POLR Cost Procedures

Prepared by:	AEMO Settlements and Prudentials
Version:	2.0
Effective date:	3 June 2024
Status:	FINAL

Approved for distribution and use by:

Approved by:	Michael Gatt
Title:	Executive General Manager - Operations
Date:	12 / 12 / 22

Contents

Current version release details

Version	Effective date	Summary of changes
2.0	3 June 2024	• Update to reflect National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021.

Note: There is a full version history at the end of this document.

1. Introduction

1.1. Purpose and scope

These are the Procurer of Last Resort (PoLR) Cost Procedures (**Procedures**), made under clause 3.15.9A(l) of the National Electricity Rules (**NER**).

These Procedures have effect only for the purposes set out in the NER. The NER and the National Electricity Law prevail over these Procedures to the extent of any inconsistency.

These Procedures set out the mechanism by which AEMO calculates and allocates, recovers and rebates PoLR costs for *liable entities* under the Retailer Reliability Obligation (RRO). In accordance with the NER, the PoLR Cost Procedures must provide for:

(a) the calculation of the inputs specified in clause 3.15.9A(c), that are required for the determination of *fixed PoLR costs* and *variable PoLR costs* under clauses 3.15.9A(d) and (e) respectively;

(b) the process and timeframes for calculating, invoicing, recovering, rebating and reporting on *PoLR debts*, under clauses 3.15.9A(f) to (k);

(c) the determination of a *liable entity's liable load* for a *compliance TI* under clause 4A.F.3(b);

(d) the determination of a *liable entity's* measured actual demand response under clause 4A.F.3(d); and

(e) the records relating to the operation and use of demand side participation contracts to be maintained and provided under clause 4A.F.9.

1.2. Definitions and interpretation

1.2.1. Glossary

Terms defined in the National Electricity Law and the NER have the same meanings in these Procedures unless otherwise specified in this clause.

Terms defined in the NER (including those defined only in clause 4.7D, clause 3.15.9A or Chapter 4A and Chapter 10 of the NER) are intended to be identified in these Procedures by italicising them, but failure to italicise a defined term does not affect its meaning.

The words, phrases and abbreviations in the table below have the meanings set out opposite them when used in these Procedures.

Term	Definition
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator Limited
AER	Australian Energy Regulator
AME	Adjusted metered energy
AMI	Advanced Metering Infrastructure
ARD	*Aggregate RERT dispatched* (NER clause 3.15.9A(c))

Term	Definition
ARFP	*Aggregate RERT fixed payments* (NER clause 3.15.9A(c))
ARP	*Aggregate RERT procured* (NER clause 3.15.9A(c))
ARVP	*Aggregate RERT variable payments* (NER clause 3.15.9A(c))
CP	*Connection point*
CRMP	*Cost Recovery Market Participant*
CTI	*Compliance TI* (NER clause 4A.F.2)
DLF	*Distribution loss factor*
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*
FPC	Fixed PoLR costs (NER clause 3.15.9A(d))
FRG	*Forecast reliability gap* (NEL clause 14G(1))
HAPD	Highest adjusted peak demand (NER clause 4A.F.3 (a) and (d))
LL	*Liable load* (NER clause 4A.F.3(b))
LS	*Liable share* (NER clause 4A.F.3(a))
MADR	Measured actual demand response
MC	*Market Customer*
NEL	National Electricity Law
NEM	National Electricity Market
NER	National Electricity Rules
OC	The amounts described as “OC” in NER clause 3.15.9(e)
OIC	*Opt-in customer* (NER clause 4A.A.1)
OITPDF	*One-in-two year peak demand forecast* (NER clause 4A.A.1)
PoLR	Procurer of Last Resort
Procedures	These *PoLR cost procedures*
Relevant *connection point*	A *connection point* that is relevant for determining the *liable load* for a *liable entity* for a *compliance TI* – see Sections 3.1.2 and 3.1.3 of these Procedures
RERT	*Reliability and emergency reserve trader*
RGP	*Reliability gap period*
RRO	Retailer Reliability Obligation
TI	*Trading interval*
TLF	*Intra-regional loss factor*
TNI	Transmission node identifier
UC	The charges described as “UC” in NER clause 3.15.9(e)
VPC	*Variable PoLR costs* (NER clause 3.15.9A(e))
WDRSQ	*Wholesale demand response settlement quantity*

1.2.2. Interpretation

These Procedures are subject to the principles of interpretation set out in Schedule 2 of the National Electricity Law.

1.3. Related documents

Reliability Forecast Guidelines	AEMO
Electricity Statement of Opportunities	AEMO
Demand Side Participation Information Guidelines	AEMO
Procedure for the Exercise of the Reliability and Emergency Reserve Trader	AEMO
Reliability Compliance Procedures and Guidelines	AER
AER PoLR reports	AER
Contracts and Firmness Guidelines	AER
Opt-In Guidelines	AER

2. RRO background and PoLR overview

2.1. Limitations

This section 2 provides context for these Procedures only and does not impose obligations or confer rights on any person. It includes high level summaries of NEL and NER requirements to explain how PoLR costs will be determined. It must not be relied on as a complete, accurate or up to date summary of the relevant obligations.

