



# EMMS RELEASE SCHEDULE – DATA INTERCHANGE V7.4 UPGRADE

## AEMO RELEASE SCHEDULE EMMSDI7.4

Published 28 September 2017 Version 1.00



Stage 1 Pre-production: Thursday 5 Oct 2017

Production: Thursday 30 November 2017

pdrBatcher & pdrLoader  
upgrade to v7.4

---

Stage 2 Expected delivery: quarter 1, 2018

pdrMonitor product  
released to replace the  
Replication Manager



# IMPORTANT NOTICE

## Purpose & audience

This document describes the technical changes required to participant's systems for the Data Interchange 2017 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 Glossary.
- *Italicised terms* are defined in the Rules. Any rules terms not in this format still have the same meaning.
- Actions to complete in the Web Portal interface are **bold and dark blue**.

## Privacy and legal notices

The material in this publication may be used in accordance with the privacy and legal notices on [AEMO's website](#).

## Trademark Notices

Microsoft, Windows and SQL Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Oracle and Java are registered trademarks of Oracle and/or its affiliates.

UNIX is a registered trademark of The Open Group in the US and other countries.

© 2015 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

## Distribution

Available to the public.

## Document Identification

Version: 1.00

Prepared by: AEMO Market Systems

Last update: Thursday, 28 September 2017 11:35

## Documents made obsolete

The release of this document changes only the version of System Name 00.00.0 Technical Specification - Month Year.

## Further Information

For further information, please visit AEMO's website [www.aemo.com.au](http://www.aemo.com.au) or contact:

AEMO Information and Support Hub Phone: 1300 AEMO 00 (1300 236 600) and follow the prompts. Email: [supporthub@aemo.com.au](mailto:supporthub@aemo.com.au)

## Feedback

Your feedback is important and helps us improve our services and products. To suggest improvements, please contact AEMO's Support Hub.



# CONTENTS

1	Introduction.....	4
1.1	Schedule .....	4
1.2	Approval to change .....	5
2	Data Interchange Software Upgrade.....	6
2.1	pdrBatcher upgrade .....	6
2.2	pdrLoader upgrade .....	6
2.3	pdrMonitor software .....	7
3	Baseline Assumptions .....	9
3.1	Software .....	9
3.2	Data Model.....	9
3.3	Data Interchange .....	9
3.4	Database management systems .....	10
4	Implementation.....	11
4.1	Implications .....	11
4.2	After deployment of this Release .....	11
4.3	What happens if I do not upgrade?.....	11
5	Glossary .....	12
5.1	Abbreviations .....	12
5.2	Special terms .....	12



