

# FIVE MINUTE SETTLEMENT – TNSP NEGATIVE SETTLEMENTS RESIDUE PROCEDURE

FINAL REPORT AND DETERMINATION

Published: **June 2019**





## **EXECUTIVE SUMMARY**

The publication of this Final Report concludes the consultation process conducted by AEMO to consider proposed minor amendments on TNSP Negative Settlements Residue Procedure (Procedure).

Consultation on the Procedure involved a single round of stakeholder consultation due to the administrative nature of the proposed amendments. On 1 April 2019, AEMO published the Notice of Consultation and draft Procedure. The proposed amendments to the Procedure involved:

- Updates to the worked example in section 6.1 to align with 5MS
- Template changes and updates

No submissions were received in response to the Notice of Consultation. AEMO considers that no further changes to the draft Procedure was necessary.

AEMO's final determination is to amend the Procedure in the form published with this Final Report.



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## 1. STAKEHOLDER CONSULTATION PROCESS

The matter for consultation involved changes to the Procedure as a result of the Five-Minute Settlement (5MS) Rule.

AEMO's timeline for this consultation was as follows.

Deliverable	Indicative date
Minor amendment consultation published	1 April 2019
Submissions due on minor amendment consultation	3 June 2019
Final Report published	14 June 2019

The publication of this Final Report marks the end of this consultation. Note that there is a glossary of terms used in this Final Report at Appendix A.

## 2. BACKGROUND

### 2.1. NER requirements

The Procedure provides for the timing, interval and methodology for payment of negative settlement residues under clause 3.6.5(a)(4) of the National Electricity Rules, and for the recovery of any related interest costs under clause 3.6.5(a)(4A). AEMO must determine these matters following consultation with TNSPs.

### 2.2. Context for this consultation

In November 2017, the 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 final 5MS Rule requires 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 identified that the Procedure requires minor amendments to the worked examples in section 6.1 of the Procedure.

### 2.3. Consultation approach

Consultation on the Procedure involved a single round of stakeholder consultation due to the administrative nature of the proposed amendments.

On 1 April 2019, AEMO published an updated draft of the Procedure on the AEMO consultation webpage. 5MS stakeholders and TNSPs were notified directly through the relevant mailing lists, and other stakeholders were also notified through the AEMO mailing list.

<https://www.aemo.com.au/Stakeholder-Consultation/Consultations/Five-Minute-Settlement---NEM-TNSP-Negative-Settlements-Residue-Procedure>

## 3. SUMMARY OF AMENDMENTS

### 3.1. 5MS related changes

5MS related changes involved updating the worked example in section 6.1 of the Procedure to align quantities with 5 minute trading interval times.



Existing Example:

An interconnector between 2 regions with a flow of 1000MW (i.e. 500MWh per trading interval)  
Prices in the regions are \$10,000 and \$100 (flow from higher to lower priced region)  
Negative Residue = 500MWh x (\$10,000 - \$100) = \$4.95 Million per trading interval  
The residue would be limited by the cumulative price threshold being exceeded, however could reach \$4.95 Million x 15 = \$74 Million

The multiple of 15 in the above example relates to the cumulative price threshold (CPT). Currently the CPT is approximately 15 times the market price cap, i.e.:

- MPC = \$14,500
- CPT = \$216,900
- CPT/MPC = 14.96

The multiplier is not exactly 15 because of the way MPC and CPT are rounded when they increase each year.

Under 5MS, the flow per trading interval in the example will be 6 times lower for a five minute interval, and the CPT multiplier will be 6 times higher (see clause 3.14.1(e)).

AEMO's proposed update of the worked example is shown below.

Updated Worked Example:

An interconnector between 2 regions with a flow of 1000MW (i.e. 83MWh per trading interval)  
Prices in the regions are \$10,000 and \$100 (flow from higher to lower priced region)  
Negative Residue = 83MWh x (\$10,000 - \$100) = \$0.825 Million per trading interval  
The residue would be limited by the cumulative price threshold being exceeded, however could reach \$0.825 Million x 90\* = \$74 Million

\*Approximation only. Represents the approximate number of trading intervals for which spot prices could be at the market price cap before reaching the cumulative price threshold.

### 3.2. Other considerations

AEMO considered the impact of 5 minute intervals on the \$100,000 prepayment threshold in regard to shortfall risk. This threshold was chosen to avoid small negative residue amounts from being prepaid where non-payment would not have any significant impact on AEMO's ability to pay generators. The value applies to the entire billing week (not individual trading intervals), and so is not impacted by a change from 30-minute to 5-minute.

- AEMO concluded that the current risk matrix is sufficient and still largely valid, therefore no change is necessary.
- As a result no amendment in consulted TNSP Negative Settlements Residue procedure, and related procedure Dispatch SO\_OP\_3705 in regard to the \$100,000 threshold.



The TNSP Negative Settlements Residue Procedure also references the AEMO guidance document: Methodology for the Allocation and Distribution of Settlements Residue. AEMO has not identified any necessary changes related to this guide as a result of 5MS implementation.

#### **4. DISCUSSION AND DETERMINATION**

AEMO received no submissions from TNSPs or other interested parties on the proposed changes to the Procedure.

AEMO considers that the proposed updates to worked example 6.1 in the Procedure are necessary to reflect the change in trading interval from 30 minutes to 5 minutes after 1 July 2021. The underlying processes described in the Procedure will remain the same.

Accordingly, AEMO's final determination is to amend the Procedure in the form published with this Final Report. The amended Procedure will come into effect on 1 July 2021.



## APPENDIX A. GLOSSARY

Term or acronym	Meaning
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
NEM	National Electricity Market
NER	National Electricity Rules