2.2. Retailer Reliability Obligation

The Retailer Reliability Obligation (RRO), implemented under the *National Electricity Amendment (Retailer Reliability Obligation) Rule 2019*, requires energy retailers and some large energy users to hold contracts or invest directly in generation or demand response to support reliability in the NEM.

2.3. Triggering the RRO

(a) Each year, AEMO will identify *forecast reliability gaps* in each NEM *region* for the coming five years in the ESOO. Depending on the time horizon in which a *forecast reliability gap* arises, AEMO will ask the AER to make a *T-3 reliability instrument* or a *T-1 reliability instrument* to trigger the RRO.[1]

(b) If triggered, the RRO applies to *liable entities* for a *region*, as determined under NER Chapter 4A, Part D, for specified trading intervals during a *reliability gap period* (*gap trading intervals*) identified in a *T-1 reliability instrument.*

[1] The South Australian Minister also has the ability to trigger the RRO within South Australia. In the first three years (to 2021) this can be done 15 months or more before the start of the identified gap, and after that must be consistent with the AER's timeframes.

(c) Under a *T-1 reliability instrument*, a *liable entity* must have a sufficient *net contract position* under *qualifying contracts* to cover the *liable entity's 'liable share'* of the *one-in-two peak demand forecast* in the relevant *region* for each *gap trading interval*.

(d) The *liable share* is based on energy consumption at *connection points* in the *region* for which the *liable entity* is *financially responsible*. *Liable entities* must report their *net contract positions* to the AER.

2.4. Liable entities

(a) *Liable entities* (defined under NER clause 4A.D.2) are *financially responsible Market Customers* or *Integrated Resource Providers* and eligible customers who elect to opt-in to the RRO rather than having their retailer manage the obligation on their behalf.

(b) For clarity, the term *Market Customer* refers to a corporate entity that is a *Registered Participant* with AEMO under NER Chapter 2 in the 'Market Customer' category. A *Market Customer* purchases electricity directly from the wholesale electricity market. The current list of *Registered Participants*, including the categories in which they are registered, is publicly available on AEMO's website[2].

(c) To classify as a *liable entity* in a given *region*, a *financially responsible Market Customer* or *Integrated Resource Provider* must meet the criteria outlined in NER clause 4A.D.2(a). A *financially responsible Market Customer* or *Integrated Resource Provider* can be designated as a *new entrant* for a *region* for the purposes of the RRO, if they meet the criteria outlined in NER clause 4A.D.3.

(d) Eligible electricity consumers can opt-in to the RRO for a particular *forecast reliability gap period.* To do this, they must register with the AER in accordance with NER rule 4A.D and the *AER Opt-In Guidelines*. An *opt-in customer* is categorised as either a *large opt-in customer* or a *prescribed opt-in customer* by the AER.

2.5. Compliance with the Retailer Reliability Obligation

(a) A *compliance TI* is a *gap trading interval* in which the *peak demand*, as published under NER clause 4A.A.4(c), exceeds the *one-in-two year peak demand forecast* for that *region*.

(b) As outlined under NER clause 4A.F.4, AEMO will provide the AER with written notice of any *compliance TIs*, after the end of a *forecast reliability gap period*.

(c) If there are compliance TIs during a *reliability gap period*, then within 40 weeks after the end of the *reliability gap period*, *AEMO* will calculate and provide the AER with each *liable entity*'s *liable share* for each *compliance TI*.

(d) If the AER determines that a *liable entity*'s *net contract position* is less than its *liable share* for a *compliance TI*, it will be designated as a *PoLR liable entity* in the *AER PoLR report*. The AER provides the *AER PoLR report* to AEMO.

[2] AEMO's Current Registration and Exemptions Lists can be accessed online: https://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Participant-information/Current-participants/Current-registration-and-exemption-lists

2.6. Procurer of Last Resort cost recovery mechanism

(a) Once a *T-1 reliability instrument* is made by the AER, AEMO may start procuring resources through the *reliability and emergency reserve trader* (*RERT*) framework to fill the remaining gap. Certain costs of the *RERT* acquired for that purpose are recoverable by AEMO from any *PoLR liable entities* in the relevant *region* through the PoLR cost allocation mechanism (NER clause 3.15.9A).

(b) A *PoLR liable entity* is liable to pay *AEMO* an amount (*PoLR debt*) for a *reliability gap period* calculated as the aggregate of its '*availability liability*' for the *reliability gap period* and the sum of the '*usage liability*' for all applicable *PoLR TIs* in that *reliability gap period*, capped at $100 million.

