



Australian Energy Market Commission

CONSULTATION PAPER

NATIONAL ELECTRICITY AMENDMENT (REMOVAL OF UNACCOUNTED FOR ENERGY FROM LIABLE LOAD IN THE RETAILER RELIABILITY OBLIGATION) RULE 2021

PROPONENT

Australian Energy Market Operator

28 OCTOBER 2021

RULE

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Energy Ministers' Meeting (formerly the Council of Australian Governments Energy Council). We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the Energy Ministers' Meeting.

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1 INTRODUCTION

On 3 August 2021, the Australian Energy Market Operator (AEMO) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission). AEMO is proposing to amend rule 4A.F.3 of the National Electricity Rules (NER) to change the calculation of liable load under the Retailer Reliability Obligation (RRO) to remove unaccounted for energy (UFE).

The rule change request also includes a proposed rule (see appendix A).¹ A copy of the rule change request and proposed rule may be found on the AEMC website, www.aemc.gov.au.

This consultation paper has been prepared to facilitate public consultation on the rule change request and to seek stakeholder submissions. It:

- provides background to and summarises the rule change request
- identifies issues and questions to facilitate consultation on this rule change request
- outlines the process for making submissions.

1.1 Key dates

The Commission considers that this rule change request is a request for a non-controversial rule under the s 96(1) of the NEL for the reasons set out in section 6.1, and therefore has decided to use the expedited rule change process for the rule change proposal. Consistent with the timelines and requirements for an expedited rule change process, the key dates in this process are:

- commencement of this rule change process: **28 October 2021**
- objections to the Commission's decision that the rule change request is a request for a non-controversial rule (and be subject to the expedited process) to be received by: **11 November 2021**
- submissions to the rule change request and consultation paper are to be received by: **25 November 2021**
- final determination to be published under an expedited process by: **23 December 2021**.

Publishing the Commission's final determination by 23 December 2021 ensures regulatory clarity and certainty as early as possible before the commencement of Global Settlement on 1 May 2022. Global Settlement will shift how UFE is allocated in the NEM and therefore will influence the calculation of liable load in the RRO.

¹ AEMO, rule change request, pp. 4-5.

2 CURRENT ARRANGEMENTS

This chapter outlines the current arrangements in the NER for:

- the Retailer Reliability Obligation (RRO)
- the calculation and allocation of UFE before and after the commencement of the Global Settlement rules.

2.1 Retailer Reliability Obligation

The RRO rules commenced on 1 July 2019. The objective of the RRO is to provide an incentive for market participants to invest in firm generation technology in regions where it is needed to support reliable electricity supply in the NEM. It is intended to be a long-term solution to ensuring reliability at the lowest cost by preparing for forecast reliability gaps well in advance of their occurrence.

The RRO requires energy retailers to be accountable for reliability in the power system. In particular, it requires retailers and some large energy users to hold contracts for their share of system peak demand when there is an identified forecast 'reliability gap' period.²

2.1.1 What are the obligations of the RRO?

The RRO introduced obligations on market participants (also referred to as liable entities), AEMO and the AER. The RRO requires:

- **liable entities (typically retailers and some large energy users)**³ — enter into sufficient qualifying financial contracts with generators if the RRO is triggered to meet their share of expected system peak electricity demand.
- **AEMO** — to:
 - identify forecast reliability gaps in each NEM region in its *Electricity Statement of Opportunities* (ESOO) forecast
 - if a forecast reliability gap arises, also request the AER to issue a reliability instrument.
- **AER** — to assess and determine:
 - AEMO's forecast reliability gap and trigger the RRO by issuing a reliability instrument
 - liable entities' compliance with the market liquidity obligation following the trigger of the T-3 Reliability Instrument
 - liable entities' compliance with the contracts and firmness guidelines following the trigger of the T-1 Reliability Instrument
 - liable entities' compliance with the RRO should a reliability gap period eventuate.

2 Department of Industry, Science, Energy and Resources, *Retailer Reliability Obligation*, fact sheet, 2019, available at: https://www.energy.gov.au/sites/default/files/retailer_reliability_obligation_factsheet.pdf

3 Liable entities include all market customers registered by AEMO in the NEM such as retailers. Other large customers may choose to opt in if they are not registered as market customers yet would like to manage the obligation for themselves.

2.1.2 What is a 'reliability gap' period?

AEMO will forecast a reliability gap when expected unserved energy (USE) does not meet the interim reliability measure (which is a higher threshold than the reliability standard, at least until 30 June 2025).⁴ USE refers to the amount of energy demanded but not supplied due to reliability incidents such as insufficient reserves to meet demand or inter-regional transmission network capability.⁵ Therefore, a reliability gap period is defined as expected USE exceeding 0.0006% of annual demand in each NEM region in any year.⁶ Under the RRO, AEMO is obliged to identify any reliability gaps in the coming five years and report these in the ESOO.

2.1.3 What happens if a 'reliability gap' period eventuates?

Under the RRO, AEMO is obliged to forecast any reliability gaps in the coming five years in its ESOO, updated annually. This determines whether the RRO must be triggered. There are two different trigger instruments based on how far away a reliability gap is forecast (see Table 2.1 below)

Table 2.1: Triggering the RRO

TRIGGER	TRIGGER DESCRIPTION	LIABLE ENTITY OBLIGATIONS
T-3 Reliability Instrument	AEMO must request the AER to make a T-3 Reliability Instrument to trigger the RRO if a reliability gap exists three years and three months in advance of the identified gap.	Liable entities (usually retailers) are required to demonstrate future compliance by entering into sufficient qualifying contracts to cover their share of a one-in-two year peak demand at the time of the gap.
T-1 Reliability Instrument	If the expected reliability gap remains one year and three months in advance of the identified gap, AEMO must again request the AER to make a T-1 Reliability Instrument to trigger the RRO.	Liable entities are required to disclose their net contract positions to the AER. AEMO may also procure resources through the Reliability and Emergency Reserve Trader (RERT) framework to fill any remaining gaps.

