

EMMS Release FAQ – October 2020 – Data Model v5.00

0.05 May 2021

Release series: EMMS521

Important notice

PURPOSE & AUDIENCE

This document describes the technical changes required to participant's systems for the release name. The Australian Energy Market Operator (AEMO) provides this information as a service targeting business analysts and IT staff in participant organisations. It provides guidance about the changes to their market systems under the National Gas or Electricity Rules (Rules), as at the date of publication.

HOW TO USE THIS DOCUMENT

- If you have questions about the business aspects of these changes, please see Consultations on AEMO's website
- The references listed throughout this document are primary resources and take precedence over this
 document.
- Unless otherwise stated, you can find resources mentioned in this guide on AEMO's website.
- Text in this format, indicates a reference to a document on AEMO's website.
- This document is written in plain language for easy reading. Where there is a discrepancy between the Rules and information or a term in this document, the Rules take precedence.
- Glossary and Rules terms are capitalised and have the meanings listed against them in the Glossary and Rules.

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0.05 Updates to Chapter 3 and 4.

DOCUMENTS MADE OBSOLETE

The release of this document changes only the version of EMMS Release FAQ – October 2020 – Data Model v5.00.

SUPPORT HUB

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FEEDBACK

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1. Glossary

Term	Description
30-Minute Tables	30-min Data Model tables - BIDPEROFFER - MNSP_PEROFFER - MNSP_FILETRK - MNSP_OFFERTRK These tables are discontinued from the Participant Data Model v5.00
30-Minute Tables reused for 5MS	BIDDAYOFFER MNSP_DAYOFFER BIDOFFERFILETRK
5-Minute Tables	5-min Data Model tables: - BIDOFFERPERIOD - MNSP_BIDOFFERPERIOD These tables are only populated with 5-minute Bid submissions. They do not contain replicated 30-minute Bids
5MS Bidding Transition	The 1st of April 2021 – the 30th of September 2021 During Bidding Transition, AEMO uses the latest of either 5- or 30- minute Bids
5MS Rule Commencement (Post- 5MS Bidding Transition)	The 1st of October 2021 Post 5MS Rule Commencement, AEMO uses the latest of either 5- or 30-minute Bids migrated to the 5-minute tables where they remain current
Bidding Transition Go-Live	The 1st of April 2021
Bid	Bid or Offer
Bid Sheet	The grid in the web bidding interfaces where participants enter their Bid data
Bidding Granularity	5- or 30-minute bidding

Term	Description			
Interfaces - 5MS	API: - 5-minute JSON schema file to the API e-Hub FTP: - 5-minute JSON schema file to the Participant File Server Web Interface – 5MS: - Manually in the interface - Import (or export) a csv file - Upload a JSON file			
Interfaces - Legacy	 txt or zip file to the Participant File Server Web Interface - Legacy: Manually in the interface Copy/paste into the web Bid Sheet Upload a plain text or zip file 			
Prior to Transition	Before 5MS Bidding Transition Prior to the transition period, AEMO uses the latest 30-minute Bids			
5MS Rule	National Electricity Amendment (Five Minute Settlement) Rule 2017 No. 15			
Web Interface – 5MS	The 5-minute web bidding interface after 5MS Bidding Transition Go- Live			
Web Interface - Legacy	The 30-minute web bidding interface before 5MS Rule Commencement			

2. Data Interchange

2.1 Where can I find new/updated reports for non-5MS tables?

The new reports for non-5MS tables will be available on the NEMWeb from December 2020. The Data Model scripts for the new reports will be available in April 2021.

2.2 Where can I find a list of the new tables for non-5MS changes?

You can find all details in the updated version of the <u>EMMS Technical Specification – 5MS - Data Model v5.00</u>.

2.3 With the Data Model v5.00 implemented in participant systems in April 2021, will there be another Data Model later?

Participants can implement the full Data Model v5.00 for 5MS changes along with some non-5MS updates in April.

2.4 When will the new update that includes automatic upgrade to the new Data Interchange version be available to the participants?

Pre-production: the 15th of October 2020

Production: the 29th of October 2020

2.5 How does this affect the participant?

If you have currently subscribed to both the legacy and the latest versions, this update unsubscribes you from the legacy version. To avoid any issues, please complete the transition before the go-live date. For more details, see EMMS ReleaseSchedule – Data Interchange – October 2020.