3. Liable share

The *liable share* calculation (see section 3.4) is the key component in determining whether a *liable entity* has met its RRO obligations. A *liable entity*'s *liable share* is its share of the *one-in-two year peak demand forecast* for a *compliance TI*. It is made up of three key components:

- *Liable load* (see section 3.1)
- *Highest adjusted peak demand* (see section 3.1.4)
- *One-in-two year peak demand forecast* (see section 3.3).

3.1. Liable load

3.1.1. Overview

(a) A *liable entity*'s *liable load* is calculated by AEMO as a first step to determining a *liable entity's liable share* as per NER clause 4A.F.3(b). The calculation for *liable load* is different for *Market Participants* and *opt-in customer*s.

(b) At a high level, a *liable entity*'s *liable load* at each *connection point* for a *compliance TI* is calculated as:

- **Demand**, represented by adjusted metered energy (apportioned where relevant between the *Market Participant* and any *opt-in customer* at that *connection point*). It excludes any market connection point for a *market generating unit* or *small generating unit*.
- **Plus** the measured actual demand response (other than *wholesale demand response*) under a *qualifying contract*, adjusted for the relevant *distribution loss factor.*
- **Plus** the wholesale demand response settlement quantity.
- This quantity is then adjusted for *intra-regional loss factors* and multiplied by the number of *trading intervals* in an hour.

3.1.2. Liable load – Market Participants

(a) For a *liable entity* that is a *Market Participant*, its *liable load* relates to the *connection points* for which that *liable entity* is *financially responsible* in a *compliance TI* in the *region* to which the *compliance TI* relates (each a **relevant *connection point***).

(b) The *Market Participant liable load* at a relevant *connection point* is calculated as:

$$\boldsymbol{LL\_MP_{CTI,CP}} = \Big(\big(\big|\boldsymbol{AME\_MP_{CTI,CP}}\big| - \big|\boldsymbol{AME\_OIC_{CTI,CP}}\big| + \boldsymbol{MADR\_MP_{CTI,CP}} \times \boldsymbol{DLF_{CP}}\big) + \boldsymbol{WDRSQ_{CTI,CP}}\Big) \times \boldsymbol{TLF_{CP}} \times \mathbf{12}$$

(c) The *Market Participant liable load* for a *compliance TI* is calculated as the sum of *liable load* for all its relevant *connection points*, as:

$$\boldsymbol{LL\_MP_{CTI}} = \sum \boldsymbol{LL\_MP_{CTI,CP}}$$

(d) For the purposes of paragraphs (b) and (c):

LL_MP	*Market Participant liable load* for a *compliance TI* (MW).
$LL\_MP_{CTI,CP}$	*Market Participant liable load* at each relevant *connection point*.
$AME\_MP_{CTI, CP}$	*Market Participant* adjusted metered energy at the relevant *connection point (*excluding any market connection point for a *market generating unit* or *small generating unit)*, based on the relevant *routine revised statements* for the *billing periods* relating to the *reliability gap period* given approximately 30 weeks after the relevant *billing period* (MWh).
$AME\_OIC_{CTI, CP}$	Adjusted metered energy for which an *opt-in customer* is registered at the relevant *connection point*, based on the relevant *routine revised statements* for the *billing periods* relating to the *reliability gap period* given approximately 30 weeks after the relevant *billing period* (MWh).
$MADR\_MP_{CTI, CP}$	*Liable entity*'s measured actual demand response under a *qualifying contract* at the *connection point* for which it is *financially responsible* for the *compliance TI* (MWh).
$WDRSQ_{CTI, CP}$	*Wholesale demand response settlement quantity* for each relevant *connection point* (MWh).
DLF_{CP}	*Distribution loss factor* for that *connection point.*
TLF_{CP}	*Intra-regional loss factor* at the *transmission network connection point* to which the *connection point* is assigned.

3.1.3. Liable load – opt-in customers

(a) AEMO will use the information provided by the AER under section 3.1.4 to obtain the details necessary to calculate the *liable load* for *opt-in customers* under this clause.

(b) For a *liable entity* that is an *opt-in customer*, a *liable entity*'s *liable load* relates to the *connection points* for which that *liable entity* has opted-in to RRO liability for a *compliance TI*, in the *region* to which the *compliance TI* relates (each a **relevant *connection point***).