Source: Department of Industry, Science, Energy and Resources, *Retailer Reliability Obligation*, fact sheet, 2019. Available at: https://www.energy.gov.au/sites/default/files/retailer_reliability_obligation_factsheet.pdf

The AER will determine the shortfall for a compliance period if an entity is under-contracted for its liable share (calculating using liable load), and will use this to determine penalties for

⁴ The interim reliability measure was introduced as a higher threshold RRO trigger and specifies a maximum expected USE of 0.0006% of the total energy demand in a region for a given financial year (clause 3.9.3C(a1) of the NER).

⁵ clause 3.9.3C(b) of the NER.

⁶ AEMO, *Electricity Statement of Opportunities*, August 2021, available at: https://aemo.com.au/-/media/files/electricity/nem/planning_and_forecasting/nem_esoo/2021/2021-nem-esoo.pdf?la=en&hash=D53ED10E2E0D452C79F97812BDD926ED

non-compliance. Civil penalties may also be pursued with an upper limit of \$1.435 million for first offences and \$10 million for repeat offences.⁷

AEMO will then recover a portion of the *Procurer of Last Resort (POLR)*⁸ costs to non-compliant entities up to a maximum of \$100 million.

2.2 Allocating UFE and its impact on calculating liable load under the RRO

2.2.1 What is UFE?

UFE refers to all residual electricity losses in a local area that remain after calculating the sum of all recorded load, generation and distribution loss factors (DLFs). UFE can be a surplus or a deficit, and may include:⁹

- **Technical losses** — power dissipation in electricity system components such as distribution lines and transformers, calculated by applying estimated DLFs and transmission marginal loss factors.
- **Commercial losses** — unaccounted for unmetered connections, electricity theft, malfunctioning metering equipment and errors in accounting and record-keeping.
- **Estimation errors** — associated with profiling accumulation metering.

2.2.2 How is UFE allocated and settled?

UFE must be 'settled' and paid for by market participants. Historically this billed to the single incumbent retailer in an area, known as the 'local retailer' under a 'settlement by difference' framework.

The settlement by difference framework was established at the start of the NEM when the incumbent retailer traditionally accounted for a clear majority of energy consumed by customers within the area.¹⁰

With the influx of many competitor retailers, it is no longer fit for purpose to allocate all financial responsibility of UFE to the incumbent retailer as they do not account for such a large majority of energy consumed in the area. On 8 December 2018, the AEMC made a final rule to transition from the settlement for difference framework to Global Settlement to better reflect the competitive nature of the retail market.¹¹

The new settlement methodology implemented by the Global Settlement rule will start on 1 May 2022. This will treat all market customers equally by allocating a share of UFE to all

7 Section 2AB(1)(d) of the NEL.

8 Clause 3.15.9A of the NER.

9 AEMC, *Global Settlement and Market Reconciliation*, consultation paper, 7 June 2018, available at: <https://www.aemc.gov.au/sites/default/files/2018-06/Consultation%20paper.pdf>

10 AEMC, *Global Settlement and Market Reconciliation*, final determination, 6 December 2018, available at: <https://www.aemc.gov.au/sites/default/files/2018-12/Global%20Settlement%20and%20Market%20Reconciliation%20-%20For%20publication.pdf>

11 AEMC, *Global Settlement and Market Reconciliation*, final determination, 6 December 2018. Available at: <https://www.aemc.gov.au/sites/default/files/2018-12/Global%20Settlement%20and%20Market%20Reconciliation%20-%20For%20publication.pdf>

retailers in a distribution area. This means that AEMO will be able to fully reconcile the market as it will receive data from all retailers in the area.

2.2.3 UFE in adjusted gross energy

UFE has not historically been explicitly included in liable entities' liable load under the RRO. However, once Global Settlement begins on 1 May 2022, UFE will be included in 'adjusted gross energy' (AGE) and therefore, in the calculation of liable load.

AGE is defined in the NER as the flow of electricity at a participant's connection point(s), in the relevant category for recovery either as load or generation.¹² This essentially refers to the consumption of a market customer in a particular trading interval that they are required to pay in settlement.

However, following the start of Global Settlement, UFE will be included in the calculation of market customers' AGE. Every retailer will be billed for the loss-adjusted metered electricity that is consumed by their customers and UFE will be allocated to all market customers in a distribution network, pro-rated based on their 'accounted-for' energy.¹³

¹² Clauses 3.15.4 and 3.15.5 of the NER.

¹³ AEMC, *Global Settlement and Market Reconciliation*, final determination, 2018. Available at: <https://www.aemc.gov.au/sites/default/files/2018-12/Global%20Settlement%20and%20Market%20Reconciliation%20-%20For%20publication.pdf>

3 DETAILS OF THE RULE CHANGE REQUEST

This chapter outlines the:

- issues raised in the rule change request
- AEMO's proposed solution
- potential benefits and drawbacks of the proposed rule
- scope of the rule change request.

