AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

EMMS Revised Release Schedule & Technical Specification - Jan 2019 – Electricity Data Model v4.28

V2.00 Final December 2018

pre-production: 13 December 2018

production: 10 January 2019

Release series: EMMS082018MP5F

Important notice

PURPOSE & AUDIENCE

This document describes the technical changes required to participant's systems for the January 2019 - Data Model 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.
- Italicised terms are defined in the Rules. Any rules terms not in this format still have the same meaning.

AEMO REFERENCE NUMBERS

Included in each project heading is a Quality Centre Identifier (QCID) that provides useful tracking information. There may be none, one, or more QCIDs relevant to each project heading.

References to change notices are CN followed by the change notice number.

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

Prepared by: AEMO Technology

Last update: Tuesday, 11 December 2018 3:19 PM

VERSION HISTORY

V2.00 Additional information for MP5F.

DOCUMENTS MADE OBSOLETE

The release of this document changes only the version of EMMS Revised Release Schedule & Technical Specification - Jan 2019 – Electricity Data Model v4.28.

SUPPORT HUB

AEMO's Support Hub	Phone: 1300 AEMO 00 (1300 236 600) and follow the prompts. Email: 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

1.1 Summary

This release schedule and technical specification informs participants about NEM report and Electricity Data Model v4.28 changes.

1.2 Changes in this version

Changes in this EMMS Revised Release Schedule & Technical Specification - Jan 2019 – Electricity Data Model v4.28 include:

1. Where to retrieve NEM reports.
2. Small changes to the comments in the DEMAND_FORECAST tables for the MP5F project.
3. Added information about **Intervention Pricing constraint right-hand-side calculation improvement,** see Projects below**.**
4. A small change to comments in the GENERIC CONSTRAINT GENCONDATA table.
5. Removed the **Used** field from NEM reports.

1.3 Audience

We provide this information as a service targeting business analysts and IT staff in participant organisations.

1.4 Schedule

- Pre-production: 13 December 2018
- Production: 10 January 2019

1.5 Projects

1. **Improvements to Projected Assessment of System Adequacy (PDPASA and STPASA)**: Improvement to publication of reserves. The change enables PASA to first utilise the energy limited plant to minimise LOR conditions and then allocate the remaining energy limited plant proportional to regional demand in reserve reporting. For more details, see Market Notice 63432.
2. **Improvements to Projected Assessment of System Adequacy (MTPASA)**: Improvements to MTPASA reporting.

3. **Intermittent Generation wind and solar farm availability:** Private information included in the Data Model, allowing participants to reconcile information submitted to AEMO with their own backend systems without having to visually inspect the Markets Portal.

4. **Market Participant 5-Minute Self Forecast (P1312 MP5F)**: For details, see http://aemo.com.au/-/media/Files/Electricity/NEM/IT-Systems-and-Change/2018/EMMS-Release-Schedule---August-2018---MP5F-API.pdf
Participant data submitted to AEMO's API e-Hub will be available in the Electricity Data Model and NEM Reports from this Release.

5. **Intervention Pricing reporting improvements**: The change to all P5MIN tables adds an Intervention field for participants wanting to add Intervention Pricing to their primary keys.

6. **Intervention Pricing constraint right-hand-side calculation improvement:** Introducing a new column FORCE_SCADA to tag feedback constraints that use the SCADA "InitialMW" values instead of "WhatIfIntialMW" values in the NEMDE Intervention Pricing run. For more information on the change to the constraint right-hand-side calculation of feedback constraints in the intervention pricing run, see Intervention Pricing Methodology consultation final report (http://www.aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/Electricity_Consultations/2018/Intervention-Pricing/Intervention-Pricing-Methodology---Final-Report-and-Determination.pdf).

1.6 Proposed timeline

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

Milestone	Date	Description
Approval required	1 November 2018	Final date for participant approval of this Release.
Revised Release Schedule	11 December 2018	Further details of the changes to assist IT staff with their own technical implementation.
User group meeting: initial	21 November 2018	Market systems user group meeting to discuss items on this Release.
PDR Monitor, PDR Batcher, & PDR Loader	22 November 2018	Available in production.
Pre-production refresh	Refresh not required for this Release	Refresh of the pre-production system with data refreshed from the production system.

Milestone	Date	Description
Pre-production Data Model v4.28 scripts released	4 December 2018	Release of Data Model scripts. Participant can apply the scripts to their pre-production environments. Please do not apply these scripts to your production environments.
Pre-production implementation	10 December 2018 – 13 December 2018	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 release	13 December 2018	January pre-production projects released.
Production implementation	7 January 2019 – 10 January 2019	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.
Production release	10 January 2019	January production projects released.
User group meeting: post-implementation review	17 January 2019	Market systems user group meeting to review the implementation of the production release.

1.7 Approval to change

AEMO sought approval to proceed in v0.18 EMMS Revised Release Schedule & Technical Specification - Jan 2019 – Electricity Data Model v4.28, published October 2018. See Proposed timeline on page 2.

1.8 Glossary

Abbreviation/Term	Explanation
API	Application Programming Interface

Abbreviation/Term	Explanation
API e-Hub	Consists of the API Web Portal and the API Gateway
ASEFS	Australian Solar Energy Forecasting System
AWEFS	Australian Wind Energy Forecasting System
EMMS	Wholesale electricity market system
Market time	Australian Eastern Standard Time (AEST)
MP5F	Market Participant 5-Minute Self Forecast
Suppressed	AEMO suppresses participant forecast if they deem there is a threat to system security.
UIGF	Unconstrained Intermittent Generation Forecasts

1.9 Related resources

Participants can find resources on AEMO's website.