(c) The opt-in customer liable load at each relevant connection point is calculated as:

$$\boldsymbol{LL\_OIC_{CTI,CP}} = \left(\left(\left|\boldsymbol{AME\_OIC_{CTI,CP}}\right| + \boldsymbol{MADR\_OIC_{CTI,CP}} \times \boldsymbol{DLF_{CP}}\right) + \boldsymbol{WDRSQ_{CTI,CP}}\right) \times \boldsymbol{TLF_{CP}} \times \mathbf{12}$$

(d) The *opt-in customer liable load* for each *compliance TI* is calculated as the sum of *liable load* for all its relevant *connection points*, as:

$$\boldsymbol{LL\_OIC_{CTI}} = \sum \boldsymbol{LL\_OIC_{CTI,CP}}$$

(e) For the purposes of paragraphs (c) and (d):

LL_OIC_{CTI}	*Opt-in customer liable load* for a *compliance TI* (MW).
$LL\_OIC_{CTI,CP}$	*Opt-in customer liable load* at each relevant *connection point* (MW).
$AME\_OIC_{CP,CTI}$	*Opt-in customer* adjusted metered energy - the adjusted metered energy for each relevant *connection point* (or part thereof if it is a *prescribed opt-in customer* registered for a portion of the *load* at that *connection point*), based on the relevant *routine revised statements* provided to the relevant *Market Customer* for the relevant *connection points* for the *billing periods* relating to the *reliability gap period* given approximately 30 weeks after the relevant *billing period* (MWh).
$MADR\_OIC_{CP,CTI}$	*Opt-in customer*'s measured actual demand response under a *qualifying contract* at each relevant *connection point* (MWh).
$WDRSQ_{CTI, CP}$	*Wholesale demand response settlement quantity* for each relevant *connection point* (MWh).
DLF_{CP}	*Distribution loss factor* for that *connection point.*
TLF_{CP}	*Intra-regional loss factor* at the *transmission network connection point* to which the *connection point* is assigned.

3.1.4. AER to provide opt-in register information

(a) To allow AEMO to calculate *liable share* information for *liable entities*, AEMO requires information from the AER's *opt-in register* for each approved *opt-in customer*, including:

(i) business name, ABN or ACN of registered *opt-in customer*;

(ii) category of registration: *prescribed opt-in customer* or *large opt-in customer*;

(iii) *connection points* (*NMIs*) for which the customer has opted-in to liability; and

(iv) for *prescribed opt-in customers*, the portion of total load for which they have opted-in to liability at each *connection point*.

(b) The AER must provide any other information from the AER's *opt-in register* that AEMO reasonably requests to calculate *liable share* information.

(c) The AER must provide this information to AEMO within 50 *business days* after the *opt-in cut-off day* by email to settlements@aemo.com.au with the subject heading "Opt-in Register Information" or by other means advised by AEMO.

(d) Information in the opt-in register is confidential information.

3.2. Highest adjusted peak demand

3.2.1. Highest adjusted peak demand for a reliability gap period

The highest adjusted peak demand for a *reliability gap period* is the highest of all the adjusted peak demand quantities determined for each *compliance TI* in that *reliability gap period*.

3.2.2. Adjusted peak demand for a compliance TI

(a) In accordance with NER clause 4A.F.3.(d), the adjusted peak demand for a *compliance TI* is the *actual demand* for the *region* in that *compliance TI* as determined under NER clause 4A.A.4(b) and the *Reliability Forecast Guidelines*, and published by AEMO on its website after the relevant *trading interval*, adjusted for:

(i) the 'measured actual demand response' of all *liable* entities for the region during that compliance TI (other than wholesale demand response), where each *liable entity's* measured actual demand response is determined under section 4 of these Procedures.

(ii) the *wholesale demand response settlement quantities* for that *compliance TI* for all *connection points* for which a *liable entity* is *financially responsible*.

(b) The adjusted peak demand calculation is represented as:

$$\boldsymbol{APD_{CTI} = AD_{CTI} + \sum MADR_{CTI} + \sum WDRSQ_{CTI}}$$

Where:

APD_{CTI}	Adjusted peak demand for the *region* in the *compliance TI* (MW).
AD_{CTI}	*Actual demand* for the *region* in the *compliance TI*, as published by AEMO (MW).
$MADR_{CTI}$	Measured actual demand response (other than *wholesale demand response*) for liable entities under *qualifying contracts* for the *region* in the *compliance TI*.
$WDRSQ_{CTI}$	*Wholesale demand response settlement quantity* for liable entities for each relevant *connection point.*

3.3. One-in-two year peak demand forecast

Under clause 4A.A.3 of the NER, *one-in-two year peak demand forecast* for a *region* is:

(a) the forecast made in accordance with AEMO's Reliability Forecast Guidelines; and

(b) specified in a reliability forecast to be that forecast for that *region* for that *financial year*.

3.4. Calculating liable share

A *liable entity*'s *liable share* is its share of the *one-in-two year peak demand forecast* for a *compliance TI*. It is calculated by AEMO per NER clause 4A.F.3(a), as:

$$\boldsymbol{LS_{CTI}} = \left(\frac{\boldsymbol{LL_{CTI}}}{\boldsymbol{HAPD_{RGP}}}\right) \times \boldsymbol{OITPDF_{CTI}}$$

where:

LS_{CTI}	*liable entity*'s *liable share* for the *compliance TI* (MW).
LL_{CTI}	*liable entity*'s *liable load* for the *compliance TI* (MW).
$HAPD_{RGP}$	highest adjusted peak demand occurring in a *compliance TI* in the relevant *reliability gap period* (MW).
$OITPDF_{CTI}$	*one-in-two year peak demand forecast* for the *compliance TI* (MW), except that if OITPDF/HAPD > one, then it is taken to be equal to one (effectively LS is capped at LL).