3.1 Issues raised in the rule change request

The Global Settlement rule will commence on 1 May 2022, which will shift how UFE is allocated in the NEM (see section 2.2). This will cause UFE to be allocated to all retailers in a local area and be included in the 'adjusted gross energy' (AGE) calculation.¹⁴

AEMO identified two key issues that may arise when Global Settlement commences and UFE is included in the calculation of liable load under the RRO.¹⁵ AEMO considers these issues are that:

- UFE introduces a source of variability and uncertainty into the calculation of liable load that liable entities are unable to quantify or manage in advance
- the calculation of liable load adds back the 'measured actual demand response' which is not adjusted to account for UFE in the NER which leads to an inconsistency in the calculation for energy and demand response.

These issues are further explained in the following sections.

3.1.1 Variability and uncertainty of UFE

In its rule change request, AEMO considers that the inclusion of UFE would introduce a source of variability and uncertainty for the calculation of liable load.¹⁶

AEMO considers there is uncertainty about the variability of UFE and that it may be difficult for liable entities to manage their compliance with the RRO without having the information needed to avoid non-compliance. AEMO considers liable entities will be unable to accurately account for UFE when anticipating their contract position requirements.

AEMO considers that small changes in UFE have the potential to make a liable entity either compliant or non-compliant. In instances where liable entities are deemed non-compliant by the AER, it may also be difficult for these liable entities to predict any non-compliance costs given the uncertainty associated with the calculation and allocation of UFE. RERT costs¹⁷ are allocated based on the degree of non-compliance under the POLR cost procedures mechanism of the RRO.¹⁸

14 AEMO, rule change request, p. 2.

15 AEMO, rule change request, p. 2.

16 AEMO, rule change request, p. 2.

17 The Reliability and Emergency Reserve Trader (RERT) is a function conferred on AEMO to maintain power system reliability and system security using reserve contracts.

3.1.2 Inconsistency in calculating liable load for energy and demand response

AEMO also identified the issue that the determination of liable load adds back the “measured actual demand response” and this term is not adjusted by UFE in the NER.¹⁹ This means there is an inconsistency in the calculation with one term being adjusted and another term not being adjusted.

3.2 Proposed solution

AEMO's rule change request proposes to change the calculation of liable load to exclude UFE. AEMO proposes liable load should be calculated in a manner reflecting the calculation of AGE prior to the introduction of Global Settlement. Currently the liable share is calculated as follows:

$$\text{Liable share} = (\text{LL} / \text{HAPD}) \times \text{OITPDF}$$

LL = the liable entity's liable load

HAPD = the highest adjusted peak demand occurring in a compliance trading interval in the relevant reliability gap period

OITPDF = the one-in-two-year peak demand forecast

AEMO proposes to change the calculation of liable load in this equation. Under clause 4A.F.3(b) of the NER, liable load is calculated using the aggregate of AGE. However, AEMO is proposing an alternative term of 'adjusted metered energy' to replace AGE in the calculation of liable load. This new term would mean that the liable load calculation only accounts for metered energy adjusted for distribution loss factors and therefore excludes UFE and the uncertainty associated with it.²⁰

3.3 Expected benefits and costs

AEMO considers the key benefits of its proposed rule change will include:

- Reducing the cost of compliance for liable entities as it will be easier for them to manage their compliance position without having to account for unpredictable UFE as part of their liable load.
- Reducing the cost of implementation for AEMO when Global Settlement commences as sourcing UFE data will not be required when calculating liable load.

AEMO also notes that there will be no impact to the efficacy of the RRO as the UFE term for calculating liable load is expected to be small.

¹⁸ Clause 3.15.9A of the NER.

¹⁹ AEMO, rule change request, p. 2.

²⁰ AEMO, rule change request, p. 4.

AEMO identified its Procurer of Last Resort (PoLR) cost procedures would need amending to give effect to any rule change. However, it did not identify any other costs associated with the proposed rule change.

3.4 Scope of the rule change request

The request focuses on a narrowly defined calculation to determine ex-post compliance with the RRO. The rule change request does not discuss the merits of the RRO or Global Settlement. The focus is confined to the effect of UFE on liable load under the RRO, and not the effectiveness of the RRO itself. The Commission will consider submissions focusing on the merits or otherwise of these rules out of scope for consideration in this rule change process.

4 ASSESSMENT FRAMEWORK

This chapter outlines the:

- decision-making framework the Commission must apply to determine whether the rule change contributes to the achievement of the national electricity objective (NEO)
- proposed assessment framework
- Commission's ability to make a more preferable rule
- Commission's ability to make a differential rule, as relevant.

4.1 Achieving the national electricity objective

Under the NEL, the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).²¹ This is the decision-making framework that the Commission must apply.

The NEO is:²²

to promote efficient investment in, and efficient operation and use of, electricity services for the longer term interests of consumers of electricity with respect to -

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.

AEMO's assessment on how the proposed rule contributes to the NEO

AEMO considers that removing UFE from the calculation of liable load would make it easier for liable entities to manage their compliance position. Therefore, it would reduce the cost of compliance for retailers and flow through to lower overall costs for consumers.

4.2 Proposed assessment framework

To determine whether the rule change promotes the NEO, the Commission will assess the rule change request against the following criteria:

- **Regulatory clarity and certainty** — does the proposed solution enable market participants to understand and manage their retailer reliability obligations?
- **Risk allocation to those best able to manage those risks** — to what extent will market participants change their hedging strategies once they are allocated a share of UFE in settlement?
- **Minimising the regulatory and administrative burden** — what are the costs and benefits for market participants and market bodies of implementing the rule change proposal? Are these proportional to the problem the rule change proposal seeks to address?

²¹ Section 88 of the NEL.

²² Section 7 of the NEL.

- **Reliability of the power system during 'reliability gap' periods** — would any change to the calculation of liable load that removes UFE result in any additional risks or benefits to reliability?

