

EMMS Release Schedule - Data Interchange – April 2023

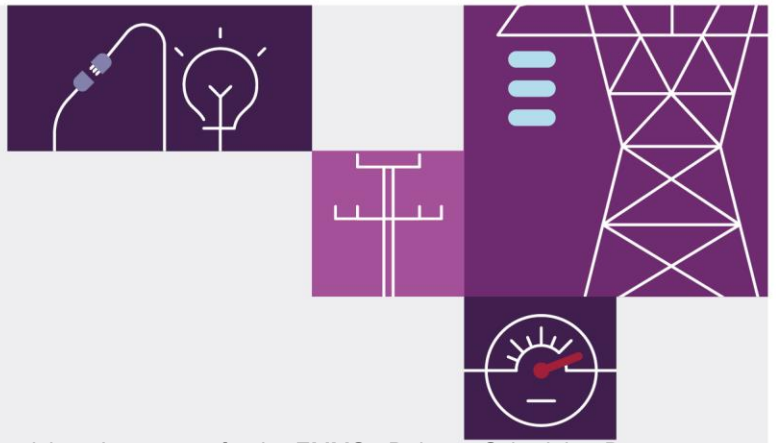
1.00 February 2023

Pre-production: Wednesday 1 March 2023

Production: Wednesday 12 April 2023

Release series: EMMSDIWESUB





Important notice

Purpose & audience

This document describes the technical changes required to participant's systems for the EMMS - Release Schedule - Data Interchange – April 2023 (Release). 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 and 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** is a link to related information. Some links require access to MarketNet.
- **Text in this format**, indicates a reference to a document on AEMO's website.
- **Text in this format** is an action to perform in the Markets Portal.
- 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 Terms are capitalised and have the meanings listed against them in the Glossary.
- Rules Terms have the meaning listed against them in the [National Gas Rules](#) and [National Electricity Rules](#) (Rules).

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Distribution

Available to the public.

Document Identification

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Version History

1.00 Initial creation

Documents made obsolete

The release of this document changes only the version of EMMS - Release Schedule - Data Interchange – April 2023.

Support Hub

To contact AEMO's Support Hub use Contact Us on AEMO's website or for urgent matters phone: 1300 AEMO 00 (1300 236 600).



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1 Introduction

1.1 Audience

AEMO provides this information as a service targeting business analysts and IT staff in Registered Participant companies.

1.2 Objective

The EMMS - Release Schedule - Data Interchange – April 2023 (Release) advises participants about the schedule and timeline for:

1. Upgrades to the Data Subscription web application in the Markets Portal.
2. Adding AEMO support for the pdrLoader CONFIGURATION request functionality.

1.3 Status

Version	Status
1.00	For information only

1.4 Release dates

Scheduled for implementation in:

- Pre-production: Wednesday 1 March 2023
- Production: Wednesday 12 April 2023

1.5 Enhancements

Enhancements in this Release include:

1. **Data Subscription**
2. **Participant Data Replication Loader (pdrLoader)**

1.6 Rule and procedure changes

None

1.7 Related technical specifications

Title	Description
EMMS Data Model v5.2	Describes the changes to the Data Model v5.2 according to projects planned by AEMO from a participant perspective

1.8 Related documents

Once published, these resources take precedence over this Release Schedule

These guides and resources are updated according to this Release.

Title	Description	Publication
Data Interchange Online Help	Data Subscription	Wednesday 12 April 2023
	Participant Data Replication Batcher	
	Baseline Assumptions	

Access to the [Data Interchange Online Help](#) does not require a MarketNet connection. Access to the [Markets Portal Help](#) requires a MarketNet connection. Please speak with your company's Participant Administrator if you require access.

1.9 Approval to change

AEMO request approval to proceed from all participant change controllers by close of business Tuesday 21 March 2023.

1.10 Market systems user group meetings

The Market Systems User Group (MSUG) is an industry user group established to discuss wholesale and retail IT systems releases. Its purpose is to facilitate the continuing improvement of AEMO's IT systems by seeking feedback and collaboration from participants.

MSUG meetings are open to all interested parties, with invitations sent to all included on the distribution list. If you have a technical question for a project and want to attend the MSUG ask your company's support team to include your email address in their **AEMO Help Desk Bulletin (CRM)** distribution list.

1.11 Version numbers

AEMO releases new versions of this document as the technical requirements are streamlined.

Incremental version numbers such as 1.01, 2.01 and so on mean there is a minor change to the technical specification.