4. Calculating measured actual demand response

4.1. General

A demand side participation (DSP) contract or other arrangement may be used by a *liable entity*, for the purposes of RRO compliance, in one of two ways:

(a) The *liable entity* may record the demand response contract/arrangement as a *qualifying contract* (if it meets the criteria for *qualifying contracts* listed below) and include it in its *net contract position*. In that case, the 'measured actual demand response' from that contract is added into the *liable load* calculation for the *liable entity*.

(b) If it is not recorded as a *qualifying contract*, any demand reduction achieved under that arrangement effectively reduces the adjusted metered energy that makes up its *liable load*.

4.2. Demand Response as a qualifying contract

(a) A DSP arrangement may be recorded as a *qualifying contract* for a *liable entity* if it meets the applicable requirements in section 14O of the NEL and NER clause 4A.E.1. Further guidance on *qualifying contracts* is provided in the AER's *Contracts and Firmness Guidelines*.

(b) Only DSP arrangements that are recorded as *qualifying contracts* are used in the determination of *liable shares* and adjusted peak demand.

4.3. AEMO access to information on DSP qualifying contracts

(a) To meet the RRO, *liable entities* are required to enter into sufficient *qualifying contracts* (which can include DSP arrangements) to meet their share of AEMO's *one-in-two year peak demand* forecast during a *forecast reliability gap period*.

(b) *Liable entities* are required to provide their *net contract position* to the AER by the *reporting day* specified in a *T-1 reliability instrument*.

(c) To allow AEMO to calculate the measured actual demand response and thus the *liable share* information for *liable entities*, the AER must make the following information available to AEMO regarding DSP contracts recorded as *qualifying contract*s for each *compliance TI*:

  (i) *liable entity's* name, ABN or ACN;

  (ii) contract ID;

  (iii) *connection points* (*NMIs*) for which the DSP *qualifying contract* applies;

  (iv) unadjusted and adjusted contract volumes (MW); and

  (v) any other information collected by the AER about the DSP *qualifying contract* that AEMO reasonably requests to determine the measured actual demand response.

(d) This information is to be provided electronically to AEMO at settlements@aemo.com.au, with the subject heading "Demand Response Qualifying Contracts Information" or as advised to the AER in writing by AEMO, within 30 *business days* of the AER receiving written notice of any *compliance TIs*, after the end of a *forecast reliability gap period* from AEMO.

4.4. Participant information requirements

(a) 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* (including the *NMIs* to which they relate).

(b) For these purposes, a *liable entity* must maintain records that provide reasonable evidence to verify the information required by the DSPI Guidelines for each DSP arrangement registered in the Demand Side Participation Information Portal (DSPIP) and applied as a *qualifying contract*.

(c) Under NER clause 4A.F.9(b), a *liable entity* must make these records available to AEMO on request.

(d) For these purposes, a *liable entity* must provide the requested records to AEMO within 5 *business days* after the date of the request, unless AEMO agrees a longer period having regard to the circumstances.

4.5. Baselines – calculating measured actual demand response

(a) A liable entity's measured actual demand response is the demand response under a qualifying contract at each *connection point* (NMI) for which it is *financially responsible* (if a *Market Participant*) or registered (if an *opt-in customer*), for the *compliance TI*.

(b) AEMO is required to outline how a *liable entity*'s measured actual demand response will be determined for a *trading interval* in these Procedures, according to NER clause 4A.F.10(a).

(c) When a demand response event occurs, the response calculated (in this case for the purposes of the RRO) is the difference between the metered quantity of energy at the *connection point* and the baseline energy for the resource, where the baseline energy is an estimate of what demand would have been at the *connection point* had there been no demand response.

4.6. Baselines – calculating wholesale demand response quantity

(a) The calculation of the *wholesale demand response quantity* for any *wholesale demand response* which is a qualifying contract under the RRO will be subject to the baselining methodology (or methodologies) approved by AEMO for *wholesale demand response* and may differ from the default baseline methodology outlined below.

(b) Refer to AEMO's Wholesale Demand Response Guidelines for a description of the baseline methodology for calculating *wholesale demand response quantity*.

4.7. Default baseline methodology for RRO

(a) To calculate measured actual demand response under a *qualifying contract*, the default baseline methodology draws on approaches developed under AEMO's Demand Response Mechanism (DRM) proposal in 2013[3], which was based on methods used internationally (i.e. the CAISO "10 of 10" baseline methodology) and assessed for application within a NEM context.