2.6 Will the participant get a notification message when they are auto unsubscribed from the LEGACY tables?

No, not in this release. AEMO will take on board the suggestion to provide notification as a future enhancement.

2.7 Do participants need to apply anything on their systems to implement the latest DI release?

No, this release is a carry-over from the previous release and manages the LEGACY report subscriptions and does not include any changes to the DI applications previously released in 2019.

2.8 DI tools and versions?

Data Interchange Versions are available at https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/nemweb-help > Framework > Baseline Assumptions > Data Interchange versions.

To upgrade the pdrLoader to the latest version, please refer to the Guide to pdrLoader Implementation Note- from Releases share from the below location: (/Releases/pdrLoader/PreProduction/v7.4.2/ Participant Data Replication Loader Implementation Note.pdf)

3. Data Model

3.1 What are the new Data Model versions?

• Electricity 5.00

3.2 **Do I have to upgrade my Data Model?**

Yes, participants must ensure their systems are upgraded prior to the 5MS Rule Commencement date (the 1st of October 2021) and can interact with the new Data Model 5.0. The wholesale market systems are in the transition period between the 1st of April 2021 and the 1st of October 2021. Participants can upgrade to receive the data in the new format at any time during this period.

3.3 When can I upgrade my Data Model?

Participants upgrade their Data Models after AEMO's communication advising the release is complete.

3.4 What if there is a delay to the release?

If there is a delay to the release AEMO will send a communication advising of the problem and a new date and time for the release.

3.5 When will AEMO release the scripts?

The full release available to the participants in pre-production on the 29th of November 2020.

3.6 Where can I find the scripts?

FTP to the Participant File Server: 146.178.211.25 > Releases > Gas or MMS Data Model > Pre-production.

3.7 Do I need to subscribe to the new reports?

- No, if you have already subscribed to the existing reports, you are subscribed to the new reports, by default.
- Yes, if you are not currently subscribed, then you will need to subscribe to the necessary reports.

3.8 How do I subscribe to new Data Model files?

- For help subscribing to Gas Data Model files, follow the steps in this document: http://aemo.com.au/-/media/Files/Gas/IT_Systems/2017/Subscribing-to-new-Gas-Data-Model-files.pdf
- For help subscribing to Electricity Data Model files, follow the steps in this guide: <u>Guide to Data Subscription</u>.

3.9 When will I see the new data?

The new MTPASA reports releasing in December should be available in NEMWeb first once the MTPASA application goes live in production. The details of these reports are available in the EMMS Technical Specification - 5MS - Data Model v5.00. Starting April 2021, when the Data Model goes live into pre-production with the 5MS release, the non-5MS reports will be available via the Data Interchange.

3.10 Will there be other Data Model versions after v5.00 goes into pre-production?

Participants can implement the full Data Model v5.00 on the 1st of April 2021. This version covers changes to all EMMS streams.

3.11 Are there other Data Model changes we can expect further down the line?

Yes, the Wholesale Demand Response rule change project is planned for the last quarter of 2021 and can introduce a new version of the Data Model as a part of that project.

3.12 Does AEMO plan on releasing the non-5MS related Data Model changes before the 29th of November 2020?

No, the non-5MS Data Model changes will be release directly into pre-production in November 2020.

3.13 Do all data in the Data Model tables between the dates of the 1st of April 2021 and the 1st of October 2021 have 30-minute granularity?

Not necessarily, for example, the participants can grab the 5MS offers and bids that emulate a 30 minute. It is for the participant to decide when you want to transition to the 5-minute granularity.

AEMO recommends when you transition to 5-minutes, you subscribe to all tables for 5MS. The 30-minute tables will still work until the 1st of October 2021 when all tables will transition to 5-minutes.

3.14 What does the primary key change mean for the participants? How much time will the update take?

As a part of the Data Model v5.0, the primary key for STPASA and PDPASA tables have been updated. All participants will need to upgrade to this version to ensure the tables are populated properly post the 5MS Rule commencement date. For more details, see the MMS Data Model v5.0 Release Notes in the \Releases\MMS Data Model\PreProduction\v5.0 folder.

Do NOT interrupt the upgrade while in progress.