Major version numbers such as 1.00, 2.00 means there are substantial changes to the technical specification. Participants must carefully review these changes, detailed below.

1.12 Changes in this version

No changes, this is the initial version.

2 Proposed Timeline

The dates for the Market System User Group Meetings (MSUG) are tentative. We will provide an invitation one week prior to the meeting.

Milestone	Date	Description
Approval required	Tuesday 21 March 2023	Final date for participant approval of this Release
Revised Technical Specification	March 2023 (if required)	<p>AEMO releases new versions of this document as the technical requirements are streamlined. During the project, this document is the source of truth.</p> <p>From the pre-production release, the technical specification is no longer updated, the related documents become the source of truth.</p> <p>Release schedules and technical specifications</p>
Pre-production available	Wednesday 1 March 2023	Testing period begins for participants
Pre-production refresh	<p>Apr 11, 2023 - Apr 17, 2023</p> <p>Refreshed with production data from 31 March 2023 TBC</p>	<p>Refresh of the pre-production system with data refreshed from the production system. An outage of up to five days can occur to the pre-production environment during this period. Participant access is not restricted, however, AEMO do not guarantee the pre-production data content or system availability. During the refresh, access to other AEMO systems such as AWEFS, EMMS, OPDMS, and STTM may be intermittently affected</p>
Participant Testing	Wednesday 1 March 2023 – Wednesday 12 April 2023	Unstructured/bilateral participant testing in the pre-production environment
MSUG meeting: pre-production review	Thursday, 30 March 2023	<p>Market systems user group meeting to review the implementation of this pre-production release</p> <p>This date is tentative. The project manager will provide an invitation one week prior to the meeting</p>
Production systems available	Wednesday 12 April 2023	Production systems available to participants
Related documents publication	Wednesday 12 April 2023	Release of guides and resources mentioned in Related documents

Milestone	Date	Description
MSUG meeting: post-production review	Thursday, 4 May 2023	<p>Market systems user group meeting to review the implementation of the production release</p> <p>This date is tentative. The project manager will provide an invitation one week prior to the meeting</p>

3 Participant Impact

3.1 Baseline assumptions

AEMO works to the assumption that participants' systems are compliant with the minimum supported configuration of Data Interchange, see [Baseline Assumptions](#).

3.2 Data subscription

Be aware of enhancements in the [Data Subscription](#) interface.

3.3 pdrLoader

Be aware of impacts to the CONFIGURATION capability in pdrLoader, see Implementation > [pdrLoader](#).

3.4 pdrBatcher

Be aware of impacts to the CONFIGURATION response files in pdrBatcher, see Implementation > [pdrBatcher](#).

4 Baseline Assumptions

The Data Interchange suite includes the following products:

- **Data Model:** The industry standard information store for the electricity and gas Data Models where participants load market data.
- **pdrBatcher:** Supporting file exchange with AEMO wholesale market systems.
- **pdrLoader:** Supporting loading of data to participants' local databases.
- **pdrMonitor:** Supporting configuration management and logging events (replaces the Replication Manager).
- **pdrDataModelManager:** Used to create or update a Data Model release into a participants database environment.

AEMO works to the assumption that participants' systems are compliant with the minimum supported configuration of the following software and systems.

4.1 Software

Software	Current version	Release
Java	11	Data Interchange 2022 release

4.2 Data Interchange

The following table lists the baseline assumptions for future releases of the Electricity/Gas Data Model:

Software	Current	Still supported
PDR Loader	7.5.0	7.4.*
PDR Batcher	7.5.0	7.4.*
PDR Monitor	1.2.0	1.1.0
Data Model Manager	1.0.0	n/a

4.3 Database management systems

The following table lists the specific database platforms that Electricity/Gas Data Model releases are tested against:

DBMS	Current	Still supported
Microsoft SQL Server	2019	2017, 2014
Oracle	19C	18C, 12C

4.4 Product Interoperability matrix

The following table lists the interoperability requirements between Data Interchange products. Please ensure your deployment is using a certified suite of software:

pdrMonitor version	pdrBatcher version	pdrLoader Version
1.1.0	>= 7.4.1	>= 7.4.2
1.2.0	>= 7.5.0	>= 7.5.0

5 Data Subscription

5.1 New report visibility column

The Data Subscription web application in the Markets Portal lists the catalogue of available reports. This interface is enhanced to provide a more complete view of the data confidentiality categorisation.

