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Dear Mr Pierce

Addendum to five-minute settlement and global settlement implementation amendments rule change proposal

The Australian Energy Market Operator's Five-Minute Settlement implementation program was initiated in early 2018 to implement the changes set out in the AEMC's five-minute settlement and global settlement rules. Through this, AEMO identified six areas of the National Electricity Rules (NER) that it considers need changing to assist in implementing five-minute settlement and global settlement effectively and efficiently. Consequently, AEMO submitted a rule change request to AEMC in March 2019 seeking changes to the NER to improve clarity, reduce unnecessary administrative burden and avoid unintended consequences of implementing five-minute settlement and global settlement.

After this rule change request was submitted, AEMO identified three further areas of the NER (as amended by the global settlement rule) requiring amendment. AEMO is seeking further changes to the NER to improve clarity and avoid unintended consequences of implementing global settlement through the attached addendum. It is intended that this addendum is processed by the AEMC as part of the March 2019 5MS and GS rule change request.

I look forward to working with you and your team as you consider this proposal. Please do not hesitate to contact Chris Muffett, 5MS Business and Industry Lead, at chris.muffett@aemo.com.au should you wish to discuss any aspect of the request.

Yours sincerely



Peter Geers
Chief Strategy and Markets Officer

Attachment: Addendum to March 2019 Rule Change Proposal - Five Minute Settlement and Global Settlement Implementation Amendments

ELECTRICITY RULE CHANGE PROPOSAL

ADDENDUM TO THE *FIVE MINUTE SETTLEMENT AND
GLOBAL SETTLEMENT IMPLEMENTATION AMENDMENTS*
RULE CHANGE REQUEST (MARCH 2019)

May 2019





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1. SUMMARY

In March 2019, the Australian Energy Market Operator (AEMO) submitted a rule change request to the Australian Energy Market Commission (AEMC). The request seeks changes to the National Electricity Rules (NER) to improve clarity, reduce unnecessary administrative burden, and avoid unintended consequences of implementing five-minute settlement (5MS) and global settlement (GS) in the National Electricity Market (NEM).

AEMO is seeking further changes to the NER to improve clarity and avoid unintended consequences of implementing GS through this addendum to the original rule change request. It is intended that this addendum is processed by the AEMC as part of the March 2019 5MS and GS rule change request.

In April 2019, AEMO identified three further areas of the NER that it considers require amendments to assist in implementing GS effectively and efficiently:

1. **Removing retailer financial responsibility at transmission/distribution boundary points.** A rule change is required to remove the requirement for there to be retailer financial responsibility at the boundary between transmission and distribution networks. Without this change, under GS the local retailer (LR) will be financially responsible for the metered energy for all transmission connection points feeding their local area as well as for their customers' distribution connection points in the local area. This results in a double-counting of the associated energy, which leads to incorrect settlement outcomes for the LR and the intra-regional settlement residue.
2. **Clarifying that all customer loads are market loads.** A rule change is required for all customer loads (including non-market unmetered loads) to be explicitly classified as market loads. Only market loads will be able to be settled through the NEM after the implementation of GS. If any loads are excluded from classification, the energy would be incorrectly distributed to other retailers as part of the unaccounted for energy (UFE) calculation.
3. **Clarifying that UFE will not be allocated to distribution-connected generators.** A rule change is required to allocate UFE to customer load only, and not also to distribution connected generators. Without this change, distribution-connected generators will be responsible for UFE charges along with retailers. This is not consistent with the original intention of the GS rule, as evident from the AEMC's final determination and other aspects of the GS rule.

Consistent with the issues identified in the March 2019 rule change request, AEMO considers the proposed changes in this addendum will not have a significant effect on the NEM and are therefore non-controversial. AEMO requests that the AEMC considers this proposal as a request for a non-controversial Rule in accordance with section 96 of the National Electricity Law alongside the original rule change request.



2. BACKGROUND AND STATEMENT OF ISSUES

This section sets out the background to the March 2019 rule change request, this addendum and each of the three NER areas that are the subject of this addendum. It also describes the issues with each of the NER areas that need addressing.