Participants should examine the size of tables of STPASA_CONSTRAINTSOLUTION and STPASA_INTERCONNECTORSOLN in the Pre 5MS (**before upgrading to DM 5.0**), and if the number of rows is large or if an outage cannot be taken on the Data Interchange facility then proceed with pre/post steps as described or otherwise implement 5MS upgrade (**during upgrade to DM 5.0**) only

Pre 5MS (before upgrading to DM 5.0)

- Stop pdrLoader application.
- Copy the table structure (including indexes and primary key definition) of STPASA_CONSTRAINTSOLUTION and STPASA_INTERCONNECTORSOLN
- Rename tables STPASA_CONSTRAINTSOLUTION and STPASA_INTERCONNECTORSOLN. You can append table name with "BACKUP"
- Create the same tables using the structure that you copied in step 2
- Limited back population of new table for operational purposes
- Start pdrLoader application

5MS upgrade (during upgrade to DM 5.0)

- Stop pdrLoader
- Upgrade your database to DM5.0 if you are on DM4.30. This upgrade should be quick now.
- Start pdrLoader

Post 5MS (post upgrade to DM 5.0)

- Back populate remainder of the data from the backup table. You can run this script to run overnight. The new column that is added will get populated with default value "MARKET"
- Drop renamed table

3.15 What is the default value for the added column that will be the Primary Key for STPASA table changes?

The default value is MARKET.

3.16 Are concurrent subscriptions allowed?

Yes, participants can subscribe to both Current and Legacy files.

3.17 Are the subscriptions to the new versions automatic?

Yes, Participants will be automatically subscribed to the new files in production only. You will not be autosubscribed in the pre-production version. Also, participants subscribed to BIDMOVE_SUMMARY will be automatically subscribed to BIMOVE_COMPLETE file as BIDMOVE_SUMMARY will be discontinued with 5ms release.

As a standard process, for changes in existing files ,participants that are subscribed to the Current will be moved to _LEGACY files and they will have to revisit their subscription after they upgrade to the Data Model v5.0.

3.18 What are the milestone dates for the Data Model v5.0?

Pre-production: 30 Nov 2020

Production: 1 April 2021

3.19 Is there expected to be any significant increase in the volume of traffic over MarketNet links for Data Interchange?

As a percentage of the total data that we deliver over Market Net, it is not significant. But you would see an increase in the below areas:

- The next day files produced after 4 am, which include historical offers from the previous trading day, grow as we go from 30-minutes to 5-minute resolutions. So, we would expect an increase in size in the next day data.
- The private settlement reports that we produce to go from 30- minutes to 5minute resolutions post the 1st of October. So, there will be an increase in the size of those Settlement reconciliation report files.
- 3.20 Regarding the earlier statement that there would be no further data model changes. I understand that Market Trial is currently on v5.0, and Dev is on V5.0.3. What is going live on the 1st of April? When will market trial be upgraded to v5.0-.3? 5.03 is the version in staging only. 5.0 is the current version?

There were incremental changes in the 5MS Staging environment. They do not apply to pre-production or production. All the incremental changes in staging were rolled up into the v5.0 PreProd and Prod Data Model release and that this same release is now is staging.

3.21 What's the pre-production refresh date?

While there is no date for pre-production refresh at the moment, there is an outage on the MSATS pre-production server due to the cutover and data migration tasks related to the Retail Industry Testing process. Participants have been notified via an email from the 5MS mailbox that the cutover process will require an outage in the MSATS pre-production environment from 10 to the 16th of April, 2021.

AEMO will communicate the availability of pre-production at the completion of the cutover activity, and the availability of the environment for participant usage, which may be prior to the 19th of April.

3.22 What is the best way to check for tables/columns in MMS schema, that are new for v5.0?

The best ways to check for table/column changes in the MMS schema are:

- EMMS Technical Specification Data Model v5.00.
- Data Model Upgrade Report available in the \Releases\MMS Data Model\PreProduction\v5.0 folder.

3.23 Is an upgrade to Batcher required?

Data Model 5.0 upgrade is independent of the Batcher upgrade. Do not couple the two activities together.

Upgrade Batcher to the current Production Release.

3.24 Will there be any more changes to Data Model?

The release made on the 1st of April 2021 is the final release of Data Model v5.0.

