



Five-minute settlement and global settlement

March 2021

5MS Bidding Service Go-live Plan

Important notice

PURPOSE

This paper describes the go-live approach with respect to the deployment of the AEMO's 5-minute bidding service.

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VERSION CONTROL

Version	Release date	Changes
0.1	08 February 2021	Draft released to the SMS/GS Readiness Working Group for comment
1.0	08 March 2021	Final version

Executive summary

AEMO and National Electricity Market (NEM) participants are currently implementing the five-minute settlement (5MS) and global settlement (GS) market reforms and the implementation program has entered its market readiness phase.

The National Electricity Rules (NER) changes for 5MS and GS have amended or introduced new regulatory obligations on certain NEM participants and AEMO. They require significant updates or changes to market procedures, metering and market and participants' systems at various times. AEMO has a key coordination role, through collaboration with its industry working groups, to ready industry and itself for the various system and market "go-live" dates.

This document describes the go-live approach with respect to the deployment of the AEMO's 5-minute bidding service.

At a high level, the go-live responsibilities are set out below:

- AEMO to independently assess the go-live decision for AEMO's 5-minute bidding service, and notify participants when the 5-minute bidding service is available for use. This is expected on 1pm Market Time 1 April 2021
- Participants to commence using the 5-minute bidding service at any time between go-live and 5MS market commencement on 1 October 2021

Participants are not obliged to commence using the new 5-minute bidding service at go-live on 1 April, and may continue to use the current 30-minute bidding service until 30 September 2021. There will be no disruptions to the current 30-minute bidding service at go-live.

Contents

Executive summary	3
1. Introduction	6
1.1 AEMO's 5MS and GS implementation program	6
1.2 5MS Bidding Transition	6
2. 5MS Bidding Service Go-live Plan Framework	8
2.1 Scope	8
2.2 Principles	8
3. 5MS Bidding Service Go-live Plan	9
3.1 Go-live plan	9
3.2 Communications	9
3.3 Bidding Transition Plan	9
3.4 Participant Data Model Considerations	11
3.5 Post Go-Live Support	11
3.6 Contingencies	12
Glossary	13

Tables

Table 1	5MS bidding service go-live plan development timeline	7
Table 2	Contingency Scenario – AEMO’s 5-minute bidding service failing to cutover	12

1. Introduction

This chapter explains the Australian Energy Market Operator's (AEMO) five-minute settlement (5MS) and global settlement (GS) implementation program. It then details the purpose and context of the 5MS Bidding service go live plan.

1.1 AEMO's 5MS and GS implementation program

The Australian Energy Market Commission (AEMC) made the 5MS rule¹ in November 2017 and AEMO's extensive 5MS implementation program began in early 2018.² GS activities were incorporated into the program when the GS rule³ was made in December 2018 because aligning 5MS and GS implementation activities is intended to minimise costs for AEMO and market participants.

On 9 July 2020, the AEMC determined that the commencement of the 5MS rule and GS rule should be delayed by 3 months, so that they commence on 1 October 2021 and 1 May 2022 respectively.⁴

The program covers the procedural, IT system and market readiness arrangements needed to implement 5MS and GS using the following workstreams:

- Procedures – defines and implements the required changes to market procedures⁵
- Systems – designs, develops, tests, and implements changes to AEMO's market systems⁶
- Readiness – coordinates, assists and prepares AEMO and participants for the transition to 5MS and GS.⁷

AEMO's 5MS and GS implementation program has entered the market readiness phase of the project. This paper relates only to market readiness.

1.2 5MS Bidding Transition

The 5MS bidding transition is described in the 5MS Bidding transition plan.⁸

1.2.1 Document purpose

This document describes the go-live approach with respect to the deployment of the AEMO's 5-minute bidding service.

¹ *National Electricity Amendment (Five minute settlement) Rule 2017 No. 15*, Australian Energy Market Commission, available at: <https://www.aemc.gov.au/rule-changes/five-minute-settlement>, as further amended by the *National Electricity Amendment (Five minute settlement and global settlement implementation amendments) Rule 2019 No. 7*, available at <https://www.aemc.gov.au/rule-changes/five-minute-settlement-and-global-settlement-implementation-amendments>

² Details of AEMO's 5MS and GS implementation program: <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement>

³ *National Electricity Amendment (Global settlement and market reconciliation) Rule 2018 No. 14*, Australian Energy Market Commission, available at: <https://www.aemc.gov.au/rule-changes/global-settlement-and-market-reconciliation>, as further amended by the *National Electricity Amendment (Five minute settlement and global settlement implementation amendments) Rule 2019 No. 7*, op cit.

