

FIVE MINUTE SETTLEMENT – NEM SETTLEMENT REVISIONS POLICY CHANGES

FINAL REPORT AND DETERMINATION

Published: **May 2019**





EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the Rules consultation process conducted by the Australian Energy Market Operator (AEMO) to consider amendments to the NEM Settlement Revisions Policy (Policy) under the National Electricity Rules (NER) for the implementation of Five-Minute Settlement (5MS) and Global Settlement (GS).

On 14 December 2018, AEMO published the Notice of First Stage Consultation and the Issues Paper for the Policy. The Issues Paper detailed key proposals involving:

- The potential effect of 5MS
- The potential effect of GS

AEMO received three submissions from Ergon Energy Queensland (EEQ), Origin Energy and Alinta Energy. Submissions were generally supportive of AEMO's proposed changes, but highlighted some issues for AEMO's consideration. Having considered the submissions, AEMO's draft determination was to retain the amendments as proposed in the Issues Paper, and also introduce a new clause in the Policy to clarify the implementation of GS in relation to settlement revisions.

On 22 March 2019, AEMO published the Notice of Second Stage Consultation and Draft Determination for the Policy. One submission from Stanwell was received in the second stage consultation.

Considering the submission and the requirements of the NER and the amending rules for 5MS and GS, AEMO has made no further changes to the draft Policy. AEMO's final determination is to amend the NEM Settlement Revisions Policy in the form published with this Final Report, reflecting the following outcomes:

- Introduce a new transitional clause in the Policy to clarify transitional considerations of 5MS
- Introduce a new transitional clause in the Policy to clarify transitional considerations of GS



CONTENTS

EXECUTIVE SUMMARY	2
1. STAKEHOLDER CONSULTATION PROCESS	4
2. BACKGROUND	4
2.1. NER requirements	4
2.2. Context for this consultation	4
2.3. First stage consultation	5
2.4. Second stage consultation	5
3. DISCUSSION OF MATERIAL ISSUES	5
3.1. Potential effect of Five-Minute Settlement	5
3.2. Potential effect of Global Settlement	7
APPENDIX A. GLOSSARY	10
APPENDIX B. SUMMARY OF SUBMISSIONS AND AEMO RESPONSES	11



1. STAKEHOLDER CONSULTATION PROCESS

AEMO has consulted on the NEM Settlement Revisions Policy (Policy) in accordance with clause 3.15.19(e) of the NER and the Rules consultation process in rule 8.9.

AEMO's indicative timeline for this consultation is outlined below:

Deliverable	Date
Notice of first stage consultation and Issues Paper published	14 December 2018
First stage submissions closed	22 February 2019
Draft Report & Notice of second stage consultation published	22 March 2019
Submissions due on Draft Report	8 April 2019
Final Report published	13 May 2019

The publication of this Final Report marks the conclusion of this consultation.

In addition to public consultation, AEMO consulted on the Policy through various 5MS program engagement channels¹ including:

- Procedures Working Group (PWG)
- Systems Working Group (SWG)
- Settlements Focus Group (SFG).

Note that there is a glossary of terms used in this Final Report at Appendix A.

2. BACKGROUND

2.1. NER requirements

The policy outlines procedures around how AEMO prepares and issues routine and special revised statements under the NER clause 3.15.19(e).

2.2. Context for this consultation

2.2.1. Five-Minute Settlement and Global Settlement

In November 2017, the Australian Energy Market Commission (AEMC) made the 5MS rule. The rule reduces the trading interval for financial settlement in the National Electricity Market (NEM) from 30 minutes to five minutes, aligning with NEM dispatch.

The AEMC made the GS rule in December 2018 to introduce a 'global settlement' framework for settlement of the demand side of the wholesale electricity market.

The final 5MS and GS rules require AEMO to update and publish a number of specified relevant procedures by 1 December 2019. While the Policy is not one of the specified procedures, AEMO has identified it as one of the publicly consulted documents that require amendment for 5MS and GS implementation.

