserve trader
RRO	Retailer Reliability Obligation
TI	Trading interval