The new column, **ReportVisibility** has the following values:

- **PRIVATE:** Confidential data
- **PUBLIC:** Public data
- **PRIVATE-PUBLIC:** Confidential data becoming public (for example, NEXT DAY)

The csv download also includes the new **ReportVisibility** column. Click **Export to CSV** to download the file.

5.1.1 Data Subscription example interface

AEMO Markets Portal
Participant: NEMMCO
?

Menu Favourites
(?) Phil Hayes

Home

EMMS + Current EMMS Data Model Version - v5.1

MSATS + EMMS Show All File Report Relationships

Gas Supply Hub + Export to CSV

Data Interchange	PackagId	DataModelTable	Field	FileName	ReportType	ReportSubType	ReportVersion	TransactionType	RowTypeFilter	ReportVisibility
Data Delivery +	ANCILLIARY_SERVICES	CONTRACTAGC	CONTRACTAGC	<#VISIBILITY_ID>.ANCILLIARY_SERVICES.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ANCILLIARY_SERVICES	CONTRACTAGC	1	INSERT-UPDATE	LASTCHANGED	PRIVATE
Data Subscription	ANCILLIARY_SERVICES	CONTRACTLOADSHED	CONTRACTLOADSHED	<#VISIBILITY_ID>.ANCILLIARY_SERVICES.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ANCILLIARY_SERVICES	CONTRACTLOADSHED	2	INSERT-UPDATE	LASTCHANGED	PRIVATE
Performance Monitor	ANCILLIARY_SERVICES	CONTRACTREACTIVEPOWER	CONTRACTREACTIVEPOWER	<#VISIBILITY_ID>.ANCILLIARY_SERVICES.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ANCILLIARY_SERVICES	CONTRACTREACTIVEPOWER	4	INSERT-UPDATE	LASTCHANGED	PRIVATE
System Security +	ANCILLIARY_SERVICES	CONTRACTRESTARTSERVICES	CONTRACTRESTARTSERVICES	<#VISIBILITY_ID>.ANCILLIARY_SERVICES.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ANCILLIARY_SERVICES	CONTRACTRESTARTSERVICES	2	INSERT-UPDATE	LASTCHANGED	PRIVATE
Forecasting and Planning +	ANCILLIARY_SERVICES	CONTRACTRESTARTUNITS	CONTRACTRESTARTUNITS	<#VISIBILITY_ID>.ANCILLIARY_SERVICES.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ANCILLIARY_SERVICES	CONTRACTRESTARTUNITS	1	INSERT-UPDATE	LASTCHANGED	PRIVATE
DERR +	ASOFFER	OFFERAGCDATA	OFFERAGCDATA	<#VISIBILITY_ID>.ASOFFER.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ASOFFER	OFFERAGCDATA	1	INSERT		PRIVATE
DWGM +	ASOFFER	OFFERASTRK	OFFERASTRK	<#VISIBILITY_ID>.ASOFFER.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ASOFFER	OFFERASTRK	1	INSERT		PRIVATE
Gas Bulletin Board +	ASOFFER	OFFERLISHEDDATA	OFFERLISHEDDATA	<#VISIBILITY_ID>.ASOFFER.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ASOFFER	OFFERLISHEDDATA	1	INSERT		PRIVATE
Supply Forecasting +	ASOFFER	OFFERRESTARTDATA	OFFERRESTARTDATA	<#VISIBILITY_ID>.ASOFFER.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ASOFFER	OFFERRESTARTDATA	1	INSERT		PRIVATE
Portfolio Management System +	ASOFFER	OFFERPOWERDATA	OFFERPOWERDATA	<#VISIBILITY_ID>.ASOFFER.<#REPORT_DATETIME>.<#EVENT_QUEUE_ID>.CSV	ASOFFER	OFFERPOWERDATA	1	INSERT		PRIVATE
	BID	BIDDAYOFFER_D	BIDMOVE_COMPLETE	<#VISIBILITY_ID>.BIDMOVE_COMPLETE.<#CASE_DATE>.<#EVENT_QUEUE_ID>.CSV	BID	BIDDAYOFFER_D	2	INSERT		PUBLIC
	BID	BIDPOFFER_D	BIDMOVE_COMPLETE	<#VISIBILITY_ID>.BIDMOVE_COMPLETE.<#CASE_DATE>.<#EVENT_QUEUE_ID>.CSV	BID	BIDPOFFER_D	2	INSERT		PUBLIC
	BID	BIDDAYOFFER	BIDOFFERFILETRK	<#VISIBILITY_ID>.BID.<#REPORT_DATETIME>	OFFER	BIDDAYOFFER	2	INSERT		PRIVATE-PUBLIC

