



INFORMATION

Five minute settlement

Implementation of five minute settlement

The AEMC has made a rule to align operational dispatch and financial settlement at five minutes. This will reduce the time interval for financial settlement in the national electricity market from 30 minutes to five minutes. The rule has a transition period of three years and seven months.

This information sheet provides high level information on what stakeholders need to do to be ready for five minute settlement.

Implementation of five minute settlement

Five minute settlement will commence on Thursday, 1 July 2021, noting that the transitional provisions of the final rule will commence on 19 December 2017.

From 1 July 2021, the following processes will occur on a 5 minute basis:

- Bidding and offering into the National Electricity Market
- Settlement
- Intervention pricing
- Calculation of trading amounts
- Calculation of the cumulative price threshold

Therefore implementing five minute settlement will require:

- reviewing and where necessary updating existing contract terms and conditions
- upgrading metering to provide five minute granularity data (where required)
- upgrading IT systems to store and process five minute granularity data

The Australian Energy Market Operator (AEMO) will govern and oversee the implementation of five minute settlement. The AEMC acknowledges the breadth and depth of implementation required and therefore recommends that market participants begin transitioning to five minute settlement without delay in consultation with AEMO.

Table 1 (attached) indicates the main actions that stakeholders are expected to take in the lead up to the commencement date and beyond.

Table 2 (attached) sets out the treatment of different meter types, both current and under five minute settlement.

Background

Sun Metals Corporation Pty Ltd submitted a rule change request to reduce the time interval for settlement in the wholesale electricity market from 30 minutes to five minutes.

The AEMC has made a rule, which is a more preferable rule, to align operational dispatch and financial settlement at five minutes. More information about why the rule change was made and the details of the final rule can be found in the accompanying information sheet and final rule determination.


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Table 1: Indicative stakeholder actions to implement five minute settlement

Stakeholder	During the transition period	From 1 July 2021
<p>Australian Energy Market Operator (AEMO)</p> 	<p>Procedures</p> <p>By 1 December 2019, consult and amend its relevant procedures, methodologies and guidelines.</p> <p>By 1 December 2019, consult and publish a procedure setting out the requirements for applying for an exemption from complying with the data storage requirements for types 1, 2 and 3 metering installations and type 4 metering installations at a transmission network connection point or distribution network connection point where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator installed prior to 1 July 2021.</p> <p>IT systems to be changed</p> <p>Where necessary, upgrade/make changes to the following IT systems:</p> <ul style="list-style-type: none">◆ Settlement◆ Trading◆ Billing◆ Reporting◆ Data collection and storage◆ Structure of Electricity Market Management System (EMMS) data model tables◆ B2B e-hub <p>Consider providing a test environment for market participants.</p>	<p>Publish a 30 minute price (calculated in the same way that the current spot price is calculated) for a regional reference node for each 30 minute period in addition to publishing the five minute spot price for each regional reference node.</p> <p>Publish the pre-dispatch schedule in two resolutions: one for a 30 minute period, and one for a five minute period. The five minute period will only be in relation to the 60 minute period before the time that the relevant pre-dispatch schedule is published.</p> <p>Projected Assessment of System Adequacy (PASA) processes to continue preparing and publishing information for each 30 minute period.</p> <p>Exemptions</p> <p>AEMO can exempt a Metering Provider from complying with the data storage requirements for types 1, 2 and 3 metering installations, and type 4 metering installations at a transmission network connection point or distribution network connection point where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator, installed prior to 1 July 2021 where it is reasonably satisfied that the Metering Provider will be able to otherwise meet the requirements of Chapter 7 of the National Electricity Rules (NER).</p> <p>AEMO is unable to grant an exemption for type 4 metering installations at all other connection points.</p>

Stakeholder

Australian Energy Regulator (AER)



Information Exchange Committee (IEC)



Generators, small generation aggregators



Large consumers (market load)



During the transition period

By 1 December 2019, consult and amend its relevant documents.

By 1 July 2019, consult and recommend to AEMO any changes to the B2B procedures.

Where necessary, update internal procedures and documents.

Review and if necessary update existing contracts terms and conditions.

Where necessary, upgrade/make changes to the following IT systems:

- ◆ Settlement
- ◆ Risk management
- ◆ Trading
- ◆ Reporting
- ◆ Data collection and storage

Where necessary, update internal procedures and documents.

Review and if necessary, update existing contracts terms and conditions.

Where necessary, upgrade/make changes to the following IT systems:

- ◆ Settlement
- ◆ Risk management
- ◆ Trading
- ◆ Reporting
- ◆ Data collection and storage

From 1 July 2021

AER to amend late rebidding procedures and guidelines to amend late rebidding period from 15 minutes to 30 minutes before the start of each five minute trading interval.

AER to apply the \$5,000/MWh price threshold to the average spot price over rolling 30 minute periods rather than to a trading interval when preparing reports on high price events.

Submit five minute granularity offers into the National Electricity Market (NEM).

Submit five minute granularity bids into the NEM.

Stakeholder

Retailers



During the transition period

Where necessary, update internal procedures and documents.

