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# **EMMS Release Schedule - Data Interchange - February 2020**

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**1.00 Final November 2019**

Pre-production: Wednesday 4 December 2019

Production: Wednesday 5 February 2020

Release series: EMMSDIJRE11

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# Important Notice

## PURPOSE & AUDIENCE

This document describes the technical changes required to participant's systems for the Data Interchange - November 2019 release (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 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 Terms are capitalised and have the meanings listed against them in the **Data Interchange Framework and Glossary**.
- Italicised terms are defined in the Rules. Any rules terms not in this format still have the same meaning.

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## VERSION HISTORY

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## DOCUMENTS MADE OBSOLETE

The release of this document changes only the version of EMMS Release Schedule - Data Interchange - February 2020.

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# 1. Introduction

## 1.1 Summary

This release schedule advises participants about the schedule and timeline for the Data Interchange 2019 release (Release).

This Release includes:

1. Certification of the Data Interchange suite of applications (pdrBatcher, pdrLoader, pdrMonitor) against Java Runtime Environment 11.
2. Several minor enhancements and defect fixes to the applications.
3. Information about streamlining Legacy files on page 9.

## 1.2 Schedule

Scheduled for implementation in:

- Pre-production: Wednesday 4 December 2019
- Production: Wednesday 5 February 2020

## 1.3 Proposed timeline

Milestone	Date	Description
Approval required	20 December 2019	Final date for participant approval of this Release
User group meeting: initial	No MSUG meetings for this Release	Market systems user group meeting to discuss items on this Release.
Revised Release Schedule	Not required	Further details of the changes to assist IT staff with their own technical implementation (if required).
Pre-production refresh	Not required	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.

Milestone	Date	Description
Pre-production implementation	Not required	AEMO implements components of the Release to pre-production for participant testing. AEMO has full access to the system during this period. Participant access is not restricted; however, the data content or system availability is not guaranteed.
Pre-production Data Model release	Not required	Participant Data Model scripts released.
Pre-production available	Wednesday 4 December 2019	Testing period begins for participants.
Production implementation	Not required	AEMO implements the release to production.
Production systems available	Wednesday 5 February 2020	Production systems available to participants

## 1.4 Related resources

**Data Interchange Framework and Glossary:** provides important information about upgrading your Data Interchange (DI) environment, explains DI terms, DI Legacy files, and DI related resources. Please read this guide with this Release Schedule.

**Guide to Participant Data Replication Batcher:** Covers the set up and use of the PDR Batcher.

**Guide to Participant Data Replication Loader:** Covers the set up and use of the PDR Loader

**Guide to Participant Data Replication Monitor:** covers the configuration and use of the pdrMonitor software.

**Participant Data Replication Batcher GUI Installer Guide:** covers the set up of the PDR Batcher using the GUI installer.

**Participant Data Replication Loader GUI Installer Guide:** covers the set up of the PDR Loader using the GUI installer.

**Participant Data Replication Monitor GUI Installer Guide:** assists participants to install and configure the Participant Data Replication Monitor (pdrMonitor) software.

**Guide to Data Subscription:** instructions for using the Data Subscription web interface in the Markets Portal.

**Data Interchange software and associated guides:**

- Participant File Server > Releases Folder > pdrBatcher, pdrLoader, or pdrMonitor.
- Data Subscription web application in the Markets Portal:
  - Production: <https://portal.prod.nemnet.net.au>
  - Pre-production: <https://portal.preprod.nemnet.net.au>
- AEMO's website: Electricity or Gas IT Systems.

**1.5 Approval or agreement to change**

AEMO request approval to proceed from all participant change controllers by close of business 20 December 2019.

## 2. Release notes

### 2.1 pdrBatcher

The pdrBatcher v7.4.2 release is an upgrade from any existing v7.4.n installation. The changes delivered in the v7.4.1 release are included in this document for completeness.

#### 2.1.1 Functional enhancements

##### **pdrBatcher v7.4.2**

The functional enhancements to pdrBatcher v7.4.2 include:

- Certification of operation against OpenJDK JRE 11.
- Improved GUI installer providing support for full and upgrade application installations.

##### **pdrBatcher v7.4.1**

The functional enhancements to pdrBatcher v7.4.1 include:

- Performance and logging monitor interface includes the instance\_identifier in the filename, allowing sharing of the performance directory between multiple application instances.
- Ensuring the cache state file is regularly persisted in CONSUMER\_CACHE mode.
- An exclusive lock on the web file manager state file, preventing configuration of multiple application instances using the same state cache file.
- Additional disk space monitoring capabilities.
- A check if the file has an OS level lock when performing processing of files from the LOCAL source.
- Additional ability to filter items from the properties configuration file displayed in the pdrMonitor.

#### 2.1.2 Bug fixes

##### **pdrBatcher v7.4.2**

The bug fixes in pdrBatcher v7.4.2 include:

- Correction of a defect in the initialisation of the PURGE thread.

## **pdrBatcher v7.4.1**

The bug fixes in pdrBatcher v7.4.1 include:

- Only writing cache state files on application shutdown when they are configured for use.

## **2.2 pdrLoader**

The pdrLoader v7.4.2 release is an upgrade from any existing v7.4.n installation. The changes delivered in the v7.4.1 release are included in this document for completeness.