⁴ Details on the delayed implementation of five minute and global settlement: <https://www.aemc.gov.au/rule-changes/delayed-implementation-five-minute-and-global-settlement>

⁵ Details of the procedures workstream: <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Procedures-Workstream>

⁶ Details of the systems workstream: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Systems-Workstream>

⁷ Details of the readiness workstream: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Readiness-Workstream>

⁸ For more information on the 5MS bidding transition see: <https://aemo.com.au/en/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/readiness-workstream/key-readiness-documents>

1.2.2 Development approach

The 5MS Bidding service go-live plan is developed in consultation with industry through the 5MS and GS Readiness Working Group (RWG). Table 1 below illustrates AEMO's engagement approach and timeline for developing the plan.

Table 1 5MS bidding service go-live plan development timeline

Milestone	Date
Initial engagement with the RWG	12 January 2021
Publish draft for industry feedback	8 February 2021
Deadline for industry feedback	22 February 2021
Publish final plan	8 March 2021

2. 5MS Bidding Service Go-live Plan Framework

2.1 Scope

- In scope
 - Go-live approach, including the go/no-go decision approach and communication mechanism with the industry
 - Contingency process and notification
 - Participant Data Model release considerations
- Out of scope
 - Participant deployment approaches for 5MS bidding capability
 - Participant roll-back plans

2.2 Principles

The Industry transition and go-live strategy principles apply to the 5-minute bidding service go-live. These are:

1. Mandated 5MS and GS commencement dates should be met
2. NEM operations should be uninterrupted during periods of transition and go-live
3. Market system go-lives and 5MS and GS commencement risks should be minimised
4. More certainty for participants' project planning should be introduced
5. Participants should be provided with implementation flexibility where possible
6. Participants and AEMO are responsible for their own transition and go-live planning⁹

In addition, the following principles are specific to the industry bidding platform go-live:

1. Impact on participant operations will be minimised to the extent possible
2. AEMO to perform the cutover, making capability available prior to Industry participant deployments
3. AEMO will independently assess and inform the industry on the go-live decision for AEMO's 5-minute bidding service, and communicate status during the cutover process
4. Participants will comply with the cutover plan to facilitate the cutover
5. Participants will develop their individual plans that have regard to the key activities and dates set out in the 5MS Bidding service go-live plan and Bidding transition plan
6. Must continue to fulfil all regulatory and compliance obligations during the system cutover

⁹ Full descriptions of each principle are set out in the Industry transition and go-live strategy at: <https://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Readiness-Workstream/Key-Readiness-Documents>

3. 5MS Bidding Service Go-live Plan

3.1 Go-live plan

The 5-minute bidding service will be made available to participants on 1 April 2021. The go-live responsibilities are set out below.

1. AEMO will be performing all preparatory work for the 5-minute bidding platform go-live.
2. AEMO will performing all cutover activities, and will independently assess and inform the industry on the go-live decision on the 5-minute bidding service based on AEMO's assessment of defects identified during industry tests.
3. Participants will be kept informed of the cutover process through the AEMO Support Hub Bulletin which will be forwarded to all 5MS working groups from 5MS mailbox.
4. At the completion of the cutover, AEMO will inform industry that the 5-minute bidding services is available. This is expected at approximately 1pm Market Time 1 April 2021.
5. Participants to commence using the 5-minute bidding service at any time between go-live and 5MS market commencement. Participants are not obliged to commence using the new 5-minute bidding service at go-live on 1 April, and may continue to use the current 30-minute bidding service until 30 September 2021.

The 5-minute bidding service will be available in parallel with the current 30-Minute bidding service. There will be no disruptions to the current 30-minute bidding service.

3.2 Communications

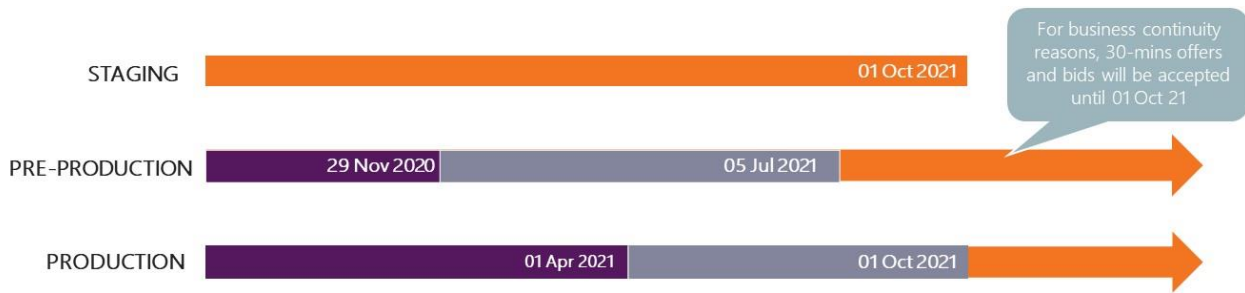
Any correspondence regarding the bidding platform go-live will be released through AEMO Support Hub bulletins, and forwarded from the 5MS mailbox. Participants will be informed if there are any changes to the go-live date through the communication mechanisms above.