QUESTION 1: ASSESSMENT FRAMEWORK

- a) Is the proposed assessment framework appropriate for considering AEMO's rule change request?
- b) Are there any other relevant considerations that should be included in the assessment framework?

4.3 Making a more preferable rule

Under s. 91A of the NEL, the Commission may make a rule that is different (including materially different) to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule will or is likely to better contribute to the achievement of the NEO.

4.4 Making a differential rule

Under the Northern Territory legislation adopting the NEL, the Commission may make a differential rule if, having regard to any relevant MCE statement of policy principles, a different rule will, or is likely to, better contribute to the achievement of the NEO than a uniform rule. A differential rule is a rule that:

- varies in its term as between:
 - the national electricity system, and
 - one or more, or all, of the local electricity systems, or
- does not have effect with respect to one or more of those systems

but is not a jurisdictional derogation, participant derogation or rule that has effect with respect to an adoptive jurisdiction for the purpose of s. 91(8) of the NEL.

The rule change request appears to relate to parts of the NER that currently do not apply in the Northern Territory. However, the Commission will consider as part of this rule change project whether it is necessary to assess the rule change request against additional elements required by the Northern Territory legislation.²³

²³ From 1 July 2016, the NER, as amended from time to time, apply in the NT, subject to derogations set out in regulations made under the NT legislation adopting the NEL. Under those regulations, only certain parts of the NER have been adopted in the NT. (See the AEMC website for the NER that applies in the NT.) National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

5 ISSUES FOR CONSULTATION

Taking the proposed assessment framework into consideration, the Commission is interested in stakeholders' views on the following issues:

- materiality of the calculation and allocation of UFE
- potential solutions for the treatment of UFE in the calculation of liable load
- potential impacts of removing or changing how UFE is treated in the calculation of liable load
- consequential impacts for implementation, procedures and guidelines.

Stakeholders are also encouraged to comment on other aspects of the rule change request or this paper, including the proposed assessment framework.

5.1 Materiality of the calculation and allocation of UFE

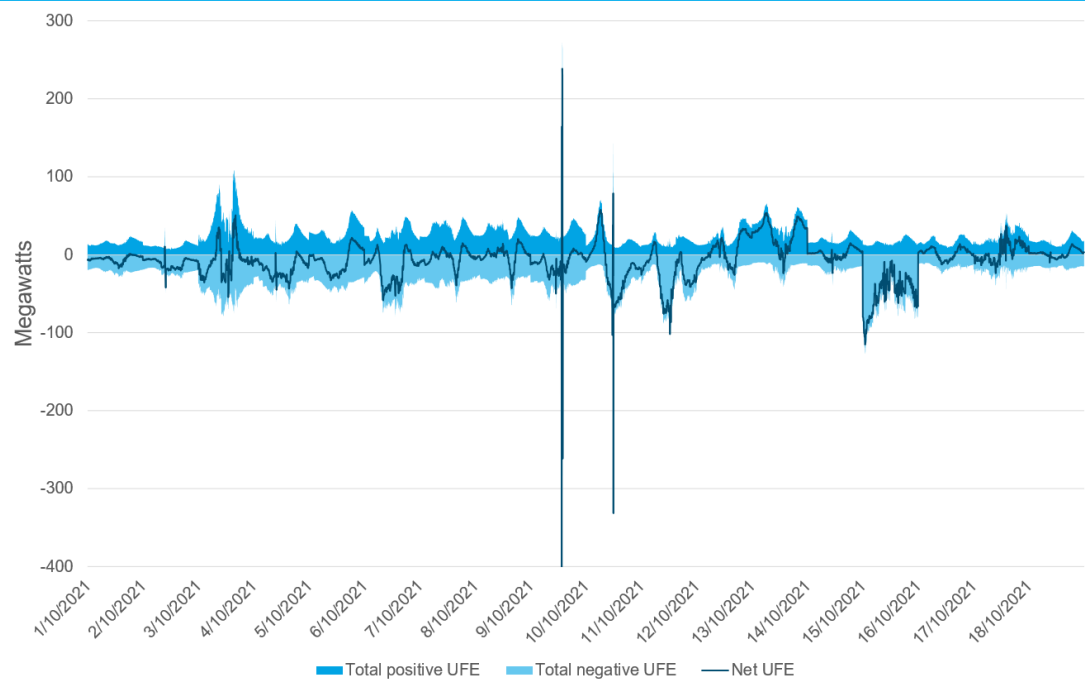
Global Settlement soft-start commenced on 1 October 2021, which required AEMO to start calculating UFE and publishing these calculations for the first time.²⁴ The soft-start of this reform is to give retailers time to understand how their obligations will change moving to the new settlement framework.

The Commission undertook a simplified analysis of the total of all calculated UFE across the NEM for the first 19 days of the measure (Figure 5.1). UFE is calculated on a trading interval basis (every five-minutes). This analysis indicates:

- calculated UFE for an individual local distribution area can be positive or negative
- total calculated net UFE can be positive or negative
- UFE is a very small proportion of demand accounting for only up to 0.02% of NEM demand with calculated values generally less than 50 MW in total across the NEM.

²⁴ AEMC, *Contingency arrangements for five minute settlement implementation*, final determination, 9 September 2021; AEMC, *Delayed implementation of five minute and global settlement*, final determination, 9 July 2020.

Figure 5.1: Total calculated UFE by trading interval



Source: AEMC analysis using AEMO NEM data.

Note: All distribution zones added together for positive and negative sum of unaccounted for energy (UFE). Net UFE shows the sum of all UFE calculated for each 5-minute trading interval.