### **2.2.1 Functional enhancements**

#### **pdrLoader v7.4.2**

The functional enhancements to pdrLoader v7.4.2 include:

- Certification of operation against OpenJDK JRE 11.
- Certification against new database platforms: Oracle 18C/19C, SQL Server 2017.
- Added support to export table from the database to a CSV file compatible with the pdrLoader.
- A new script to reset the reconciliation point in time from the command line.
- Support for loading to the TIMESTAMP fields in Oracle.
- Enhancements to the GUI installer providing improved support for the implementation of full and upgrade installations.
- Enhanced APIs supporting additional functionality in the pdrMonitor Data Interchange dashboard v1.1.0.

#### **pdrLoader v7.4.1**

The functional enhancements to pdrLoader v7.4.1 include:

- An update to postgresSQL JDBC driver.
- The performance and logging monitor interface has instance\_identifier in the filename to allow sharing of the performance directory between multiple application instances.
- Additional disk space monitoring capabilities.
- Additional tablespace monitoring facilities.
- A new parameter allowing configuration of the Data Model audit tables accessed within API services.
- Additional ability to filter items from the properties configuration file displayed in the pdrMonitor.



## 2.2.2 Bug fixes

### pdrLoader v7.4.2

The bug fixes in pdrLoader v7.4.2 include:

- Correction of a defect that may result in parallel file loading even when the sequential\_procs flag is set.

### pdrLoader v7.4.1

The bug fixes in pdrLoader v7.4.1 include:

- Correction of a defect resulting in repeated warning messages where ABANDONED reports exceeded the maximum rejection count.
- All manifests and acknowledgments processed sequentially to avoid locking issues in mySQL.
- Correction of a defect for reporting reconciliation point-in-time for status report in the log file.

## 2.3 pdrMonitor

### 2.3.1 Functional enhancements

The functional enhancements to pdrMonitor v1.1.0 include:

- Certification of operation against OpenJDK JRE 11.
- Certification against new database platforms: Oracle 18C/19C, SQL Server 2017.
- Support for millisecond resolution performance data reporting.
- Enhancements to the Data Interchange dashboard display to report status within the latest hour.

### 2.3.2 Bug fixes

The bug fixes in pdrMonitor v1.1.0 include:

- Correction of a defect with name case mismatch including a reference to dataTables.min.js causing problems on case-sensitive operating system platforms.
- Correct a syntax error in the pdrMonitorPasswordReset.sh.
- Changes in the start and end date validation in the web interface forms correcting a validation problem.

# 3. Baseline Assumptions

The Data Interchange suite includes four products:

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

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

## 3.1 Software

Software	Current version	Release
Java	11	Data Interchange 2019 release

## 3.2 Data Interchange

For the 2019 Data Interchange software release there are the following new versions of the PDR Batcher, PDR Loader and PDR Monitor:

Software	New version	Current version	Not supported
PDR Loader	7.4.2	7.4	7.3
PDR Batcher	7.4.2	7.4	7.3
PDR Monitor	1.1.0	1.0.0	n/a

## 3.3 Database management systems

DBMS	Current	Still supported
Microsoft SQL Server	2017	2014, 2012
Oracle	19C	18C, 12C

### 3.4 Product Interoperability matrix

pdrMonitor version	pdrBatcher version	pdrLoader Version
1.0.0	$\geq 7.4.1$	$\geq 7.4.1$
1.1.0	$\geq 7.4.1$	$\geq 7.4.2$

# 4. Streamlining Legacy Files

## 4.1 About legacy files

AEMO market system software releases support the Latest (n) and Legacy (n-1) integrations to AEMO's market systems, allowing maintenance of participant interfaces across the system implementation at the AEMO end.

AEMO expects participants using Data Interchange to complete the corresponding release implementation at their end, moving from Legacy to Latest, prior to the next system release.

Once participants upgrade their systems to the latest release, there is no requirement to maintain the Legacy report subscriptions.

For more details about Data Interchange Legacy files, see [Data Interchange Framework and Glossary](#).

For help subscribing and unsubscribing to files, see [Guide to Data Subscription](#).

## 4.2 Problem

During a Data Interchange implementation, many participants subscribe to the new files but do not complete the final step of removing the Legacy report subscriptions.

Participants' Data Interchange systems maintaining concurrent subscriptions to the Current and Legacy versions of Data Model files can cause the systems to discard the Current file version in favour of the Legacy file version.

For help with a Data Interchange installation, see:

- [Guide to setting up a standard Data Interchange environment](#)
- [Guide to upgrading a standard Data Interchange environment](#)

## 4.3 Resolution

To assist the integrity of participants Data Interchange systems, from the implementation of this Release, AEMO will:

1. Check every 15 minutes if the Participant ID is subscribed to the Current file.
2. If yes, de-subscribe the Participant ID from the Legacy file.

## 4.4 Outcome

This change:

- Only impacts participants' Data Interchange systems maintaining concurrent subscriptions to the Current and Legacy versions of Data Model files as an outcome of incomplete implementations of historical or future releases.
- Does not impact participants' ability to maintain a Legacy subscription following a release and complete the system upgrade at a time of their own choosing.

However, once participants subscribe to the Latest reports, AEMO's systems automatically unsubscribe participants from the Legacy report, as outlined in Resolution on page 9. Participants can revert this action by resubscribing to the Legacy report and unsubscribing from the Latest.