2.1 March 2019 rule change request

AEMO's SMS and GS implementation program began in early 2018. Through this program AEMO identified six areas of the NER that it considered required further amendment to assist in implementing SMS and GS effectively and efficiently. A rule change request addressing these items was submitted to the AEMC in March 2019.¹

2.2 Purpose of this addendum

Subsequent to the March 2019 rule change request, AEMO identified three further areas of the NER (as amended by the GS rule) requiring amendment to improve clarity and avoid unintended consequences in implementing GS. This addendum:

- Details each issue requiring change.
- Sets out proposed amendments to address each issue.
- Describes the benefits, costs and contribution to the national electricity objective (NEO) of each additional proposed amendment.

It is intended that this addendum is:

- Read in conjunction with and as part of the March 2019 SMS and GS rule change request.
- Processed by the AEMC as part of the March 2019 SMS and GS rule change request.

2.3 Removing retailer financial responsibility at transmission/distribution boundary points

Background

Under the current NEM settlement by difference framework, local retailers (LRs) have financial responsibility, and therefore also the financial responsibility for UFE, at connection points that connect distribution networks to the transmission network. The differencing calculation involves the LR being invoiced on the amount of electricity that was measured at transmission/distribution boundary points minus the electricity invoiced to the independent retailer(s) in the local area.

The GS framework is intended to improve competition and risk allocation by apportioning UFE to all retailers based on their accounted-for energy within each local area.² It involves calculating each retailer's settlement amount as the sum of its loss-adjusted energy consumption and share of UFE. The GS framework therefore removes the need for retailers to have financial responsibility at transmission/distribution boundary points.

¹ See: <https://www.aemc.gov.au/rule-changes/5-minute-settlement-and-global-settlement-implementation>

² AEMC, Global Settlement and Market Reconciliation, Rule determination, 6 December 2018, pp. ii-iii.



Issue

The current NER as amended by the GS rule do not reflect the policy intent of removing retailer financial responsibility at transmission/distribution boundary points, as follows:

- NER clause 2.3.4(h) requires LRs to “classify any *connection point* which *connects* its *local area* to another part of the *power system* as a *market load*.” This captures transmission/distribution boundary points for a LR’s local area and requires them to be market connection points.
- GS amendment rule clause 3.15.4(a) describes how adjusted gross energy amounts are calculated at transmission/distribution boundary points that are market connection points.
- NER clause 3.15.3 assigns financial responsibility for market connection points.

2.4 Clarifying that all customer loads are market loads

Background

Where an unmetered load currently does not fall into an established type 7 metering installation category, it is settled out of the market through a negotiated agreement between the customer (referred to as a franchise customer in the NER), the local network service provided (LNSP) and the LR.³ The LNSP and the LR are paid for the energy and network provision associated with these loads by the franchise customers.⁴ Another feature of these loads is that they are not contestable.⁵

The GS rule defines these loads as “non-market unmetered loads” (NMUL).⁶ Currently, they do not enter NEM settlements, are served by the local retailer and are therefore part of settlement-by-difference. However, the GS amendment rule requires NMULs to be accounted for in settlements and removed from UFE.⁷ This avoids retailers being charged for load that the LR is being paid for. The GS amendment rule captures NMULs in settlements through an obligation for AEMO’s to update its metrology procedures to require:

- National metering identifiers (NMI) to be assigned for each NMUL in AEMO’s market settlement and transfer solution (MSATS).
- Each NMUL NMI to be assigned a transmission network connection point or virtual transmission node (VTN).
- A methodology for calculating NMULs and a load profile.
- Estimates of NMUL volumes to be included in settlements.

Issues

Under GS, NMULs need to be accounted for in settlements and removed from UFE. Therefore, these loads need to be settled through the NEM and charged to the Local Retailer. For this to occur, NMULs need to be classified as market loads and this classification needs to be reflected in MSATS. The GS rule does not provide for NMULs to be classified as market loads. In fact, as the GS rule did not amend the existing NER in relation to market customer registration, the provisions for classification of customer connection points as market loads are only permissive, rather than mandatory. This raises the potential for any load to go unclassified and be included in UFE.