3.25 When will the Technical Specification for Data Model v5.1 be released?

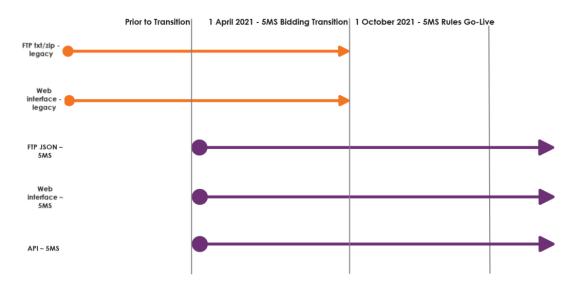
It was released on the first week of May 2021 at <u>AEMO | WDR system</u> documentation updates.

4. Bidding and Dispatch

4.1 Transition

	Prior to 5MS Transition Go- Live	5MS Bidding Transition the 1st of April 2021	5MS Rules Go-Live the 1st of October 2021
FTP txt (legacy)	\checkmark	\checkmark	×
Web bidding (legacy)	√	\checkmark	×
FTP JSON (5MS)	×	\checkmark	\checkmark
Web bidding (5MS)	×	\checkmark	\checkmark
API (5MS)	×	\checkmark	\checkmark

4.2 Timeline



4.3 Must I transition from the 1st of April 2021?

No.

The choice to move to 5-minute bidding and use the Interfaces - 5MS is participants' choice until 5MS Rule Commencement.

See Transition and go-live strategy > Bidding and dispatch platform delivery.

4.4 Which web interface should I use during 5MS Bidding Transition?

Web Interface - Legacy or Web Interface - 5MS.

During 5MS Bidding Transition, 5- and 30-minute bidding coexist in Production. AEMO maintains the Web Interface - Legacy and Web Interface - 5MS concurrently during 5MS Bidding Transition so participants can choose the web interface they prefer to use.

The Web Interface - Legacy (30-minute) and Web Interface – 5MS (5-minute) display all recently submitted Bids.

4.5 Can I revert to 30-minute bidding if I start using 5-minute?

Yes.

AEMO's systems can accommodate participants reverting to 30-minute Bids. However, to prevent confusion for participants, AEMO discourages this in Production

AEMO uses the latest submitted Bid regardless of Bidding Granularity for the DUID, Service and Trading Date so participants can choose to transition from 30-minute to 5-minute Bids any time within the 5MS Bidding Transition period.

4.6 How do we submit bids during 5MS Bidding transition?

Either, Interfaces – Legacy or Interfaces - 5MS. See below for more details:

Interfaces - Legacy

- 1. **Web**: manually in the interface, copy/paste into the web Bid Sheet, upload a plain text or zip file.
- 2. **FTP:** a txt or zip file to the Participant File Server.

Interfaces - 5MS

- 1. API (JSON): 5-minute files only.
- 2. **Web**: manually in the interface, import (or export) a csv file, upload a JSON file.
- 3. **FTP** a JSON schema file to the Participant File Server.

4.7 Can we submit 30-minute bids?

Yes

Using the Interfaces - Legacy until the 5MS Rule Commencement.

4.8 Can we submit bids via FTP during 5MS Bidding Transition?

Yes:

- A 5-minute JSON schema Bid to the Participant File Server.
- A 30-minute txt or zip Bid to the Participant File Server.

4.9 Can we submit bids via FTP after 5MS Rule Commencement?

Yes. 5-minute JSON schema Bids only.

4.10 When can we submit JSON schema bids via FTP?

Yes. From 5MS Bidding Transition Go-Live (the 1st of April 2021).

4.11 Can we submit 30-minute bids using JSON?

No.

Only 5-minute JSON schema Bids are accepted to the Interfaces - 5MS.

4.12 Can we use any of web, API, and FTP interfaces to submit 5-minute bids?

Yes.

You can use any interface combination to submit 5-minute Bids: API, web, web file, and file (FTP). They use the same validation and stamp each submission with the Bid acceptance time (offerDateTime).

You may change from one interface to any another at any time as AEMO sees all submissions as equivalent.

4.13 Can AEMO provide sample JSON bidding files?

Yes.

Samples API specification schemas are available on AEMO's API Portal: https://dev.preprod.aemo.com.au/guides/bidding.

4.14 Why must each 5-minute period within a half-hour in a 5-minute bid be the same during 5MS bidding transition?

The Rules require all Bids submitted before 5MS Rule Commencement to have 30-minute granularity.