While AEMO has started calculating UFE with the commencement of Global Settlement soft-start on 1 October 2021, market participants will not be allocated their share of, nor be financially responsible for, UFE until the financial commencement of Global Settlement on 1 May 2022.²⁵ Therefore, the Commission is seeking stakeholder submissions to understand how liable entities' contracting may change, if at all, to give effect to the change in UFE allocation.

QUESTION 2: MATERIALITY OF UFE

- a) Do stakeholders anticipate the inclusion of UFE in the calculation of liable load after Global Settlement begins will be a problem for their compliance with the RRO?
- b) What concerns do you have regarding the magnitude of UFE when considering contracting positions for compliance with the RRO?
- c) AEMO notes UFE is inconsistently calculated for energy and demand response. Does this raise issues for different market participants' understanding of contracting to meet their

²⁵ AEMC, *Contingency arrangements for five minute settlement implementation*, final determination, 9 September 2021. AEMC, *Delayed implementation of five minute and global settlement*, final determination, 9 July 2020.

obligations with the RRO? Please explain and provide evidence.

d) Will the allocation of UFE, after the introduction of Global Settlement on 1 May 2022, alter how retailers will consider contracting? Please explain and provide evidence.

e) Are retailers and large energy users contracting to account for UFE given the materiality of the allocation so far is expected to be small?

f) How will large energy users be affected by retailers being allocated and financially responsible for a share of UFE once Global Settlement begins?

5.2 Potential solutions for the treatment of UFE in the calculation of liable load

This section outlines the potential solutions for the treatment of UFE in the calculation of liable load. Given AEMO's calculation of UFE has so far been both positive and negative, there may be circumstances where the inclusion of UFE may assist in reducing a liable entity's liable load, and at others it may increase it.

The Commission has identified four potential solutions to AEMO's issue with the current rule which are discussed below:

1. include UFE in the calculation of liable load (no change)
2. exclude UFE allocation from the calculation of liable load (AEMO's proposed solution)
3. partially exclude UFE when calculating liable load (alternative solution)
4. include UFE but provide liable entities the ability to appeal to the AER if UFE is the only cause of non-compliance (alternative solution).

Option 1: Include UFE allocation in the calculation of liable load (no change)

This option would retain the current calculation of liable load which includes an allocation of UFE once global settlement begins.²⁶

$$\text{Liable load} = \text{AGE} = (\text{ME} \times \text{DLF}) + \text{UFEA}$$

AGE: adjusted gross energy

ME: metered energy

DLF: distribution loss factor

UFEA: unaccounted for energy allocation

²⁶ The allocation of UFE (referred to as UFEA) will be incorporated into the definition of AGE in clause 3.15.4 of the NER once the Schedules 1 to 4 of the National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 No. 14 commence operation on 1 May 2022.

Option 2: Exclude UFE allocation from liable load (AEMO's proposed solution)

AEMO's proposed solution is to remove UFE allocation from the calculation of liable load.²⁷ AEMO has proposed the following formula to be applied:

$$\text{Liable load} = (ME \times DLF)$$

AEMO's proposed solution is to create a new term 'adjusted metered energy' which is, in effect, equal to AGE minus the allocation of UFE.

The Commission is interested in stakeholders' perspectives on retaining the current definition of AGE in liable load but then removing UFEA for the liable load calculation. This would allow AGE to remain in the liable load calculation should it change in the future.

$$\begin{aligned}\text{Liable load} &= \text{AGE} - \text{UFEA} \\ &= \{(ME \times DLF) + \text{UFEA}\} - \text{UFEA}\end{aligned}$$

Option 3: Exclude UFE allocation from liable load if positive, include if negative

This would involve AEMO excluding UFE allocation from the calculation of liable load if UFE is positive (adds to liable load) and including it if the UFE allocation is negative (reduces liable load).

$$\begin{aligned}\text{Liable load} &= (ME \times DLF) + \text{UFEA}^* \\ \text{UFEA}^* &: \text{unaccounted for energy allocation if negative}\end{aligned}$$

Option 4: Ability for liable entities to appeal to the AER if non-compliance is only due to UFE allocation

This would involve retaining the liable load calculation using the current methodology of including UFE. However, if a liable entity would be otherwise compliant with its obligations under the RRO (if UFE was excluded from the calculation), then the entity would have the ability to appeal to the AER to exclude its UFE allocation and consider it compliant.

$$\text{Liable load} = \text{AGE} = (ME \times DLF) + \text{UFEA}$$

The Commission is interested in stakeholder feedback on all the options identified in this paper. The following questions will assist the Commissions' consideration of the potential benefits and drawbacks of each of the potential solutions.

²⁷ AEMO, rule change request, p. 3-4.

QUESTION 3: POTENTIAL SOLUTIONS FOR THE CONSIDERATION OF UFE IN THE CALCULATION OF LIABLE LOAD

- a) Which of the above described solutions would be most efficient at solving the problem raised by AEMO? Why?
- b) Are there any other solutions not identified in this paper that would better resolve the issue identified by AEMO?
- c) AEMO's proposed solution creates a new definition 'adjusted metered energy'. Are there any issues with proposing a new definition rather than using 'adjusted gross energy' minus UFE? If yes, why?

5.3 Interaction between RRO compliance and financial settlement

The Commission understands retailers will typically contract for their settlement obligations. That is, a retailer will typically contract accounting for losses and other uncertain factors. Table 5.1 provides an overview of the Commission's understanding of the interaction between financial settlement after the commencement of Global Settlement and liable entities' contracting obligations under the RRO for each potential solution.