³ Examples of these loads include sports ground lighting, public barbeques, NBN cabinets, public telephones, bus shelters etc.

⁴ Typically, franchise customers are local councils and telecommunications companies.

⁵ AEMC, *Final determination: Global settlement and market reconciliation*, 6 December 2018, p93.

⁶ GS amendment rule, Schedule 4, [1] Chapter 10 New Definitions.

⁷ GS amendment rule, new clause 7.16.3(6A).



If NMULs are classified as market load, then the defined term for this type of load (non-market unmetered) is misleading. However, there is a need to distinguish this form of load, which is non-contestable, from other unmetered load connection points that are classified as type 7 metering installations under NER Chapter 7.

2.5 Clarifying that UFE will not be allocated to distribution-connected generators

Background

In its final determination, the AEMC noted the following reasons to implement GS:⁸

1. Improved transparency, leading to fewer settlement disputes between retailers and lower levels of UFE over time.
2. Competition on equal terms by allocating UFE to all retailers based on their accounted-for energy within each local area.
3. Improved risk allocation driving enhanced incentives. By allocating UFE to retailers, they will face the risk of UFE, and therefore, will be provided with improved incentives to reduce UFE.

Issue

AEMO understands that the policy intent of GS is to apportion UFE to all retailers based on their accounted-for energy within each local area because retailers are best placed to face the risk of and manage UFE.⁹ However, the GS rule as made will have the effect that UFE is also allocated to distribution connected generators if they consume energy. This is because new clause 3.15.5(c) allocates UFE to import energy (ME-) for every distribution network connection point in the local area.

⁸ AEMC, Global Settlement and Market Reconciliation, Rule determination, 6 December 2018, p. ii.

⁹ AEMC, Global Settlement and Market Reconciliation, Rule determination, 6 December 2018, pp. ii-iii.



3. PROPOSED RULE

This section describes the proposed rule and how it addresses the issues identified in section 2. It also discusses the procedure changes and transitional matters that would be a consequence of the proposed rule. Finally, this section states the case for the proposed rule to be processed through an expedited rule change process.

3.1 Description of the proposed rule and how it will address the issues

3.1.1 Removing retailer financial responsibility at transmission/distribution boundary points

The proposed rule:

- Removes NER clause 2.3.4(h).
- Further amends clause 3.15.3(b) to state that no participant has financial responsibility for a transmission/distribution boundary point. Consistent with the terminology used in clause 7.6.3A, these are referred to as transmission connection points that are not market connection points.

Together, these drafting amendments clarify that no retailer has financial responsibility at a transmission connection/distribution boundary point. This enables GS to operate effectively and as intended.

3.1.2 Clarifying that all customer loads are market loads

The proposed rule:

- Amends clause 2.3.4(a) to ensure that a market classification requirement applies to all customer loads, including contestable loads purchased from the entity who is the LR.
- Introduces a new NER clause 2.3.4(i) requiring LRs to classify any connection points in its local area at which electricity is purchased by franchise customers (including NMULs) as market loads.
- Amends GS amendment rule new clause 7.16.3(c)(6A) to require AEMO's metrology procedures to include NMULs that have been classified as market loads in settlements.
- Changes the defined term for unmetered loads that do not fall into an established type 7 metering installation category from 'non-market unmetered load' to 'non-contestable unmetered load'.

Together these changes clarify that NMULs are non-contestable for retail competition purposes but must be classified as market loads for the purposes of NEM settlement. The proposed amendment expands the LR classification requirement to all 'franchise loads', to be consistent with the revised definition of a LR in the GS rule. Under the GS framework, all customer connections must be classified as market loads.

3.1.3 Clarifying that UFE will not be allocated to distribution-connected generators

The proposed rule clarifies that distribution-connected generators will not receive an allocation of UFE. It amends new clause 3.15.5(c) so that:

- UFE is allocated to distribution network connection points in a local area that are classified as market loads.
- The definition of ADMELA is applied to market customers rather than market participants.