Requiring each 5-minute period within a half-hour to be the same allows participants to use the Interfaces - 5MS during 5MS Bidding Transition while complying with the Rules.

4.15 Which web interface do I use to see my current or future bids?

Either Web Interface - Legacy or Web Interface -5MS.

Web interface - 5MS

From 5MS Transition Go-Live:

- 1. All current and prospective submissions.
- 2. All recent 5- and 30-minute submissions.

Web Interface - Legacy

All 30-minute Bids submitted using the Web Interface - Legacy (30-minute) are replicated to the Web Interface – 5MS (5-minute).

4.16 Where are bids stored in the Data Model?

For the 5MS project some tables are created, some continued, and some discontinued. For details, see EMMS Technical Specification - 5MS - Data Model v5.00.

5MS Tables

A 5-minute bid populates:

- BIDOFFERFILETRK
- BIDDAYOFFER/MNSP_DAYOFFER
- BIDOFFERPERIOD/MNSP BIDOFFERPERIOD

Legacy Tables

A 30-minute Bid populates:

- BIDPEROFFER
- MNSP_PEROFFER

4.17 What happens to existing 30-minute bids?

30-minute Bids are either:

- 1. Superseded by subsequent Bids.
- 2. Naturally lapsed into history.
- 3. Manually translated to a 5-minute Bid.

From 5MS Rule Commencement, 30-minute Bids remain as artefacts until they are no longer required for business reasons.

4.18 During the transition period, will both tables be updated when a bid is submitted regardless of whether it is 30-minutes or a 5-minute bid?

Yes. For 30 or 5-minute submissions AEMO issues a Data Model report to convey back to Participants the data that was loaded to the NEM – in either case the reciprocal period data is also included. So an accepted 30-minute submission includes the submitted 30-minute period data (BIDPEROFFER) plus the 5-minute equivalent data (BIDOFFERPERIOD) and an accepted 5-minute submission includes the submitted 5-minute period data (BIDOFFERPERIOD) plus the 30-minute equivalent data (BIDPEROFFER).

Participants can move seamlessly between these two submission forms for the duration of the Transition but must note that on 5MS rule commencement 30-minute submissions will no longer be accepted and 5-minute submissions will no longer convey the equivalent 30-minute period data.

4.19 How do AEMO's system decide when a participant receives the 30-minute bid records vs the 5-minute bid records (particularly for the NEXT_DAY files)? Is this triggered by implementation of Data Model v5.0 on participant side?

AEMO recognises and has accommodated the request from participants that transition from 30 to 5-minute tables are easier if you receive both period data sets concurrently. During the transition period, a participant can move seamlessly from the 30-minute period data to identical 5-minute period table.

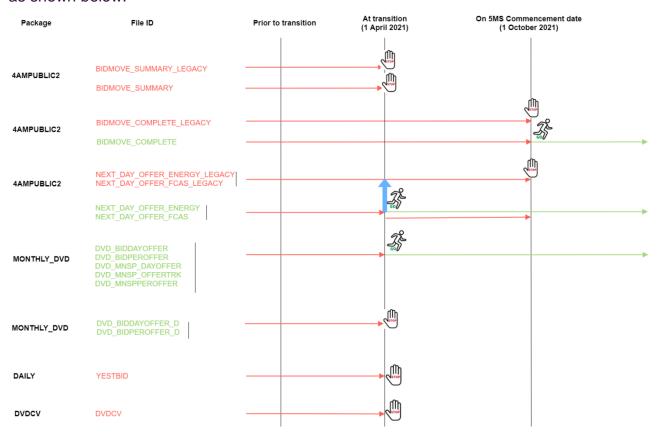
For the duration of 5MS Bidding Transition, the Data Model design is extended to include in the:

- **NEXT_DAY_OFFER_ENERGY** file: the 5-minute BIDOFFERPERIOD, 5-minute MNSP_BIDOFFERPERIOD, 30-minute BIDPEROFFER, and 30-minute MNSP_PEROFFER reports.
 - The 30-minute reports remain in the file during 5MS Bidding Transition only.
- NEXT_DAY_OFFER_FCAS file: the 5-minute BIDOFFERPERIOD and 30-minute BIDPEROFFER reports.
 - The 30-minute report remains in the file during 5MS Bidding Transition only.