Table 5.1: Example of how UFE measurements may influence liable load (and compliance) under the RRO

		ESTIMATED IMPACT		
		METERED ENERGY = 100 MW; UFE = 10 MW (EITHER POSITIVE OR NEGATIVE)		
	OPTION 1: INCLUDE UFE (NO CHANGE)	OPTION 2: EXCLUDE UFE (AEMO'S PROPOSED SOLUTION)	OPTION 3: EXCLUDE UFE ALLOCATION FROM LIABLE LOAD IF POSITIVE, INCLUDE IF NEGATIVE (ALTERNATIVE SOLUTION)	OPTION 4: INCLUDE UFE BUT PROVIDE LIABLE ENTITIES THE ABILITY TO APPEAL TO THE AER IF UFE IS THE ONLY CAUSE OF NON-COMPLIANCE (ALTERNATIVE SOLUTION)
For an individual liable entity, UFE is +10 MW (UFE <u>adds an extra 10 MW</u> to a liable entity's liable load)	<p>Liabe entity needs to contract for <u>110 MW</u> to remain RRO compliant</p> <p>Required to pay <u>110 MW</u> in settlement</p> <p>RRO liable load = settlement</p>	<p>Liabe entity needs to contract for <u>100 MW</u> to remain RRO compliant</p> <p>Required to pay <u>110 MW</u> in settlement</p> <p>RRO liable load < settlement</p>	<p>Liabe entity needs to contract for <u>100 MW</u> to remain RRO compliant</p> <p>Required to pay <u>110 MW</u> in settlement</p> <p>RRO liable load < settlement</p>	<p>Liabe entity needs to contract for <u>110 MW</u> to remain RRO compliant. If contracted for <u>between 100-110 MW</u> then a liable entity has the ability to appeal to the AER.</p> <p>Required to pay <u>110 MW</u> in settlement</p> <p>RRO liable load <= settlement, opportunity to appeal to metered energy level (i.e. to less than the settlement obligation)</p>
For an individual liable entity, UFE is -10 MW (UFE <u>takes away 10 MW</u> from a liable entity's liable load)	<p>Liabe entity needs to contract for <u>90 MW</u> to remain RRO compliant</p> <p>Required to pay <u>90 MW</u> in settlement</p> <p>RRO liable load = settlement</p>	<p>Liabe entity needs to contract for <u>100 MW</u> to remain RRO compliant</p> <p>Required to pay <u>90 MW</u> in settlement</p> <p>RRO liable load > settlement</p>	<p>Liabe entity needs to contract for <u>90 MW</u> to remain RRO compliant</p> <p>Required to pay <u>90 MW</u> in settlement</p> <p>RRO liable load = settlement</p>	<p>Liabe entity needs to contract for <u>90 MW</u> to remain RRO compliant</p> <p>Required to pay <u>90 MW</u> in settlement</p> <p>RRO liable load = settlement</p>

	ESTIMATED IMPACT			
	METERED ENERGY = 100 MW; UFE = 10 MW (EITHER POSITIVE OR NEGATIVE)			
	OPTION 1: INCLUDE UFE (NO CHANGE)	OPTION 2: EXCLUDE UFE (AEMO'S PROPOSED SOLUTION)	OPTION 3: EXCLUDE UFE ALLOCATION FROM LIABLE LOAD IF POSITIVE, INCLUDE IF NEGATIVE (ALTERNATIVE SOLUTION)	OPTION 4: INCLUDE UFE BUT PROVIDE LIABLE ENTITIES THE ABILITY TO APPEAL TO THE AER IF UFE IS THE ONLY CAUSE OF NON-COMPLIANCE (ALTERNATIVE SOLUTION)
For an individual liable entity, UFE is 0 MW	Liable entity needs to contract for <u>100 MW</u> to remain RRO compliant Required to pay <u>100 MW</u> in settlement RRO liable load = settlement	Liable entity needs to contract for <u>100 MW</u> to remain RRO compliant Required to pay <u>100 MW</u> in settlement RRO liable load = settlement	Liable entity needs to contract for <u>100 MW</u> to remain RRO compliant Required to pay <u>100 MW</u> in settlement RRO liable load = settlement	Liable entity needs to contract for <u>100 MW</u> to remain RRO compliant Required to pay <u>100 MW</u> in settlement RRO liable load = settlement

Note: AEMC analysis showing the implications of each potential solution using a simplified worked example where a participants' allocation for financial settlement is broken into their UFE allocation and energy usage.

5.3.1 **Contracting and compliance implications of a potential difference between financial settlement and liable load in the RRO**

If there is a difference between the financial settlement and the liable load calculation in the RRO for a particular liable entity, this may have implications for compliance with the RRO.

Option 2 may result in liable entities holding contracts for financial settlement being exposed to non-compliance if its UFE allocation would have otherwise reduced liable load.

5.3.2 **Reliability implications of a potential difference between financial settlement and liable load in the RRO**

If there is a difference between the financial settlement and liable load in the RRO for a particular liable entity, this may have implications for reliability outcomes for 'reliability gap' periods.

Options 2, 3, and 4 may result in liable entities holding contracts for the RRO below what they are obligated for in financial settlement. While this would help liable entities meet their obligations under the RRO, it would result in a portion of load that determines the 'reliability gap' not being accounted for.

QUESTION 4: INTERACTION BETWEEN RRO COMPLIANCE AND FINANCIAL SETTLEMENT

- a) AEMO's proposed solution to remove UFE from the calculation of liable load will result in a mismatch between RRO contracting obligations and financial settlement. Is a mismatch between RRO contracting obligations and financial settlement a problem for participants' contracting?
- b) What are the contracting and compliance implications of creating a mismatch between financial settlement and RRO obligations — particularly in instances where UFE is negative (otherwise would reduce liable load)?
- c) What are the reliability implications of creating a mismatch between financial settlement and RRO obligations — particularly in instances where UFE is positive (otherwise would increase liable load)?