Data Model scripts and documentation

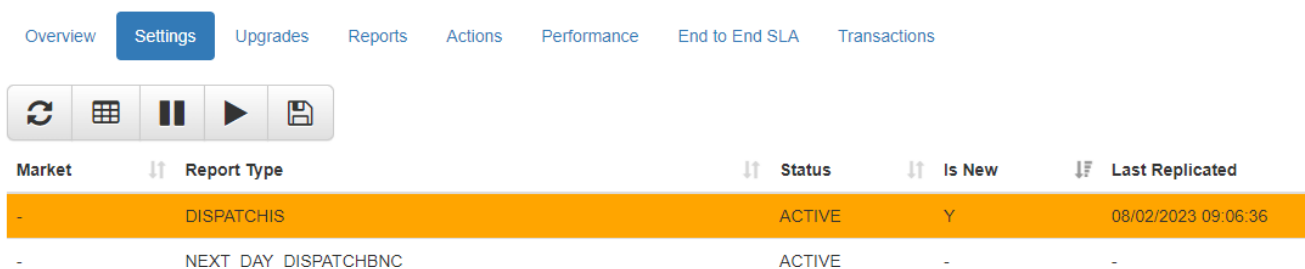
6 pdrLoader

6.1 Missing configuration data

The pdrLoader application can detect missing configuration data from the PDR_REPORT_RECORDS table. Missing configuration can arise when a csv report is presented to the pdrLoader and there is no mapping record in the table. When this happens, the pdrLoader creates a dummy record in the PDR_REPORT_RECORDS table with the new mapping.

You can identify these generated mappings several ways:

1. Direct SQL to query rows in the PDR_REPORT_RECORDS table where IS_NEW = 1.
2. In the pdrMonitor > Data Interchange > **Settings** tab.
Reports containing these generated mappings are highlighted with an orange background and show **Y** in the **Is New** column.



Overview	Settings	Upgrades	Reports	Actions	Performance	End to End SLA	Transactions
↺	📅	⏸	▶	💾			
Market	Report Type	Status	Is New	Last Replicated			
-	DISPATCHIS	ACTIVE	Y	08/02/2023 09:06:36			
-	NEXT DAY DISPATCHBNC	ACTIVE	-	-			

Usually, participants' environments maintaining a connection to a source AEMO environment do not have this issue as AEMO automatically pushes the mapping configuration updates to participants' environments.

6.2 Configuration requests

The pdrLoader application has a second process detecting any generated dummy mappings and creates a CONFIGURATION request to AEMO's systems. This request allows AEMO's systems to respond with the correct mapping configuration, allowing the data to load properly to your local database.

AEMO's systems have missed this CONFIGURATION requests feature for a number of years, so any CONFIGURATION requests generated by participants' systems remained in a TIMEOUT state. This change adds the support for these requests to the AEMO side.

6.2.1 Configuration request process

1. By default, the pdrLoader detects missing configuration on a 10-minute cycle. If the query is met (PDR_REPORT_RECORDS where IS_NEW = 1), the pdrLoader generates a CONFIGURATION request file with the details of the mappings requiring completion. This is a sample request file:

```
C,NPMN11G,REQUEST,PRTDBSYB,PRIVATE,2022/10/06,08:21:30
I,REQUEST,CONFIGURATION,1,PDR_REQUEST_ID,INSTANCE,REPORT_NAME,REPORT_SUB_TYPE,VERSION
D,REQUEST,CONFIGURATION,1,13025,NPMN11G,INT653,NULL,3
D,REQUEST,CONFIGURATION,1,13025,NPMN11G,PREDISPATCH,INTERCONNECTOR_SOLN,2
D,REQUEST,CONFIGURATION,1,13025,NPMN11G,CAUSER_PAYS_SCADA,GENERATION,1
D,REQUEST,CONFIGURATION,1,13025,NPMN11G,DISPATCH,REGIONSUM,9
D,REQUEST,CONFIGURATION,1,13025,NPMN11G,DISPATCH,REGIONSUM2,9
C,"END OF REQUEST",8
```