2.2.2. Implementing Five-Minute Settlement

5MS will commence in the NEM on 1 July 2021. It will change many NEM processes, including energy and ancillary service bidding, online dispatch, intervention pricing, the calculation of trading amounts, the

¹ For more details on the forums and groups specific to the 5MS program: <http://www.aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement>



calculation of the cumulative price threshold, and periodic energy metering. Settlement revision calculations are affected by 5MS because from 1 July 2021 settlement will be based on five-minute trading intervals and spot prices instead of the current 30-minute trading intervals and spot prices.

2.2.3. Implementing Global Settlement

Implementing GS will remove the current 'settlement by differencing' framework that has been in place since the start of NEM. Under 'settlement by differencing' the local retailer is responsible for settling the value of any residual electricity supplied to a distribution area after deducting the loss-adjusted metered electricity consumed by market loads within that area. This means that the local retailer bears the cost and risk of all residual electricity losses in that area, known as UFE.

GS will commence on 6 February 2022. The rule also requires AEMO to calculate and publish UFE data from 1 July 2021, in line with the 5MS commencement date. This is so the industry is informed of the likely level of UFE and can potentially address sources of UFE prior to GS starting.

2.3. First stage consultation

On 14 December 2018, AEMO issued a Notice of First Stage Consultation, and published an Issues Paper and draft procedures for the Policy. This information is available on AEMO's website and can be accessed through the link below.

The Issues Paper included details on AEMO's stakeholder engagement in developing the initial draft procedures and a summary of the specific amendments proposed in the initial consultation pack to address the impact of 5MS and GS, and to clarify and update other provisions of the Policy.

AEMO received three submissions in response to the first stage consultation. Copies of all written submissions have been published on AEMO's website.²

2.4. Second stage consultation

On 22 March 2018, AEMO issued a Notice of Second Stage Consultation, and published a Draft Report and Determination (Draft Report) and Draft Procedures for the Policy.

The Draft Report included a summary of the specific amendments proposed in the draft consultation pack.

AEMO received one submission to the second stage consultation. A copy has been published on AEMO's website³ and a summary is contained in Appendix B.

3. DISCUSSION OF MATERIAL ISSUES

This section details the material issues identified during the review process to date. It also provides AEMO's assessment of the issues and how AEMO has addressed them.

3.1. Potential effect of Five-Minute Settlement

3.1.1. Issue Summary

From 1 July 2021, the duration of trading intervals will change from 30 minutes to five minutes because of the 5MS rule. Settlement amounts will therefore be calculated using the spot price for each five-minute

² For more details on the first stage consultation see: <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-Settlement-Revisions-Policy>

³ For more details on the second stage consultation please see: <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-Settlement-Revisions-Policy>



trading interval. Aside from this change in settlement calculation, AEMO proposed that its process of issuing revised statements and engaging with Market Participants would remain unchanged.

Recognising transitional considerations as 5MS is adopted, AEMO proposed a new transitional clause in the Policy to confirm the following:

- Any routine and special revised statements covering settlement days before 1 July 2021 will be based on 30-minute prices, and from 1 July 2021 will be based on 5-minute prices.
- For the billing week in which the 1 July 2021 commencement date falls, settlement amounts will be separately aggregated for 30-minute and 5-minute settlement days.
- The change in trading interval duration by itself is not a reason to revise any settlement amount.

3.1.2. First Stage Submissions Summary

Origin and Alinta Energy were supportive of AEMO's proposed changes to the Policy and did not propose any alternative approaches.⁴ Alinta Energy noted that they do not expect these changes to alter market incentives or behaviour.⁵

Ergon Energy Queensland (EEQ) noted a preference for a full week of summated data and profiles at 30 mins to be extended to the end of the 5MS cutover week of 3 July 2021.⁶

3.1.3. AEMO's Draft Assessment

Stakeholder feedback from Origin and Alinta energy supported AEMO's proposed amendments to the Policy and proposed no other methods to transition to 5MS. AEMO noted that the proposed 5MS transitional amendments to the Policy do not affect the current process of settlement revisions, but are further clarifications around the 5MS transitional period. Therefore, AEMO considered the current proposed amendments appropriate as reflected in the draft Policy.