5.4 **Implementation and implications for existing procedures and guidelines**

This section sets out the proposed timeframe for implementing the final rule, including the interim steps that may need to be undertaken by market participants, AEMO and the AER before the commencement of the rule.

5.4.1 AEMO and AER procedures and guidelines implications

The RRO provisions require AEMO and the AER to develop and maintain a range of procedures and guidelines.

AEMO procedures

In its rule change request, AEMO noted that its *PoLR cost procedures* would need to be amended to give effect to a potential rule change.²⁸ The Commission considers amendments to these procedures for the sole purpose of amending the liable load calculation would fall within the classification of minor or administrative amendments and would not require AEMO to follow the Rules consultation procedures.

AER guidelines

The AER was required to develop and publish six guidelines to support the RRO.²⁹ These are:

1. opt-in guidelines³⁰
2. forecasting best practice guidelines³¹
3. reliability instrument guidelines³²
4. market liquidity obligation guidelines³³
5. contracts and firmness guideline³⁴
6. reliability compliance procedures and guidelines.³⁵

In 2019, the AER published the interim guidelines for guidelines 2-4 and in 2020 published the final guidelines for 1-2. However, following consultation with stakeholders, the AER has deferred consultation on guidelines 3-6 (which includes the reliability compliance procedures and guidelines) until Energy Ministers have considered the ESB's final recommendations on the Post 2025 Electricity Market Design.

The AER has indicated that guidelines 1-5 have not explicitly accounted for UFE and has not published an interim or final guideline that covers compliance.

If option 4 was determined to be the preferred option, the Commission considers the AER should provide clear guidance through its *Reliability Compliance Procedures and Guidelines* how it would treat processes for appeal. However, given the AER has not yet published this guideline, including the treatment of UFE in its guidance would be subject to the Rules consultation procedures.

28 AEMO, *PoLR cost procedures*, 20 November 2020. Available at https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/polr-cost-procedures/final-stage/polr-cost-procedures_v10.pdf?la=en

29 AER, *Guidelines to support the Retailer Reliability Obligation*, project page, 2020. Available at <https://www.aer.gov.au/retail-markets/retailer-reliability-obligation/guidelines-to-support-the-retailer-reliability-obligation>

30 see clause 4A.D.13 of the NER.

31 see clause 4A.B.5 of the NER.

32 see clause 4A.C.12 of the NER.

33 see clause 4A.G.25 of the NER.

34 see clause 4A.E.8 of the NER.

35 see clause 4A.F.6 of the NER.

5.4.2 Implementation and proposed commencement

The *PoLR cost procedures* and the calculation of liable load relates to the recovery of costs ex-post compliance if a reliability gap period occurs. AEMO has not noted any systems changes or costs associating with implementing its proposed solution.

If the only amendments required to systems and procedures involve AEMO updating its *PoLR cost procedures*, the Commission considers the implementation period for any potential rule change should be short and in place prior to the commencement of Global Settlement financial start on 1 May 2022.

As noted throughout this paper, AEMO's rule change request is focused on the calculation of liable load, a measure used to determine ex-post compliance with the RRO. Therefore, the Commission proposes that a final rule, if made, would commence on 1 April 2022.

QUESTION 5: IMPLEMENTATION AND IMPLICATIONS FOR EXISTING PROCEDURES AND GUIDELINES

- a) Are there any changes required to systems or procedures that have not been identified in this paper?
- b) Are there any interactions that stakeholders are aware of with other rules or initiatives that have not been identified in this paper?
- c) AEMO proposes that the *PoLR cost procedures* will require amending to give effect to a potential rule change. The Commission considers amendments to these procedures for the sole purpose of amending the liable load calculation should not require consultation. Are there any reasons that this could be an issue?
- d) The AER has indicated its guidelines do not explicitly account for UFE. Are there any reasons that this could be an issue? Please explain.
- e) AEMO's rule change request refers to ex-post compliance. Are there any issues that would mean any changes to the NER would require an implementation period longer than five months? If yes, why?

6 PROCESS FOR THIS RULE CHANGE

This section sets out the Commission's reasons for treating AEMO's proposed rule change as a non-controversial rule change, as well as details on how stakeholders can object to this expedited process and how to make a submission to the process.

6.1 Treatment as a non-controversial rule change

AEMO proposed the rule change request be treated as non-controversial in accordance with s. 96 of the NEL such that it could be processed on an expedited basis. This request has been made on the basis that it's unlikely to have a significant impact on the NEM.

The Commission considers that the rule change request should be subject to the expedited rule making process under s. 96 of the NEL on the grounds that it considers the rule change request to be non-controversial.

The Commission considers the proposed rule change request is a request for a non-controversial rule and be subject to the expedited process as is unlikely to have a significant impact on the national electricity market.³⁶ This is because changing the calculation of liable load to remove a UFE is likely to have a very small impact on liable entities' compliance with the RRO and subsequent share of RERT costs if non-compliant in the event that a 'reliability gap' period occurs. It's expected to have a small impact because UFE has been only up to around 0.002% of demand across the NEM since AEMO began calculating it on 1 October 2021 (see section 5.1).