- For consistency throughout the clause, 'connection point' is replaced with 'market connection point' in the definitions of UFEA and DME.

These changes are consistent with the GS policy intent of having all market customers manage the risk of UFE proportionately.

3.2 AEMO Procedure changes

The GS rule already requires the MSATS, metrology procedures and service level procedures to be updated for GS. No further procedural changes are necessary for the three areas considered in this addendum.

3.3 Transitional matters

AEMO suggests that the amendments in the proposed rule should be made with effect from the commencement date of the substantive elements of the GS Rule (6 February 2022). Transitional provisions are not required because these amendments relate to matters that support the GS framework and are inconsistent with the settlement by difference framework.

3.4 Expedited rule change

As with the issues raised in the March 2019 rule change request, AEMO considers the proposed changes in this addendum, will not have a significant effect on the NEM and are therefore non-controversial. AEMO therefore requests that the AEMC considers this proposal as a request for a non-controversial Rule in accordance with section 96 of the National Electricity Law.

4. EXPECTED BENEFITS AND COSTS OF THE PROPOSED RULE, AND HOW IT CONTRIBUTES TO THE NATIONAL ELECTRICITY OBJECTIVE (NEO)

The AEMC may only make a rule if it will or is likely to help achieve the national energy objectives. This addendum to the March 2019 rule change request pertains to the NEM and therefore the relevant energy objective is the NEO:

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

price, quality, safety and reliability and security of supply of electricity

the reliability, safety and security of the national electricity system."

Table 4.1 sets out the costs and benefits of each area of the proposed rule and how it contributes to the NEO.

Table 4.1: Costs and benefits of the proposed rule and how it contributes to the NEO

PROPOSED RULE	BENEFIT	COST	CONTRIBUTION TO THE NEO
Removing retailer financial responsibility at transmission/distribution boundary points	<p>The proposed rule:</p> <ul style="list-style-type: none"> Clarifies that no retailer has financial responsibility at a transmission/distribution boundary point. Implements the GS framework as intended. Enables NEM settlement to be reconciled, therefore providing more accurate information to the market. 	<p>There are no costs from the proposed rule that are additional to existing and planned 5MS and GS implementation costs.</p> <p>If the rule is not made, the LR will be financially responsible for the metered energy for all transmission/distribution boundary points as well as for their customers' distribution connection points in the local area. This results in double-counting of the associated energy, with incorrect settlement outcomes.</p>	<p>The proposed rule prevents an unintended policy change. By clarifying financial responsibility for transmission/distribution boundary points, it contributes to the efficient operation of electricity services with respect to the price of electricity.</p>



Clarifying that all customer loads are market loads	<p>The proposed rule:</p> <ul style="list-style-type: none">• Enables NMULs need to be accounted for in settlements and removed from UFE as intended by classifying them as a market load.• Removes the inconsistency of having a market load defined as a non-market load.	<p>There is are no costs from the proposed rule that are additional to existing and planned 5MS and GS implementation costs.</p> <p>If the rule is not made, the energy associated with NMULs would be incorrectly distributed to other retailers as part of the unaccounted for energy (UFE) calculation.</p>	<p>The proposed rule implements the intended GS framework by accounting for NMULs in settlements and by removing them from UFE. It also avoids potential confusion from having a market load defined as a non-market load. In this way, the proposed rule contributes to the efficient operation of electricity services with respect to the price of electricity.</p>
Clarifying that UFE will not be allocated to distribution-connected generators	<p>The proposed rule allocates UFE to retailers only, rather than also to distribution connected generators. It thereby allocates the risk and management of UFE to those market participants best able to manage it.</p>	<p>There is no incremental implementation cost to AEMO or market participants from the proposed rule.</p> <p>If the proposed rule is not made:</p> <ul style="list-style-type: none">• AEMO will face additional costs to update MSATS so that it can apportion UFE to distribution connected generators for settlement.• Distribution connected generators will be responsible for UFE charges.	<p>The proposed rule prevents an unintended policy change. By clarifying that UFE is only to be allocated to retailers (who are best placed to manage UFE), it contributes to the efficient operation of electricity services with respect to the price of electricity.</p>



5. PROPOSED RULE DRAFTING

This draft is based on version 121 of the National Electricity Rules, as amended by the GS rule (2018 no. 14).