From 5MS Rules Go-Live Commencement the 5MS Bidding Transition Bid/Offer availabilities may change for each 5-minute Interval making it impossible to represent Bid/Offers on a 30-minute period basis.

See image below for details on how some of the Bidding tables work during and post-transition.

The files in red indicate those which will be discontinued at either the transition or 5MS rule commencement dates. The files in green will continue as 5-minute tables as shown below.

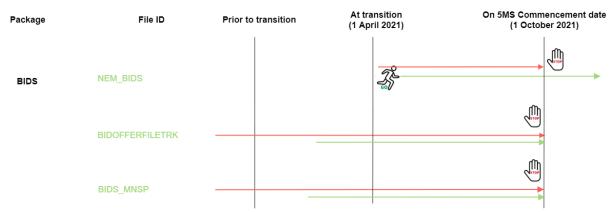


- The BIDMOVE_SUMMARY_LEGACY and BIDMOVE_SUMMARY files are terminated on the transition date, the 1st of April 2021.
- The BIDMOVE_COMPLETE_LEGACY files will contain 30-minute tables during the transition and not be populated post the 1st of October 2021, whereas the BIDMOVE_COMPLETE tables will continue to emulate 30-minute data until the 1st of October 2021 and then move to 5-minute granularity.
- At transition, the NEXT_DAY tables transfer to become the new NEXT_DAY_LEGACY tables. And the new NEXT_DAY tables read from the new tables and display both 30-miute and 5-minute data (ALL fields and 288 periods).
- The DVD_BIDDAYOFFER_D and DVD_BIDPEROFFER_D tables terminate at transition date. All other DVD_* tables will start using 5-minute granularity from the transition date of the 1st of April 2021.
- The YESTBID and DVDCV tables are terminated manually on the transition day, the 1st of April 2021.

Note: You must migrate to BIDMOVE_COMPLETE tables by the transition date to receive data from the YESTBID tables.

Note: With the 5MS rule change commencement date, the NEXT_DAY_LEGACY tables cannot be supported.





This change impacts participants subscribed to the following files in staging, preproduction, and production:

- BID_MNSP: Existing 30-minute file discontinued on commencement of the 5MS Rule Change.
- BIDOFFERFILETRK: Existing 30-minute file discontinued on commencement of the 5MS Rule Change.
- NEM_BIDS: New 5-minute file continues after commencement of the 5MS Rule Change.

For more information, see the <u>EMMS Technical Specification - 5MS - Data Model v5.00</u>.

4.20 Are all these dates and times for access/go-live beginning of the trading day @4:30 and not 00:00, specifically for the 1st of October, 2021 date?

Participants can submit 30-minute until midnight the 1st of October 2021, but any submissions made one second past midnight need to be 5-minute bids for any date.

4.21 What does the GENUNITS_UNIT patch script do?

The MMS Data Model GENUNITS_UNIT table > UNIT_COUNT column data can have a higher value than defined. Participants need to run the patch script regardless of the Data Model version you are currently on to ensure the tables are populated properly. For more details, see the EMMS - Data Model - GENUNITS_UNIT_Table on the IT Change and Release Management page.

4.22 The current version of the script does not convert from discontinued tables to ongoing/replacing tables. Would you recommend doing such a conversion?

Participants may choose to do this based on their individual application needs.

4.23 Changes to the interval data and discontinued tables like TRADINGPRICE wil not be a part of the MMS 5.0 upgrade but are included in this technical specification document. Will be there a dintinction between MMS Data Model v5.0 go-live and 5MS Rule commencement date in October?

Data Model v4.30 and v5.0 support the TRADINGPRICE table and the frequency changes from 30-minutes to 5-minute from the 1st of October.

Data Model v5.0 does not change the data, just the frequency. See Technical Specification page 12 section 4.1.1 on Modified tables.

Data Model and Technical Specification are released before Rule effective date to assist participants in preparing their systems for change. We decouple IT changes and Rule effective dates. Rule effective dates are included in Technical Specification for clarity. Recommend upgrading to Data Model v5.0 before the 1st of October.

Also included in Data Model v5.0 Technical Specification section 4.4.1 Modified data: Tables with changes to PeriodID.



4.24 Will the PREDISPATCHLOAD,
PREDISPATCHREGIONSUM tables continue on 30minutes and not be converted into 5-minute intervals
(288 intervals)?