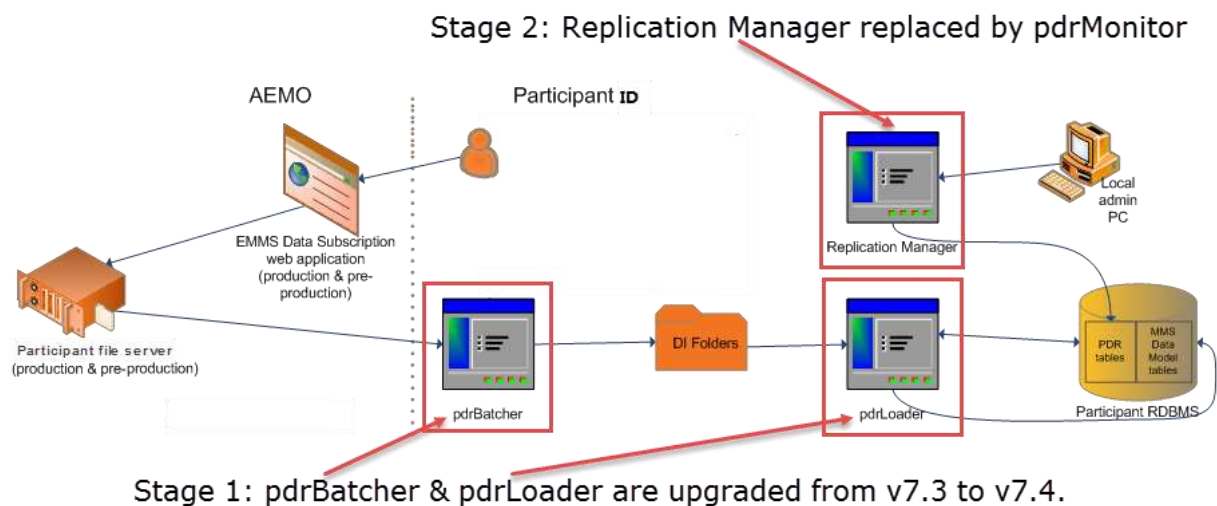
# 1 INTRODUCTION

Data interchange (DI) is a set of cooperating applications to replicate data between AEMO’s Wholesale Market Systems and registered participants’ RDBMS conforming to the Electricity and Gas Data Models. AEMO recommends participants use the Data Interchange software (supplied by AEMO) to automate receiving and storage of the subscribed reports from the Market Portal’s Data Subscriptions application.

For more details about Data Interchange, see the Data Interchange section in either Electricity or Gas IT systems on AEMO’s website.

This project upgrades components of the DI software. AEMO will deliver the upgrade in two stages:

1. Stage one: Participant Data Replication Batcher (pdrBatcher) v7.4 and Participant Data Replication Loader (pdrLoader) v7.4.
2. Stage two: introduces a new DI product, Participant Data Replication Monitor (pdrMonitor) to replace the existing Replication Manager software.



**There is no dependency between the EMMS October—December 2017 release and this Data Interchange Upgrade v7.4. AEMO recommends participants upgrade their Data Model version and their Data Interchange environment separately.**

## 1.1 Schedule

Stage one implementation - pdrBatcher v7.4 and pdrLoader v7.4:

- Pre-production: Thursday 5 Oct 2017
- Production: Thursday 30 November 2017

Stage two implementation - pdrMonitor:

- The expected delivery is quarter one 2018. Before implementation, AEMO will publish an updated release schedule with firm dates.



## 1.2 Approval to change

**AEMO seeks approval to proceed from all participant change controllers and deems the change approved if there is no response within 15 business days.**

### **Response required date, close of business: 19 October 2017**

Please send your response by email to AEMO's [Support Hub](#) with the following details:

- Name
- Organisation
- Contact details
- Response Yes or No
- Comments



## 2 DATA INTERCHANGE SOFTWARE UPGRADE

### 2.1 pdrBatcher upgrade

The improvements in the pdrBatcher v7.4 release are around certification for the Java Runtime Environment (JRE 8).

#### 2.1.1 Functional enhancements

The functional enhancements to pdrBatcher v7.4 include:

- Certification against JRE 8.
- An upgraded Log4J logging library from 1.2 to 2.8.
- Additional functionality in the file purging configurations with the ability to limit to a maximum number of files and a maximum disk size of all files.
- A periodic alert message to exercise alert delivery channels.
- A new handler, CONSUMER\_CACHE, is implemented allowing replication of data from a source without deleting the source file. This mode detects new files and updates to existing files at the source, and replicates them to the target.
- A new transport mode, NULL is added that has no persistence.
- Added enhancements and parameters for future use with the pdrMonitor product that replaces the existing Replication Manager.

#### 2.1.2 Bug fixes

The bug fixes in pdrBatcher v7.4 include:

- An upgrade of WinRun4J Windows service wrapper to resolve Java classloader issues in that component.

### 2.2 pdrLoader upgrade

The improvements in pdrLoader v7.4 release are around certification for database and Java Runtime Environment platforms (JRE 8).

#### 2.2.1 Functional Enhancements

The functional enhancements in pdrLoader v7.4 include:

- Certified against JRE 8.
- Support for SQL Server 2014.
- An upgraded Log4J logging library from 1.2 to 2.8.
- Additional functionality in the file purging configurations with the ability to limit to a maximum number of files and a maximum disk size of all files.
- A periodic alert message to exercise alert delivery channels.
- A new parameter allowing the processing order of a thread to be specified.



- Added enhancements and parameters for future use with the pdrMonitor product that replaces the existing Replication Manager.
- Changed application behaviour includes: manifest and archive request responses are no longer sent to the Archive directory after processing.