A. Removing retailer financial responsibility at transmission/distribution boundary points

2.3.4 Market Customer

[...]

- (h) ~~[Deleted]A Customer who is also a Local Retailer must classify any connection point which connects its local area to another part of the power system as a market load.~~

Note

~~This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)~~

3.15.3 Connection point and virtual transmission node responsibility

[...]

- (b) No person is *financially responsible* for a *virtual transmission node* or a connection point which connects a local area to another part of the power system.

B. Clarifying that all customer loads are market loads

2.3.4 Market Customer

- (a) If electricity, *supplied* through the *national grid* to any person *connected* at a *connection point*, is purchased other than by a franchise customer from the *Local Retailer*, that load at the *connection point* must be classified by that person or, with the consent of that person, by some other person as a *market load*.

[...]

- (i) A Customer who is also a Local Retailer must classify any load at a connection point in its local area as a market load if electricity supplied through the national grid to that connection point load is purchased by a franchise customer.

7.16.3 Requirements of the metrology procedure

[...]

- (c) The *metrology procedure* must include:

[...]



- (6A) procedures for the inclusion of ~~non-market-non-contestable~~ unmetered loads that have been classified as market loads in *settlements* including:
- (i) the creation of a *NMI* for the ~~non-market-non-contestable~~ unmetered load;
 - (ii) the assignment of *connection points* relating to ~~non-market-non-contestable~~ unmetered load to a single *transmission network connection point* or *virtual transmission node*;
 - (iii) the methodology for calculating a *load* and *load profile* for ~~non-market-non-contestable~~ unmetered load; and
 - (iv) the provision of the estimated volumes of ~~non-market-non-contestable~~ unmetered load to *AEMO* for inclusion in *settlements*; and

10. Glossary

~~non-market-non-contestable~~ unmetered load

Unmetered *load* that does not meet the criteria in the *Rules* or procedures authorised under the *Rules* for classification as a type 7 *metering installation*.

C. Clarifying that UFE will not be allocated to distribution-connected generators

3.15.5 Adjusted energy - transmission network connection points

[...]

- (c) The allocation of the total unaccounted for *energy* amount determined under paragraph (a) for every *distribution network connection point* in a *local area* that is classified as a market load where the amount of electrical *energy* flowing at the *connection point* is expressed as a negative value₁ is determined by AEMO by the following formula:

$$\text{UFEA} = \text{UFE} \times (\text{DME} / \text{ADMELA})$$

where:

UFEA is the allocation of the unaccounted for *energy* amount (in MWh) for the relevant market connection point and *trading interval*;

UFE is the unaccounted for *energy* amounts determined under paragraph (a) for the *local area*;

DME is the amount represented by (ME- x DLF) for the relevant market connection point and *trading interval* where:

ME- is the amount of electrical *energy*, expressed in MWh, flowing at the *market connection point* in the *trading interval*, as recorded in the *metering data* in respect of that *market connection point* and that *trading interval* (where the flow is away from the *transmission network connection point* to which the *market connection point* is assigned); and



DLF is the *distribution loss factor* applicable at that ~~market~~ *connection point*; and

ADMELA is the aggregate of the amounts represented by DME for that *trading interval* for each *market connection point* in that *local area*, for which a *Market Customer Participant* (other than a suspended *Market Participant*) is *financially responsible*.



6. GLOSSARY

5MS	Five-minute settlement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
GS	Global settlement
LNSP	Local network service provider
LR	Local retailer
MSATS	Metering settlement and transfer solutions
NEM	National electricity market
NER	National Electricity Rules
NEO	National electricity objective
NMI	National metering identifier
NMUL	Non-market unmetered load
TNI	Transmission node identifier
UFE	Unaccounted for energy
VTN	Virtual transmission node