(b) To calculate the measured actual demand response for a *liable entity* during a *reliability gap period*, for each *NMI* used as DSP *qualifying contract* under the RRO, *interval meter data* (at TI breakdown), sourced from a Type 1-4 Meter, or an AMI smart meter in Victoria, will be required. This will allow the determination of the measured actual demand response by *trading interval* for each *NMI* under a *qualifying contract*.

[3] AEMO, July 2013. Demand Response Mechanism and Ancillary Services Unbundling - High Level Market Design. Available at: https://aemo.com.au/-/media/files/initiatives/wdr/drm_high_level_market_design_final.pdf

(c) AEMO will use the *NMI* level data it receives for NEM settlement to generate the data by NMI of the consumption during the *reliability gap period*, and for the calculation of the baseline consumption.

(d) The default baseline methodology can be broken down into the following high level steps:

(i) Unadjusted baseline calculation – appropriate historic data is used to calculate an unadjusted baseline.

(ii) Baseline adjustment factor calculation – data from the day of the demand response used to calculate an adjustment factor to the baseline.

(iii) Adjusted baseline calculation – baseline adjusted by the calculated adjustment factor.

(iv) Measured actual demand response calculation – measured actual demand response is calculated as the difference between the actual demand and the adjusted baseline.

4.7.1. Unadjusted baseline calculation

(a) To calculate the demand response for a *compliance TI*, an unadjusted baseline consumption is derived from *metering data* for a set number of prior qualifying days, collectively called the 'selected days'.

(b) Qualifying days are calendar weekdays which are not public holidays (in that region) during the 'baseline window period'. Where possible, qualifying days will not include *compliance TI*s for that region. Paragraph (e) explains which qualifying days make up the selected set.

(c) The baseline window period is the period of 45 calendar days preceding a *compliance TI*. This time range is considered long enough to allow for a significant number of qualifying days but not so long as to create serious distortions due to changing seasons.

(d) The unadjusted baseline for a *compliance TI* is calculated according to the formula:

$$b_{CTI} = \frac{1}{S} \sum_{i=1,2,..,S} c_{CTI,i}$$

where:

b_{CTI}	Unadjusted baseline for a given *compliance TI* (MWh).
i	One of S selected days.
S	The set of selected days in the baseline window period for which the calculation is being made (the 45 day period).
c	Electricity demand for a given TI occurring on one of the selected days (MWh).

(e) The selected days for the set will be based on weekdays on which there were no *compliance TIs* (**non-CTI days**) and weekdays on which there were *compliance TIs* **(CTI days**), and determined as follows:

(i) This set of selected days normally comprise the 10 non-CTI days immediately preceding the weekday on which there was a *compliance TI* and for which the calculation is being made.

(ii) If, in the 45 day period, there are less than 10 non-CTI days but 5 or more non-CTI days, then S comprises those non-CTI days.

(iii) If, in the 45 day period, there are less than 5 non-CTI days, then S comprises the non-CTI days plus one or more of the CTI days in the 45 days period will added to the number of non-CTI days so that the total number of days in the set equals 5. The CTI days added to the non-CTI days will be determined based on the level of demand during the *compliance TIs* during the *reliability gap period* (with the CTI day with the highest demand during any *compliance TI* on that CTI day ranked highest and added to the non-CTI days, with the next highest ranked CTI day added and so on, until the total number of days in the set equals 5). If 2 or more CTI days are ranked the same based on the highest demand during any *compliance TI*, the CTI day closest in time to the weekday on which there was a *compliance TI* and for which the calculation is being made will be ranked higher.

4.7.2. Baseline adjustment factor calculation

(a) To account for the possibility that the day on which the *compliance TI* occurs is different from the average day, an adjustment factor is applied to the unadjusted baseline. This adjustment is based on the average difference between predicted and metered energy during an adjustment window, prior to (but on the same day) as the first *compliance TI*. The adjustment may be positive or negative and is added to the unadjusted baseline energy to give the adjusted baseline energy.

(b) The adjustment window is the period of time prior to the first *compliance TI* from which *metering data* is used to adjust the baseline to reflect conditions on the calendar day of the *compliance TI*. The adjustment window represents *trading intervals*, covering the 3 hour period ending one hour before the start of the first *compliance TI* for the day.

(c) The baseline adjustment factor is calculated as follows:

$$a = \frac{\sum_{TI=s-48}^{TI=s-13}(c_{TI} - b_{TI})}{36}$$

where:

A	Adjustment factor (this may be positive or negative).
s	The first *compliance TI* for the day.
c_{TI}	Electricity demand for the relevant TI
b_{TI}	Unadjusted baseline for the relevant TI (MWh)

4.7.3. 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, according to the formula:

$$B_{CTI} = b_{CTI} + a$$

where:

B_{CTI}	Adjusted baseline MWh for a given *compliance TI.*
b_{CTI}	Unadjusted baseline for a given *compliance TI* (MWh).
a	Adjustment factor (this may be positive or negative).