2. After processing the request file, AEMO's systems generate an acknowledgment of the request. This is a sample acknowledgement file:

```
C,NEMD11,RESPONSE,AEMO,PRTDBSYB,2022/10/06,09:19:25
I,RESPONSE,CONFIGURATION,1,PDR_REQUEST_ID,INSTANCE,STATUS,ERROR_MESSAGE
D,RESPONSE,CONFIGURATION,1,13024,NPMN11G,SUCCESS,
C,"END OF REPORT",4
```

3. The processing of a CONFIGURATION request results in a series of reports generated through the standard delivery channels with the requested configuration information. There is one PUBLIC_PDR_CONFIG_*_REQUEST.zip report file produced for the individual item in the CONFIGURATION request. This is a sample configuration report file:

```
C,SETA.WORLD,PDR_CONFIG_REQUEST,AEMO,PUBLIC,2022/12/01,00:03:03,000000375191834,PDR_CONFIG,0000000375191834
I,PDR_REPORT,TABLE,1,REPORT_NAME,REPORT_SUB_TYPE,VERSION,DESTINATION_TABLE,TRANSACTION_TYPE,ROW_FILTER_TYPE,IS_NEW,IS_ACTIVE
D,PDR_REPORT,TABLE,1,GASBB,GAS_SHORT_TERM_CAP_OUTLOOK,1,GAS_SHORT_TERM_CAP_OUTLOOK,INSERT,,0,0
C,"END OF REPORT",4
```

4. The pdrLoader processes the report file the same way as any other report:
 - It loads the updated configuration into the PDR_REPORT_RECORDS table.
 - Clears the IS_NEW column to reflect the configuration is confirmed.

7 Implementation

7.1 pdrLoader

The CONFIGURATION capability is enabled during the default installation of pdrLoader. If you disabled the functionality to avoid warning level messages in the application log file while the feature was unavailable at the AEMO end, you can enable it by setting the following property in the **pdrLoader.properties** configuration file:

```
# Turn on automated configuration management
file_load_auto_config=true
```

7.2 pdrBatcher

Ensure the CONFIGURATION response files are downloaded from the relevant folder on the AEMO FTP server (for help, see [Connecting to Market Systems](#)). On a standard pdrBatcher installation this file exchange is managed in Thread 6 as follows:

```
# Thread 6 : Data Interchange responses
batcher_thread_6_description=Data Interchange response download
batcher_thread_6_source=remote
batcher_thread_6_source_dir=${participant_identifier}/IMPORT/ACKNOWLEDGMENTS
batcher_thread_6_dest=local
batcher_thread_6_dest_dir=${data_staging_dir}/Reports
batcher_thread_6_inc=* _ARCHIVE_REPORTS_* , * _MANIFEST_REPORT_* , * _CONFIGURATION_*
#--batcher_thread_6_polling_interval=10
```

Participants using customised pdrBatcher thread configurations must ensure the PUBLIC_PDR_CONFIG_*_REQUEST.zip reports are made available to all pdrLoader instances. Failure to supply this report to the requesting pdrLoader instance results in that pdrLoader instance continuing to request the same missing configuration data each 10-minute cycle.

8 FAQs

Completed after the Market Systems User Group (MSUG) meeting.

9 Terms

9.1 Rules Terms

You can find the following terms defined in the [National Electricity Rules \(NER\)](#) and the [Settlements Residue Auction Rules](#).

Term
AEMO

9.2 Glossary

You can find a full list of AEMO glossary terms in [Industry Terminology](#) on AEMO's website.

Abbreviation/Term	Explanation
EMMS	Electricity Market Management System software, hardware, network, and related processes to implement the wholesale energy market
FTP	File transfer protocol
NER	National Electricity Rules
Release	EMMS - Release Schedule - Data Interchange – April 2023
Release Dates	Pre-production: Wednesday 1 March 2023 Production: Wednesday 12 April 2023
TBC	To be confirmed

10 References

10.1 Data interchange and data model resources

10.1.1 About

Information about setting up a Data Interchange environment: Data Interchange Help > [About Data Interchange](#).

10.1.2 Help

- [Data interchange online help](#)

10.1.3 Software

You can find Data Interchange software in the following locations:

- Data Interchange Help > [Software Releases](#).
- Releases directory on the participant file share: FTP to 146.178.211.2 > Data Interchange, pdrBatcher, pdrLoader, or pdrMonitor.

10.1.4 Reports

- Data Interchange Help > [Data Model Reports](#).

10.1.5 Releases

- Data Interchange Help > [Release Documents](#).

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A1. Version history

No version history, this is the initial draft release.