With regard to EEQ's request for a full week of summated data and profiles at 30 mins to be extended to the end of the billing week on 3 July 2021 AEMO noted that, under the 5MS rule, settlement amounts must be based on 5-minute prices from the start of the day on 1 July 2021.

3.1.4. AEMO's Draft Determination

AEMO's draft determination was to maintain the proposed transitional clauses for 5MS as suggested in the Issues Paper.

3.1.5. Second Stage Submissions Summary

Stanwell reviewed the Policy and noted that there were no material issues to raise with AEMO. No other submissions were received.⁷

3.1.6. AEMO's Final Assessment and Determination

As no additional issues have been raised, AEMO confirms its proposed approach to introduce transitional clauses in the Policy to clarify considerations around the 5MS transitional period. This is reflected in the Final Procedure, published with this Final Report.

⁴ Origin, Submission to first stage consultation, p.2

⁵ Alinta Energy, Submission to first stage consultation, p.2

⁶ Ergon Energy Queensland, Submission to first stage consultation, p.2

⁷ Stanwell, Submission to second stage consultation, p.1



3.2. Potential effect of Global Settlement

3.2.1. Issue summary

Under a GS environment, all retailers will bear the cost of their share of UFE. Given that UFE is one of many inputs to calculate adjusted gross energy (AGE), any change to how UFE is calculated may affect AGE and settlement amounts for Market Participants.

AEMO considers that any revision to or dispute about UFE volumes will be treated in the same way as any other component of a settlement amount. Accordingly, AEMO did not propose any specific amendments to the Policy to address UFE revisions.

3.2.2. First Stage Submissions Summary

Increased exposure to variability in settlement revisions due to metering estimates

Origin noted that they did not believe the introduction of UFE would eliminate all scenarios which require a special revision. This is because the settlement calculations rely on basic meter profiling in periods of extreme weather or load.⁸

EEQ stated that as a Local Retailer with 95% of NMs with Type 6 metering, the introduction of GS may result in more than 'minor' revisions, due to the increased exposure to errors in forward estimates of Type 6 metering under global settlement. EEQ considered these errors are also likely to be a large contributor to UFE.⁹

Suggestions to update the settlement revisions process

EEQ queried whether revisions caused by UFE can be handled by the existing settlement timeframes. EEQ suggested that special revised statements may be required as a standard practice between Revision 1 (R1)¹⁰ and Revision (R2)¹¹ with consideration to extending R2 beyond 30 weeks. EEQ believes a new provision is required to articulate a suitable process for all parties.¹²

Origin requested that in the event that a variance in excess of 5% of statement value is reached, only 51% agreement amongst participants should be sufficient to trigger a special revision out of the procedure.¹³

3.2.3. AEMO's Draft Assessment

Increased exposure to variability in settlement revisions due to metering estimates

AEMO appreciated that the introduction of GS may increase variances between revisions due to the increased exposure to forward estimate errors of Type 6 metering, but noted that the materiality of this variance is still not quantifiable, and will also be impacted by the commencement of SMS.

AEMO noted that UFE data will be published from 1 July 2021, and intended to engage with participants during the window before GS comes into effect on 6 February 2022 and assess whether further changes to relevant AEMO procedures are required (within the scope of the NER).

The associated methodology for estimated metering data for Type 6 metering is defined in Metrology Procedure: Part B, which will be consulted on separately. AEMO encouraged participants to make submissions to that consultation in relation to the methodology for forward estimates.

⁸ Origin, Submission to first stage consultation, p.3

⁹ Ergon Energy Queensland, Submission to first stage consultation, p.3

¹⁰ Revision 1 is defined as the routine revised statement at 20 weeks, as defined in clause 3.2.3 of the NEM Settlement Estimates Policy

¹¹ Revision 2 is defined as the routine revised statement at 30 weeks, as defined in clause 3.2.3 of the NEM Settlement Estimates Policy

¹² Ergon Energy, Submission to first stage consultation, p.3

¹³ Origin Queensland, Submission to first stage consultation, p.3



Suggestions to update the settlement revisions process

Existing settlement revision timeframes are currently defined in NER clause 3.15.19. The criteria for the issue of special revised statements are set out in clause 3.15.19(a)(3). The NER currently requires the issue of special revised statements to reflect the outcome of a disputed settlement statement where the adjustment amount is less than 95%, or more than 105%, of the final settlement amount. Given that the circumstances in which AEMO can issue a special revisions statement are prescribed in some detail in the NER, AEMO considers that they can only be extended to analogous situations. Any further amendments will require a rule change request to the AEMC.