Review and if necessary update existing contracts terms and conditions

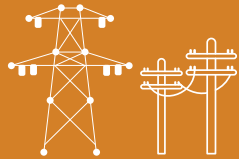
Where necessary, upgrade/make changes to the following IT systems:

- ◆ Settlement
- ◆ Risk management
- ◆ Trading
- ◆ Reporting
- ◆ Data collection and storage

From 1 July 2021

Retailers can develop and offer new products and services, using five minute data to value dynamic generation and demand response for small and large consumers.

Networks



Where necessary, update internal procedures and document

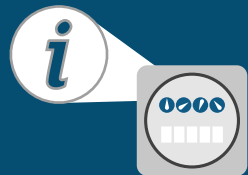
Where necessary, upgrade/make changes to the following IT systems:

- ◆ Settlement
- ◆ Billing
- ◆ Reporting
- ◆ Data collection and storage
- ◆ Network planning system

With respect to billing for distribution services, calculate charges for distribution services from either metering data or settlements ready data for type 4 metering installations.

From 1 July 2021, ensure that type 7 unmetered loads are calculated on a five minute basis.

Metering coordinators



By 1 July 2021, upgrade types 1, 2 and 3 metering installations to be capable of recording and providing five minute data.

By 1 July 2021, upgrade type 4 metering installations at a transmission network connection point or distribution network connection point, where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator, to be capable of recording and providing five minute data.

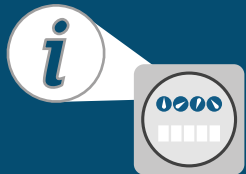
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By 1 December 2022 at the latest, ensure that all new and replacement type 4 and type 5 metering installations installed from 1 December 2018 record and provide five minute data.

By 1 December 2022 at the latest, ensure that all new and replacement type 4A metering installations installed from 1 December 2019 record and provide five minute data.

Stakeholder

Metering coordinators (continued)



During the transition period

From 1 December 2018 to the commencement date, ensure that all new and replacement metering installations (other than type 4A metering installations) are capable of recording and providing five minute.

From 1 December 2019 to the commencement date, ensure that all new and replacement type 4A metering installations are capable of recording and providing five minute data.

Where necessary, upgrade/make changes to the following IT systems:

- ◆ Settlement
- ◆ Reporting
- ◆ Data collection and storage
- ◆ Meter data management system
- ◆ B2B e-hub

From 1 July 2021

Metering data providers



Where necessary upgrade/make changes to the following IT systems:

- ◆ Reporting
- ◆ Data collection and storage
- ◆ Meter data management system
- ◆ B2B e-hub

By 1 July 2021, ensure that type 1, 2 and 3 metering installations record and provide five minute data.

By 1 July 2021, ensure that any type 4 metering installations at a transmission network connection point or distribution network connection point, where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator, record and provide five minute data.

By 1 December 2022 at the latest, ensure that all new and replacement type 4 and type 5 meters installed from 1 December 2018 record and provide five minute data.

By 1 December 2022 at the latest, ensure that all new and replacement type 4A meters installed from 1 December 2019 record and provide five minute data.

By 1 July 2021, ensure that type 7 unmetered loads are calculated on a five minute basis.

Stakeholder

Small consumers



Financial services (ASX, brokers, etc.)



During the transition period

Where necessary, update internal procedures and documents

Review and if necessary update existing contracts terms and conditions

Where necessary, upgrade/make changes to the following IT systems:

- ◆ Settlement
- ◆ Risk management
- ◆ Trading
- ◆ Reporting
- ◆ Data collection and storage

From 1 July 2021

Consider whether to access a range of new consumer products and services using five minute interval data.

Consider offering new products and services based on five minute interval data.

Table 2: Treatment of meters under five minute settlement

Meter type	Treatment under 30 minute settlement	Treatment of existing meters under five minute settlement	Treatment of new and replacement meters under five minute settlement
Type 1-3	30 minute data collected and used for settlement	5 minute data collected and used for settlement from 1 July 2021	5 minute data collected and used for settlement from 1 July 2021
Type 4 meters*	30 minute data collected and used for settlement	5 minute data collected and used for settlement from 1 July 2021	5 minute data collected and used for settlement from 1 July 2021
Other type 4	30 minute data collected and used for settlement	30 minute data collected and profiled to 5 minutes using NSLP for settlement from 1 July 2021	Meters installed after 1 December 2018 must provide 5 minute data from 1 December 2022 at the latest
Type 4A	30 minute data collected and used for settlement	30 minute data collected and profiled to 5 minutes using NSLP for settlement from 1 July 2021	Meters installed after 1 December 2019 must provide 5 minute data from 1 December 2022 at the latest
Type 5	30 minute data collected and used for settlement	30 minute data collected and profiled to 5 minutes using NSLP for settlement from 1 July 2021	Meters installed after 1 December 2018 must provide 5 minute data from 1 December 2022 at the latest
Type 6	Data collected quarterly and profiled to a 30 minute basis for settlement	Data collected quarterly and profiled to 5 minute intervals using NSLP for settlement from 1 July 2021	No new type 6 meters are expected to be installed
Type 7	Unmetered loads calculated on 30 minute basis	Unmetered loads calculated on a 5 minute basis from 1 July 2021	Unmetered loads calculated on a 5 minute basis from 1 July 2021

* Type 4 meters at a transmission network connection point or distribution network connection point where the relevant financially responsible market participant is a Market Generator or Small Generation Aggregator