Requests for a rule that are considered to be non-controversial may be processed under an expedited (faster) process under which there is only one round of consultation and the AEMC is required to publish its final rule determination within eight weeks of commencing the rule change process.³⁷

The Commission has decided to use an expedited process to consider this rule change request provided that it does not receive any valid written requests not to use the expedited process by **11 November 2021**. To be valid, an objection should not be misconceived or lacking in substance.

6.2 Lodging a submission or objection to expedition

The Commission invites requests not to make a rule under the expedited process and written submissions on this rule change proposal.

All enquiries on this project should be addressed to Sam Markham on (02) 8296 7825 or at sam.markham@aemc.gov.au.

³⁶ Section 87 of the National Electricity Law.

³⁷ Section 96(1) of the National Electricity Law.

6.2.1 **Lodging a request not to make a rule under an expedited process**

Written requests not to make a rule under the expedited process in s. 96 of the NEL must include reasons for the request, and must be lodged with the Commission by **11 November 2021** online in accordance with the process specified below.

6.2.2 **Lodging a submission to this rule change request**

Written submissions on the rule change request must be lodged with Commission by **25 November 2021** online in accordance with the process specified below.

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions on rule change requests.³⁸ The Commission publishes all submissions on its website, subject to a claim of confidentiality.

Submissions can be treated as confidential if requested, or confidential information can be redacted from submissions published on the AEMC's website.

6.2.3 **Lodging online**

Submissions, or requests not to make a rule under the expedited process, must be lodged online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code **ERC0333**.

The request or submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

³⁸ This guideline is available on the Commission's website www.aemc.gov.au.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AGE	Adjusted gross energy
Commission	See AEMC
DLF	Distribution loss factors
LL	Liable load
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEO	National electricity objective
NEM	National Electricity Market
NER	National Electricity Rules
PoLR	Procurer of Last Resort
RERT	Reliability and Emergency Reserve Trader
RRO	Retailer Reliability Obligation
UFE	Unaccounted for energy

A AEMO'S PROPOSED DRAFT RULE

AEMO provided a draft rule in its rule change request. It proposed the following changes to clause 4A.F.3 of the NER where bold and strike-through text are AEMO's proposed additions and deletions respectively:

4A.F.3 Share of one-in-two year peak demand forecast

(a) For the purposes of section 14R(2) of the *National Electricity Law*, a liable entity's share of the one-in-two year peak demand forecast for a compliance TI ("liable share") is calculated as follows:

$$LS = (LL / HAPD) \times OITPDF$$

where:

LL = the liable entity's liable load as determined under paragraph (b) (in MW);

HAPD = the highest adjusted peak demand occurring in a compliance TI in the relevant *reliability gap period* where adjusted peak demand is determined under paragraph (d) (in MW);

OITPDF = the one-in-two year peak demand forecast (in MW),

except that if OITPDF/HAPD > one, then it is taken to be equal to one.

Note:

Section 14R(2) of the *National Electricity Law* states –

The liable entity must comply with the obligation that the liable entity's net contract position for the trading interval is not less than the liable entity's share of the one-in-two year peak demand forecast for the trading interval determined in accordance with the *Rules*.

Section 14R(2) is a reliability obligation civil penalty.

(b) A liable entity's liable load for a compliance TI is calculated as follows:

(1A) to determine the quantities in sub-paragraphs (1) and (2), the adjusted metered energy for a connection point for a compliance TI is an amount equal to:

ME x DLF

where:

ME is the amount of electrical energy, expressed in MWh, flowing at the connection point in the trading interval, as recorded in the metering data in respect of that connection point and that trading interval (expressed as a positive value where the flow is towards the transmission network

connection point to which the connection point is assigned and negative value where the flow is in the other direction); and

DLF is the distribution loss factor applicable at that connection point;

(1) if the liable entity is a *Market Customer*, **determine** the aggregate of the **adjusted gross energy** ~~adjusted-metered-energy~~ for each *connection point* for which it is *financially responsible* for the compliance TI (less any **adjusted metered energy** ~~adjusted-gross-energy~~ allocated to a prescribed opt-in customer at one of those connection points) 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;

(2) if the liable entity is not a *Market Customer*, **determine** the aggregate of the **adjusted metered energy** ~~adjusted-gross-energy~~ for each *connection point* for which it is registered as an opt-in customer (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 *connection points* for the *billing periods* relating to the *reliability gap period* given approximately 30 weeks after the relevant *billing period*;

(3) **adjust** the quantity in sub-paragraph (1) or (2) (as applicable) ~~is to be adjusted~~ by adding the liable entity's measured actual demand response under a qualifying contract at each *connection point* for which it is *financially responsible* for the compliance TI, or registered if an opt-in customer, multiplied by the *distribution loss factor* for that *connection point*;

(4) **adjust** the quantities in sub-paragraphs (1), (2) and (3) (as applicable) ~~are to be adjusted~~ for *intra-regional loss factors* at the *transmission network connection point* to which the *connection point* is assigned; and

(5) **multiply** the final quantity ~~is to be multiplied~~ by the number of *trading intervals* in an hour,

in each case, as determined in accordance with the *PoLR cost procedures*. To avoid doubt, a liable entity's demand is not to be adjusted for what its demand would have been but for *unserved energy* during a compliance TI.

(c) For a liable entity that is a *Market Customer*, a liable entity's liable load relates to the *connection points* for which that liable entity is *financially responsible* for a compliance TI and those *connection points* do not need to

be the same *connection points* referred to in clause 4A.D.2.

(d) The adjusted peak demand for a compliance TI is the actual demand for the *region* in that compliance TI as determined under clause 4A.A.4(b) adjusted for the measured actual demand response of all liable entities during that compliance TI as determined in accordance with the *PoLR cost procedures*.