There is no change to PreDispatch tables at 30-minutes intervals.

4.25 What is the frequency if BIDOFFERFILETRK and how fast is this file release once a bid is submitted?

The file is released in seconds.

4.26 Will NEM_BIDS include both 30 min and 5 min till 30-Sep ? After then only 5-minute data?

Yes, but participants need to upgrade to v5.0.

4.27 BIDPEROFFER table is being discontinued. Will it be discontinued from the 1st of October, or 5 days after we update our subscription to v5?

AEMO will not accept 30 min bids from the 1st of October. There will be no 30-minute bids in the table.

4.28 If there are no active 5-minute Bids for a DUID for 01-Oct but have 5-minute Bids for an earlier date, dispatch will use that bid offer. However, if the data model upgrade has not been applied in time how do we get the valid bid for the 1st of October? Will AEMO push these bids to reflect the 1st of October?

AEMO has identified these bids and ensured all bid data is in both tables.

4.29 Is there a way to identify how bids were submitted?

There isn't a straight-forward way to identify this, as the same APIs are used across AEMO submission systems – FTP and API bidding. Participants can choose to name their API submissions as .api for their benefit. We are testing something at the moment to resolve this by adding a prefix in the filename attribute. We will keep you posted on the progress.

4.30 When will the 5-minute pre-dispatch sensitivity tables be populated in pre-production?

AEMO does not have specific dates yet but this will before the 5MS Rule Commencement date (the 1st of October 2021). AEMO plans to communicate the dates by the end of next month.

4.31 Is there a longer retention period for the files being published under the V5 Schema, or is it the same retention period we had previously?

The retention period is standard.

The exception is the facility around the private baseline, allowing you to capture the forward 5-min bids and offers that might be replicated in the BIDOFFERPERIOD table when you have completed the Data Model v5.0 upgrade.

4.32 What is the expected outcome when Daily Energy Limit is defined (that is, non-zero)

The 30-minutes bidding model loaded 0 to the Daily Energy Limit field when no value was presented. This was because the data type was a non-nullable integer, which initialised as 0.

The 5-minute bidding model uses a nullable integer, so a 0 is now taken literally. So, in 5-minute bidding,

if Daily Energy Limit is not null

then Energy constrained = 1, Energy available = Daily Energy Limit

else Energy constrained = 0, Energy available = 0

4.33 What are the changes to attributes between 30-minute and 5-minute Offers

The 5MS PDM Bidding Table Columns and Validation Changes are:

Table / Field Name	New / Change d	Description	Comments
BidOfferFileTrk			
TRANSACTION_I D	New Field	A global unique ID used to identify the submission transaction in AEMO's systems	
REFERENCE_ID	New Field	A reference ID provided by the participant for the submission	Optional, but if used, it must be unique for that PARTICIPANTID
SUBMISSION_TI MESTAMP	New Field	A date/time provided by the participant for the submission	Optional
COMMENTS	New Field	A comment provided by the participant for the submission	Optional
BidDayOffer			
VERSIONNO	Changed	Defunct (replicated as hard-coded 1 for legacy consistency)	
DAILYENERGYCO NSTRAINT	Changed	Daily energy limit for the energy-constrained plant. Used only in Pre-Dispatch.	Optional, but if used, zero is interpreted as zero (in 30-minute bids, zero is interpreted as null)
MINIMUMLOAD	Changed	Fast-start profile minimum load	Optional
T1	Changed	Fast-start time to synchronise. Now null for non-ENERGY bids.	Optional
T2	Changed	Fast-start time to reach the minimum load. Now null for non-ENERGY bids.	Optional
Т3	Changed	Fast-start minimum time at minimum load. Now null for non-ENERGY bids.	Optional
T4	Changed	Fast-start minimum time to shutdown. Now null for non-ENERGY bids.	Optional
NORMALSTATUS	Changed	No longer used	