The Policy allows AEMO to issue a settlement statement without a requirement to go through the dispute resolution process, but only if all affected Market Participants agree. This exception is to minimise the incurred cost from undergoing the dispute process for all impacted parties if the outcome is already unanimously agreed. AEMO considers agreement of all impacted parties can reasonably be considered as equivalent to a binding dispute resolution outcome.

Relating to Origin's request, AEMO explained that it was therefore unable to issue special revision statements if only 51% agreement is reached amongst impacted participants.

3.2.4. AEMO's Draft Determination

AEMO's draft determination in relation to GS was to include an additional clause 3.1B in the Policy to clarify the basis for settlement in the week of transition to GS. This additional clause does not impact the revisions process and is summarised below.

Additional clarification on the introduction of GS

To ensure that there is a clear understanding among the industry about transitioning to GS, AEMO proposed a new clause in the Policy to clarify that:

- Any routine and special revised statements covering settlement days before 6 February 2022 will be based on settlements-by-differencing, and from 6 February 2022 will be based on global settlements.
- The change from settlement-by-differencing to global settlement by itself is not a reason to revise any settlement amount.
- The allocation of UFE is dependent on energy volumes. Any changes to energy volumes in revision statements will also change the allocation of UFE to Market Participants.

AEMO acknowledged that the introduction of UFE may increase variability in settlement revisions, but concluded there was insufficient information at this stage to determine whether any specific changes may be required to relevant procedures (to the extent permissible under the NER), and the nature of any such changes. Further assessments of variability can be made between 1 July 2021 and 6 February 2022 when UFE data is available, but not yet used for financial settlement.

3.2.5. Second Stage Submissions Summary

Stanwell reviewed the Policy and noted that there were no material issues to raise with AEMO. No other submissions were received.¹⁴

¹⁴ Stanwell, Submission to second stage consultation, p.1



3.2.6. AEMO's Final Assessment and Determination

As no additional issues have been raised, AEMO confirms its draft determination. AEMO's final determination is to include a new clause in the Policy to clarify transitional considerations of GS.

4. FINAL DETERMINATION

Having considered the matters raised in the submissions, AEMO's final determination is to amend the NEM Settlement Revisions Policy in the form of the final Policy document published with this Final Report.

The key changes reflect the following outcomes:

- Introduce a new transitional clause in the Policy to clarify transitional considerations of 5MS
- Introduce a new transitional clause in the Policy to clarify transitional considerations of GS.

**APPENDIX A. GLOSSARY**

Term or acronym	Meaning
5MS	Five-Minute Settlement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AGE	Adjusted Gross Energy
EEQ	Ergon Energy Queensland
GS	Global Settlement
NEM	National Electricity Market
NER	National Electricity Rules
PCF	Program Consultative Forum
PWG	Procedures Working Group
Rules	National Electricity Rules
SWG	Systems Working Group
UFE	Unaccounted for energy

**APPENDIX B. SUMMARY OF SUBMISSIONS AND AEMO RESPONSES**

No.	Respondent	Participant Comment	AEMO response
1.	Stanwell	<p>The Stanwell representatives have reviewed the following and have identified no material issues to raise with AEMO</p> <ul style="list-style-type: none">• Application of GST to NEM Transactions v2.0 draft marked up (354 KB, pdf)• GST Info Note for Applicants v2.0 draft marked up (230 KB, pdf)• NEM Settlement Revisions Policy (v3.0 draft - marked up)• Direction Recovery Reconciliation File v2.0 draft marked up (347 KB, pdf)• NEM Settlements Process v2.0 draft marked up (738 KB, pdf)• NEMAS Recovery Reconciliation File v2.0 draft marked up (747 KB, pdf)	<ul style="list-style-type: none">• AEMO notes the respondents support of the proposed change.