4.7.4. Measured actual demand response calculation

(a) 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, which should reflect the demand response. It is calculated according to the formula:

$$MADR_{CTI} = B_{CTI} - c_{CTI}$$

where:

$MADR_{CTI}$	Measured actual demand response for the *compliance TI*.
c_{CTI}	Electricity demand for a given *compliance TI* for which the calculation is being made.
B_{CTI}	Adjusted baseline MWh for a given *compliance TI.*

(b) If demand response is delivered, then $MADR_{CTI}$ will be a positive value. Where $MADR_{CTI}$ is less than zero (i.e. demand was above the baseline), then $MADR_{CTI} = 0$.

(c) Where $MADR_{CTI}$ is greater than the Unadjusted Contract Volume for the *qualifying contract* for that particular CTI, then $MADR_{CTI}$ = the Unadjusted Contract Volume.

5. Calculating PoLR costs

5.1. Relevant rules

(a) AEMO recovers the payments made under *reserve contracts* by way of cost recovery from *Market Participants* under NER clause 3.15.9 **(**each a *Cost Recovery Market Participant*, or CRMP**)**, based on their share of the total *energy* purchased in relevant *regions*. *RERT* payments may include fixed (e.g. availability) or variable (usage) costs.

(b) If a *liable entity*'s *net contract position* is less than the *liable entity*'s *liable share* for a *compliance TI*, the AER provides AEMO with an *AER PoLR report* for that *liable entity*, including the information specified in NER clause 4A.F.8.

(c) The PoLR cost allocation methodology is applied by AEMO to a *reliability gap period* where there are one or more *PoLR liable entities* as outlined the AER *PoLR report,* to reallocate certain *RERT* costs to *PoLR liable entities* as PoLR debts as defined in and in accordance with NER clause 3.15.9A.

(d) The PoLR cost allocation methodology uses the *RERT* variables (aggregate *RERT* procured, aggregate *RERT* dispatched, aggregate *RERT* fixed payments and aggregate *RERT* variable payments) as inputs to calculating the fixed and variable PoLR costs.

(e) The *fixed PoLR costs* represent the fixed costs of *RERT* for the entire *reliability gap period*, while the *variable PoLR costs* represent the *RERT* costs calculated per TI for the *reliability gap period*.

(f) Under clause 3.15.9A(l), these Procedures must include:

  (i) the methodology and inputs for calculating each of the *RERT* variables and the fixed and variable PoLR costs (sections 5.2 to 5.5) and PoLR debts (section 6); and

  (ii) the process and timeframes for calculating, invoicing, recovering, rebating and reporting on PoLR debts (section 7).

(g) AEMO will calculate each of the amounts required for the purpose of determining PoLR debts, and the PoLR debts themselves, in accordance with the relevant NER provisions. For completeness, the following sections reflect the specified NER provisions as at the effective date of these Procedures, and in some cases give additional information about the inputs.

5.2. Aggregate RERT procured and dispatched

(a) *AEMO* will, in respect of each *reliability gap period* for a *region* the subject of an *AER PoLR report*, calculate the aggregate *RERT* procured, defined under NER clause 3.15.9A(c)(1) as the aggregate of the nominal values of reserves (in MW) procured by AEMO under *reserve contracts* for all or part of that *reliability gap period.* AEMO reports the amount of *reserves* it has contracted under NER clause 3.20.6.

(b) *AEMO* will, in respect of each *reliability gap period* for a *region* the subject of an *AER PoLR report*, calculate the aggregate *RERT* dispatched, defined under NER clause 3.15.9A(c)(2) as the aggregate volume (in MWh) of *reserves dispatched* or *activated* by AEMO during each *PoLR TI* notified in the *AER PoLR report.* This volume is determined by the outcomes of the relevant process under the Procedure for the Exercise of the *RERT* made by AEMO under NER clause 3.20.7(e):

  (i) for *dispatch* of *scheduled reserve*, the quantity reflected in *dispatch instructions* under section 8 of that procedure; and

  (ii) for activation of *unscheduled reserve*, the amount reflected as a decrease in scheduled demand under section 9 of that procedure.

5.3. Aggregate RERT variable and fixed payments

(a) *AEMO* will, in respect of each *reliability gap period* for a *region* the subject of an *AER PoLR report*, calculate the aggregate *RERT* variable payments, defined under NER clause 3.15.9A(c)(4) as the aggregate of all amounts of Usage Charges (UC) paid by AEMO for the *PoLR TIs* notified in the *AER PoLR report.*

$$Aggregate\ RERT\ variable\ payments_{RGP} = \sum Usage\ Charges_{PoLR\ TI}$$

(b) The UC is defined under NER clause 3.15.9(e) as the total usage charges (or equivalent charges) paid by *AEMO* under *reserve contracts*. This covers charges for the MWh of reserve delivered.