Table / Field Name	New / Change d	Description	Comments
MR_FACTOR	Changed	No longer used	
REBID_EVENT_TI ME	New Field	The time of the event(s) or other occurrence(s) cited/adduced as the reason for a rebid	Compulsory for rebids. Not required for fixed load or low ramp rates. Must be in HH:MM:SS format.
REBID_AWARE_T IME	New Field	The time at which the participant became aware of the event(s) / occurrence(s) that prompted the rebid	Optional. Requested in the AER's Rebidding and Technical Parameters Guideline. Not validated by AEMO.
REBID_DECISION _TIME	New Field	The time at which the participant decided to rebid	Optional. Requested in the AER's Rebidding and Technical Parameters Guideline. Not validated by AEMO.
REBID_CATEGOR Y	New Field	The rebid category defined in the AER's Rebidding and Technical Parameters Guideline	Optional. Not validated by AEMO.
REFERENCE_ID	New Field	A participant's unique Reference ID (matches the value in BidOfferFileTrk)	
BidPerOffer		Table is renamed as BidOfferPeriod	
PERIODID	Changed	The number of the trading period in the trading day	Can be 1-288 (in 30-minute bids, the period must be 1-48)
SETTLEMENTDAT E	Changed	Renamed as TRADINGDATE	
OFFERDATE	Changed	Renamed as OFFERDATETIME	
VERSIONNO	Changed	No longer used	
ROCUP	Changed	Renamed as RAMPUPRATE	
ROCDOWN	Changed	Renamed as RAMPDOWNRATE	

Table / Field Name	New / Change d	Description	Comments
LASTCHANGED	Changed	No longer used	
MR_CAPACITY	Changed	No longer used	
FIXEDLOAD	Changed	Fixed load for the trading period	Optional, but if used must be > 0 (in 30- minute bids, zero is interpreted as null)

5. Settlements

5.1 Settlements patch script

PERIODID definition has changed from NUMBER(2,0) to NUMBER(3,0). It is imperative that all participants apply this patch script once released to ensure that participants continue to receive data.

5.2 The Settlements reports are not propagating. Is this an issue with pre-production?

This issue was fixed on the 13th of April, 2021.

6. 5MS APIs

- 6.1 Can I use the API e-Hub to see my current or future bids? Yes.
- 6.2 Is the throttling applied to all API calls or only the submission ones?

Throttling is applied to all calls.

6.3 When do the API's go live in pre-prod?

All 5MS APIs are live in pre-production now.

7. Portal Refresh

7.1 Is there a scope to improve the sign-in experience on the Markets Portal? For example, a single sign-on.

We are working on abstracting the security layer. Currently, we are using URM for authentication. We are putting things in place to head in the direction of single-signon.

7.2 The links within AEMO documentation are frequently broken. Will the new portal fix this issue?

For now, we have imported the existing documentation for the portal contents. Where possible we have updated the links and few other minor changes int the. Given the amount of documentation involved, it might take a while to fix all the broken links. With the new online help portal, the introduction of context-sensitive help, as well as the search functionality, should improve the user experience considerably.

7.3 Where can I find the new online help documentation?

The new online help documentation is available in the locations below:

- Data Interchange online help
- Markets Portal pre-production online help
- Markets Portal production online help

7.4 When are the portal changes going into production?

The Markets Portal is currently available on the pre-production server at https://portal.preprod.nemnet.net.au/#/signin. The production go-live is on ADD DATE HERE.

7.5 Is MSATS web portal included?

MSATS is on the list of portals for the Portal Refresh project. AEMO is working on the technical details of pulling it in. The current release includes the Markets Portal. The MSATS web portal is on the list for one of the subsequent releases of the project.

8. References

Guide to Setting up a Standard Data Interchange Environment:

https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/nemweb-help

MSUG Meeting Minutes: http://aemo.com.au/Stakeholder-Consultation/Industry-forums-and-working-groups/IT-meetings/Market-Systems-User-Group

Release Schedules and Technical Specifications:

- Electricity: http://aemo.com.au/Electricity/IT-Systems/IT-change > Release Schedules
- Gas: http://aemo.com.au/Gas/IT-systems-and-change/IT-change > Release Schedules

Guide to Data Subscription: https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/nemweb-help

Subscribing to Gas Data Model Files: http://aemo.com.au/-/media/Files/Gas/IT_Systems/2017/Subscribing-to-new-Gas-Data-Model-files.pdf

<u>Transition and go-live strategy</u>: Describes the approach to transition and go-live activities, including industry coordination.

<u>Bidding Transition Plan</u>: Sets out the approach and activities associated with the Bidding transition period from the 1st of April 2021 to the 30th of September 2021.