

# What is 5-Minute Settlement (5MS)?

This fact sheet provides an overview of 5-Minute Settlement (5MS) and how AEMO is working with relevant stakeholders to implement this important market reform. More detail is available on AEMO's website.

## How is the NEM settled?

AEMO is responsible for the settlement of all electricity bought and sold through the National Electricity Market's wholesale electricity pool. Retailers and wholesale customers pay AEMO on a weekly basis, and AEMO subsequently pays generators. For more information, please refer to the [NEM Fact Sheet](#).

## What is the issue?

Since the start of the NEM in 1998, the scheduled process for generators to dispatch electricity has operated on a 5-minute basis, but the settlement process has operated on a 30-minute basis. The difference in time period was primarily due to historical arrangements prior to market start, including limitations on metering and data communications.

The difference in time period, sometimes referred to as the 5/30 problem, is a pricing anomaly that can cause inefficient pricing outcomes and has been identified as a contributing factor to disorderly bidding. In the long-term, the pricing anomaly may lead to inappropriate investment and higher prices for consumers.

## What is 5MS?

Many of the limitations that existed at NEM start are no longer present, with technology making it possible for settlement to occur on a 5-minute basis.

In November 2017, the Australian Energy Market Commission (AEMC), the NEM rule-maker, decided 5MS should be implemented in the NEM and come into effect on 1 October 2021. They tasked AEMO with the role of implementing changes to market procedures and systems necessary to perform 5MS, as well as obligations on participants to adopt the changes.

## Who is impacted by 5MS?

While varying in its level of impact, 5MS affects all participants along the energy supply chain, from generators to retailers. Refer to [AEMO's website](#) for details on how each participant segment is impacted.

## Benefits of 5MS?

The benefits of 5MS, stated by the AEMC in making the rule<sup>1</sup>, were:

- Improved price signals for more efficient generation and use of electricity.

<sup>1</sup> See <https://www.aemc.gov.au/rule-changes/five-minute-settlement> for further details.

- Improved price signals for more efficient investment in capacity and demand response technologies to balance supply and demand.
- Improved bidding incentives.

## What will change as a result of 5MS?

5MS requires changes to metering, settlement, prudentials, and bidding processes, as well as electricity retail and wholesale market systems. Implications include:

### Metering

- Central systems' acceptance of 5-minute metering data from the market.
- Adjusting some groups of interval meters to deliver data at 5-minute intervals.
- Controlled Load Profile (CLP) and Net System Load Profile (NSLP) change from 30-minute to 5-minute.

### Settlement Calculation

- Profiling algorithms introduced to derive 5-minute energy data.
- Transactions will need to be calculated for each 5-minute period.
- Settlement estimation will calculate energy transactions for every 5-minute period.
- Inter-regional and intra-regional residue will be calculated on a 5-minute basis.
- A number of non-energy transactions, such as market ancillary services (i.e. FCAS) and compensation recovery, will be completed using 5-minute energy volumes.

### Dispatch and Market Information

- Daily bidding intervals to increase from 48 to 288. AEMO will create new data structures to receive, use and store 5-minute bids and offers.
- 30-minute pre-dispatch and PASA processes that use bid information will be provided with 5-minute data.
- Market participant systems will need to be updated to submit and receive confirmations of 5-minute bid and offer data.
- AEMO will publish 5-minute data.

## How is 5MS being implemented?

AEMO is responsible for implementing 5MS. Through AEMO's dedicated 5MS program, AEMO has updated market procedures, systems and is in the process of facilitating an efficient transition to the new 5MS rule by working closely with industry members via working groups and forums.

The working groups and forums enable AEMO's 5MS Program to consult and engage industry members to help them prepare for the 5MS rule changes on 1 October 2021. They also provide members with an opportunity to discuss and contribute feedback and ideas that help shape program decisions and outcomes.

Outside of the working groups and forums, there are a range of communication channels that are available to all stakeholders. These include:

- 5MS website
- Monthly (newsletter style) program updates
- General information sessions
- News articles

### 5-Minute Settlement engagement structure

Engagement method	Purpose
Forums, working groups, and focus groups	Program co-ordination, information-sharing, procedure, and system development
One-on-one meetings	In-depth and confidential discussions with participants
Information sessions	General information on the program, open to all
Targeted briefing sessions	Subject-specific briefings
Email updates	Monthly information on current events
Website	General program information and repository

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## Which procedures are impacted by 5MS?

AEMO identified around 70 procedures that needed to be updated due to the Rule change. Approximately 20 of these required a formal Rules procedure consultation. However, AEMO consulted with participants on all procedure changes.

## Which AEMO systems will be impacted by 5MS?

A large number of AEMO systems are impacted to implement the functional changes outlined above.

The core systems impacted are:

- Electricity Market Management System (EMMS).
- Market Settlement and Transfer Solution (MSATS).

The changes mirror the procedures workstreams and include metering, dispatch, settlements, and power system operation<sup>2</sup>.

## What about Global Settlement?

The new Global Settlement rules will be implemented by the 5MS Program, utilising the same engagement structure as 5MS.

The full commencement of Global Settlement will begin on 1 May 2022. However, UFE data will be published by AEMO from 1 October 2021 to ease the transition to Global Settlement. Refer to the Global Settlement Fact Sheet on the [AEMO website](#) for further details.

## Further information

For any further enquiries, please contact AEMO's 5MS team at [5ms@aemo.com.au](mailto:5ms@aemo.com.au) or visit the [AEMO website](#)

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<sup>2</sup> See <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Systems-Workstream> for further details.