### 2.2.2 Bug fixes

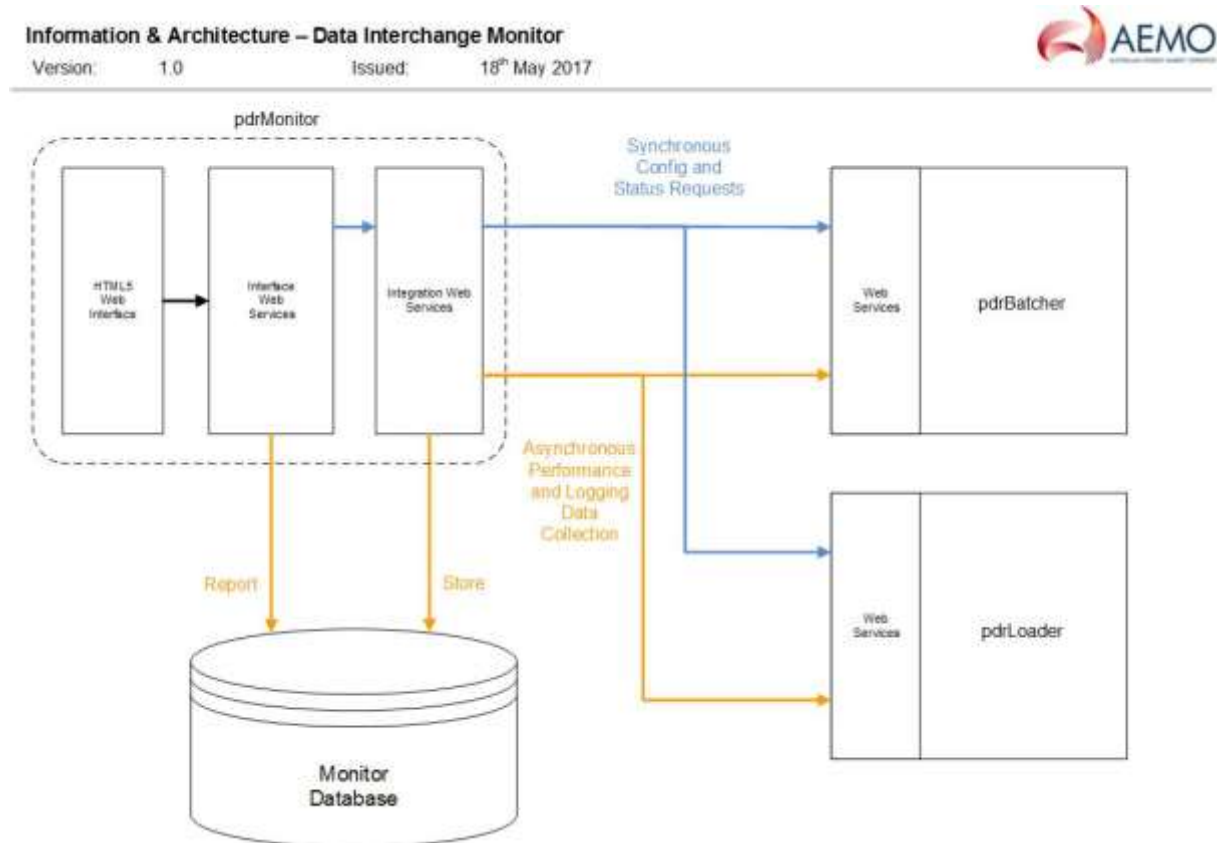
The bug fixes in pdrLoader v7.4 include:

- An upgrade of WinRun4J Windows service wrapper to resolve Java classloader issues in that component.
- A defect correction in row filter pdrRowFilterResponseProcess that caused error messages to output to a log file for responses not relevant to the running instance.
- Correct inability to shut down the windows service if there are unprocessed tasks in the loader threads.

## 2.3 pdrMonitor software

The pdrMonitor software is a new product allowing participants to analyse and monitor their connected PDR products (pdrBatcher and pdrLoader). pdrMonitor provides a browser interface to access the configuration and reporting forms that cover both the pdrBatcher and pdrLoader products.