(c) Under NER clause 3.15.9(e1) when determining the amount "UC", *AEMO* allocates usage charges (or equivalent charges) under *reserve contracts* to the *trading intervals* during which *reserves* were *dispatched* or *activated* in the relevant *region* in the *billing period*.

(d) *AEMO* will, in respect of each *reliability gap period* for a *region* the subject of an *AER PoLR report*, calculate the aggregate *RERT* fixed payments (OC) for that *reliability gap period*, defined under NER clause 3.15.9A(c)(3) as the total amount paid by *AEMO* under *reserve contracts* in the relevant *region*, other than amounts determined as "UC" in accordance with NER clause 3.15.9(e); and operational and administrative costs described in paragraph 3.15.9(g).

$$Aggregate\ RERT\ fixed\ payments_{RGP} = \sum Reserve\ contracts\ costs_{RPG} - UC_{RPG} - Op\ \&\ admin\ costs_{RPG}$$

(e) The aggregate *RERT* fixed payments are the sum of availability payments including rebates and pre-activation payments.

5.4. Fixed PoLR costs

For each *reliability gap period* for a *region* the subject of an AER *PoLR report*, AEMO will calculate the *fixed PoLR costs* (FPC) as specified under clause 3.15.9A(d) of the NER.

5.5. Variable PoLR costs

For each *PoLR TI* during a *reliability gap period* for a *region* the subject of an AER *PoLR report*, AEMO will calculate the *variable PoLR costs* (VPC) as specified under clause 3.15.9A(e) of the NER.

6. Calculating PoLR debts

(a) A CRMP who does not meet its obligations under the RRO (*PoLR liable entity*) is liable to pay *AEMO* an amount for a *reliability gap period* referred to as the *PoLR debt*, under NER clause 3.15.9A(f). Under that clause, the *PoLR debt* for a *liable entity* is capped at $100 million.

(b) The methodology for calculating the *PoLR debt* and each component of *PoLR debt* is comprehensively set out in NER clauses 3.15.9A(f) to 3.15.9A(h).

7. Recovering PoLR debts and rebating RERT costs

7.1. PoLR cost allocation timeframes

(a) To the extent reasonably practicable, AEMO will calculate *PoLR debts* for each *PoLR liable entity* within six weeks after receiving the *AER PoLR report*.

(b) AEMO will only rebate *RERT* costs after receiving payment in respect of *PoLR debts* and will include rebate amounts as an adjustment in the earliest practicable *final statement* issued to relevant CRMPs after such payments are received.

(c) AEMO will include information on the total amount of *RERT* costs rebated to CRMPs in relation a *reliability gap period* in the relevant *RERT* report as published under NER clause 3.20.6(c).

7.2. PoLR debt invoicing

(a) For *PoLR liable entities* that are CRMPs, AEMO will include their *PoLR debts* in the next *settlement statement* issued to that CRMP under NER clause 3.15.9A(i).

(b) For *PoLR liable entities* that are *opt-in customers*, AEMO will issue a tax invoice to that entity for the *PoLR debt* with a due date for payment of not less than 30 days as per NER clause 3.15.9A(j).

(c) A *PoLR liable entity* that is an *opt-in customer* must pay interest on any unpaid amount of *PoLR debt* due and payable, at the rate determined under NER clause 3.15.25 as if the *opt-in customer* were a *Market Participant*.

7.3. Rebating RERT costs

(a) As per NER clause 3.15.9A(k), AEMO will rebate the proceeds from any *PoLR debts* it recovers in relation to a *reliability gap period* for a *region*.

(b) AEMO will only undertake a rebate process if the aggregate *PoLR debt* recovery amount for a *reliability gap period* for a *region* is at least $5,000.

(c) The rebate will go to CRMPs who have paid fees under NER 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 these Procedures.

(d) The *RERT* rebate for a CRMP for a *reliability gap period* will be calculated by AEMO according to the following formula:

$$RERT\ Rebate\_CRMP_{RGP} = PoLR\ Debt\ Recovered_{RGP} \times \frac{AGE\_CRMP_{RGP}}{\sum_{All\ market\ customers} AGE\_CRMP_{RGP}}$$

(e) AEMO will only rebate *RERT* costs equal to the amount recovered by AEMO in relation to a *reliability gap period* for a *region*.

(f) For eligible CRMPs , AEMO will include *RERT* rebate in theirsettlement statement.

Version release history

Version	Effective date	Summary of changes
2.0	3 June 2024	• Update to reflect National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021.
1.1	12 December 2022	• Update to reflect National Electricity Amendment (Removal of unaccounted for energy from liable load in the Retailer Reliability Obligation) Rule 2021 No. 16. • Remove references to 30 minute trading intervals. • Update to new AEMO template.
1.0	20 November 2020	First issue