3.3 Bidding Transition Plan

The Bidding transition plan provides coordinated guidance for AEMO and participants on the transition to 5-minute bidding. Figure 1 illustrates the overall approach to the industry transition to 5-minute bidding. The full plan is published separately as a written report and spreadsheet¹⁰. The 5MS Bidding service go-live plan describes the deployment of bidding transition arrangements in the production environment on 1 April 2021.

¹⁰ For more information on the 5MS bidding transition see: <https://aemo.com.au/en/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/readiness-workstream/key-readiness-documents>

Figure 1 5-minute bidding phases



LEGEND

LEGACY	BIDDING TRANSITION	SMS RULE
30-minute bidding only via: <ul style="list-style-type: none"> • FTP (txt) • Web Bidding (Legacy) 	30-minute bidding via: <ul style="list-style-type: none"> • FTP (txt) • Web Bidding (Legacy) 5-minute bidding* via: <ul style="list-style-type: none"> • FTP (JSON) • Web Bidding (SMS) • API <i>*Each 5-minute bid within each half hour must be identical, giving the same effect as the submission of a 30-minute bid.</i>	5-minute bidding* only via: <ul style="list-style-type: none"> • FTP (JSON) • Web Bidding • API <i>*30-minute bid emulation restriction lifted</i>

3.4 Participant Data Model Considerations

Participants that wish to commence using the 5-minute bidding service will have to update to version 5.00 of the EMMS data model¹¹. No action is required if participants are continuing to submit bids in the current 30-minute format.

3.5 Post Go-Live Support

AEMO will be providing support to the industry post go-live through Support Hub. The AEMO business, IT SMEs and 5MS project teams will be available through this channel. Participants should log issues via AEMO Support Hub to ensure that issues are escalated in a timely manner to the right team within AEMO.

Participants that require support from AEMO when they transition their own systems are encouraged to inform AEMO as early as possible to ensure an adequate level of support is provided, and to the extent possible schedule those deployments during normal working hours. Where this is not feasible to provide 72 hours of notice to enable after hours support teams to be aware of potential support requirements.

Existing support communication channels will be utilised for market communications in the post go-live period. IT system notifications will continue through the AEMO Support Hub.

Participants not already receiving Support Hub bulletins may register at: <https://www.aemo.com.au/subscribe>

The AEMO 5MS program may also organise post-go-live open Q&A sessions if required.

¹¹ For more information on the latest data model see: <https://aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/systems-workstream/systems-technical-documents>

3.6 Contingencies

The scenario of AEMO’s 5-minute bidding service failing to go-live on the scheduled date is documented in the Industry Readiness Contingency Plan spreadsheet under the scenario ID ‘C12’.¹² Table 2 below is an extract of scenario ‘C12’.

In the event AEMO’s 5-minute bidding service fails to go-live on the scheduled date, AEMO will investigate any issues and inform the industry of a new go-live date. No disruption to existing bidding processes is expected and participants will be able to continue submitting bids through the existing 30-minute bidding service.

Table 2 Contingency Scenario – AEMO’s 5-minute bidding service failing to cutover

Industry Risk Ref	Contingency Scenario	Scenario Description	Priority (H/M/L)	Likelihood (H/M/L)	Impacted Stakeholders	Triggers	Monitoring Mechanism	Response
R20	C12 - AEMO Bidding and dispatch platform cutover failure	Cutover process and production validations not successfully completed for bidding and dispatch platform deployment	H	L	AEMO, Impacted Participants	AEMO advises that the relevant milestone will not be achieved on time	Cutover plan	<ul style="list-style-type: none"> - Perform impact assessment and recommend preferred response e.g. alternative timings, assessment needs to consider materiality and duration of the delay and flow on consequences to the critical mass of participants being able to meet minimum criteria for 5MS/GS commencements and broader market. - Allow adequate time for testing.

¹²

The Industry Readiness Contingency Plan consists of a written document and a spreadsheet. For more information see: <https://aemo.com.au/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/industry-working-groups-and-readiness/industry-readiness-strategy>

Glossary

This document uses many terms that have meanings defined in the National Electricity Rules (NER). The NER meanings are adopted unless otherwise specified.

Term	Definition
5MS	Five-minute settlement
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
Cutover / Go-live	System implementation event
EMMS	Electricity Market Management Systems
GS	Global settlement
NEM	National electricity market
NER	National electricity rules
RWG	Readiness working group
Transition	Process of shifting from current to future operating state