The high-level technical architecture is shown below:





pdrMonitor's significant characteristics are:

- It has the same underlying technical requirements as the other Data Interchange components - Java Runtime Environment 8 and a supported database platform.
- Its database supports Oracle or SQL Server.
- It can be co-hosted within existing data model databases or schemas, if desired or stored as an independent repository.
- It uses the web server built into the Java Runtime Environment to serve up browser interfaces. There is no requirement for configuration of a web server.
- It accesses pdrBatcher and pdrLoader v7.4 web service interfaces to report status and configuration.
- It supports multiple Data Interchange systems within a single pdrMonitor instance, if desired.





## 3 BASELINE ASSUMPTIONS

AEMO works to the assumption that participants' systems are compliant with the minimum supported configuration of the software and systems. The following changes to baseline assumptions apply from the production implementation of this release

### 3.1 Software

The changes to current software versions are:

Software	Current version	Release
Java	8	Data Interchange v7.4 release

### 3.2 Data Model

Market	Current version	Still supported
Electricity	4.27	4.26
Gas	1.4	1.3

### 3.3 Data Interchange

The current DI software versions are:

Software	Current version	Still supported
PDR Loader	7.4	7.3
PDR Batcher	7.4	7.3
PDR Monitor	1.0	n/a
Replication Manager	Replaced by PDR Monitor	3.0.16

**To continue to receive support from AEMO, participants need to upgrade their pdrBatcher and pdrLoader software to the v7.4 release by 30 November 2018.**



### 3.4 Database management systems

DBMS	Current	Still supported
Microsoft SQL Server	2014	2012
Oracle	12c	11g

#### 3.4.1 Data Interchange software and guides

You can find Data Interchange software and associated documents in the following locations:

- Releases directory on the participant file share: FTP to 146.178.211.25; Data Interchange, pdrBatcher, pdrLoader, or Replication Manager.
- 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.



## 4 IMPLEMENTATION

### 4.1 Implications

To continue to receive support from AEMO for Data Interchange products, participants need to ensure their installed versions of Data Interchange software remain compliant with the software versions AEMO supports, see Baseline Assumptions on page 9.

Participants need to upgrade their pdrBatcher and pdrLoader software to the v7.4 release within 12 months of the production implementation date: Thursday 30 November 2017.

**AEMO no longer supports the v7.3 Data Interchange products and the Replication Manager software from Friday 30 November 2018.**

### 4.2 After deployment of this Release

- The supported Data Model versions remain the same. See Baseline Assumptions on page 9.
- AEMO no longer supports Microsoft SQL Server 2008 as a target platform in pdrLoader v7.4.

### 4.3 What happens if I do not upgrade?

In the event that a participant running pdrBatcher or pdrLoader v7.3 requests support from AEMO for those versions after Friday 30 November 2018, AEMO will request the participant to perform an upgrade to the v7.4 release before providing support.



## 5 GLOSSARY

### 5.1 Abbreviations

Abbreviation	Explanation
DBMS	Database Management System
DI	Data Interchange
EMMS	AEMO's Wholesale Energy Market Management System. Software, hardware, network and related processes to implement the wholesale energy market.
FTP	File transfer protocol
PDR	Participant Data Replication

### 5.2 Special terms

Term	Definition
Data Interchange (DI)	The set of cooperating applications to replicate data between AEMO's Wholesale Market Systems and a participant's RDBMS conforming to the Electricity and/or Gas Data Models
Data Model	Refers to the Electricity or Gas Data Models, which is the definition of the interface to participants for data published by AEMO
Markets Portal	Wholesale system pre-production and production web-based portals: Production: <a href="https://portal.prod.market.net.au">https://portal.prod.market.net.au</a> Pre-production: <a href="https://portal.preprod.market.net.au">https://portal.preprod.market.net.au</a>
pdrBatcher	Participant Data Replication Batcher
pdrLoader	Participant Data Replication Loader
pdrMonitor	Participant Data Replication Monitor
Release	Data Interchange Upgrade v7.4
Replication Manager	Replication Manager is a GUI-based application installed at participant's sites to assist with the management of the data flows to and from participant's local Data Model database and AEMO. AEMO discontinues the Replication Manager from this release.