Concise Guide to Data Interchange: describes how to set up a standard Data Interchange environment to replicate data between AEMO's energy market systems and participants' local DBMS conforming to the MMS Data Model. The standard environment is AEMO's recommended configuration.

Data Interchange Framework and Glossary: provides important information about upgrading your Data Interchange (DI) environment, explains DI terms, and DI related resources. Please read this guide in conjunction with this technical specification.

Guide to AEMO's e-Hub APIs: Provides details about using AEMO's e-Hub as an interface to communicate information with AEMO. It assists Wholesale electricity and gas participants developing their own APIs.

Guide to Electricity Information Systems: Provides guidance for *Registered Participants* and interested parties about AEMO's participant electricity market systems.

Guide to Markets Direct: Explains how to use the Markets Portal Market Direct web application providing participants with access to reports and statements published by AEMO.

Guide to User Rights Management: Assists participant administrators (PAs) to use the user rights management functions in the MSATS Web Portal.

2. NEM Reports

2.1 MP5F

2.1.1 Confidential reports

Immediate report

An immediate report flagging when AEMO suppresses or does not suppress participant forecasting on each DUID along with the reason.

Current interval reports

Current interval reports for all valid *dispatch* forecast submissions. To reduce the volume of individual files these reports are included with the *dispatch* reports. The forecast used is flagged for each DUID.

There is one file with the following two reports:

Report 1

Field	Confidential
RUN_DATETIME	Yes
DUID	Yes
ORIGIN	Yes
FORECAST_PRIORITY	Yes
OFFERDATETIME	Yes
PARTICIPANT_TIMESTAMP	Yes
COMMENTS	Yes
MODEL	Yes
SUPPRESSED_PARTICIPANT	Yes
SUPPRESSED_AEMO	Yes
AUTHORISEDBY	Yes
TRANSACTION_ID	Yes
LASTCHANGED	Yes

Report 2

RUN_DATETIME	Yes
DUID	Yes
ORIGIN	Yes
FORECAST_PRIORITY	Yes
OFFERDATETIME	Yes
INTERVAL_DATETIME	Yes
FORECAST_MEAN	Yes
FORECAST_POE10	Yes
FORECAST_POE50	Yes
FORECAST_POE90	Yes

2.1.2 Public reports

Next-day publication of all valid *dispatch* forecasts

Next-day publication of all valid *dispatch* forecasts for all DUIDs and *dispatch intervals* for the previous trading day, regardless of suppression or origin. This report also includes the value AEMO used (not supported in the Data Model).

There is one file with the following two reports:

Report 1

Field	Public
RUN_DATETIME	Yes
DUID	Yes
ORIGIN	Yes
FORECAST_PRIORITY	Yes
OFFERDATETIME	Yes
PARTICIPANT_TIMESTAMP	Yes
COMMENTS	No

Field	Public
MODEL	No
SUPPRESSED_PARTICIPANT	Yes
SUPPRESSED_AEMO	Yes
AUTHORISEDBY	No
TRANSACTION_ID	Yes
LASTCHANGED	Yes

Report 2

Field	Public
RUN_DATETIME	Yes
DUID	Yes
ORIGIN	Yes
FORECAST_PRIORITY	Yes
OFFERDATETIME	Yes
INTERVAL_DATETIME	YES
FORECAST_MEAN	Yes
FORECAST_POE10	Yes
FORECAST_POE50	Yes
FORECAST_POE90	Yes
USED (unsupported in the Data Model)	Yes

2.2 Predispatch PASA and Short term PASA

The Predispatch PASA and Short term PASA public files change to select the Unconstrained Capacity and Constrained Capacity values from LOR runs.

There is no change to the Electricity Data Model.

Participants can retrieve these files by the following methods:

1. Directly from http://www.nemweb.com.au > Predispatch PASA or Short Term PASA.
2. Data Subscription > Subscribe to Files (retrieve from the Participant File Server using Data Interchange or FTP).

2.3 Retrieving NEM reports

2.3.1 Market Direct

Participants retrieve the reports from the Markets Portal Market Direct web application. For help, see **Guide to Markets Direct**.

2.3.2 Data Interchange

Participants can set up Data Interchange to replicate data between their systems and AEMO's. For help, see **Concise Guide to Data Interchange**.

2.3.3 FTP

Participant File Server: ftp://146.178.211.63 (requires subscription in the Markets Portal Data Subscription web application).

2.3.4 Market Data NEMweb

Next day availability: http://www.nemweb.com.au/

3. Data Interchange products

We remind participants that from Friday 30 November 2018, we no longer support the Data Interchange PDR Loader and PDR Batcher v7.3 and the Replication Manager software.

To continue to receive support from AEMO for Data Interchange products, participants must ensure their installed versions of Data Interchange software remain compliant with the following supported products:

Software	Current version	Still supported
PDR Loader	7.4.1	7.4
PDR Batcher	7.4.1	7.4
PDR Monitor	1.0	n/a

To ensure the installation is compatible with PDR Monitor, we recommend upgrading to PDR Batcher/PDR Loader to v7.4.1

This Electricity Data Model release will only be tested on the supported products mentioned above.

3.1 Version 7.4.1 availability

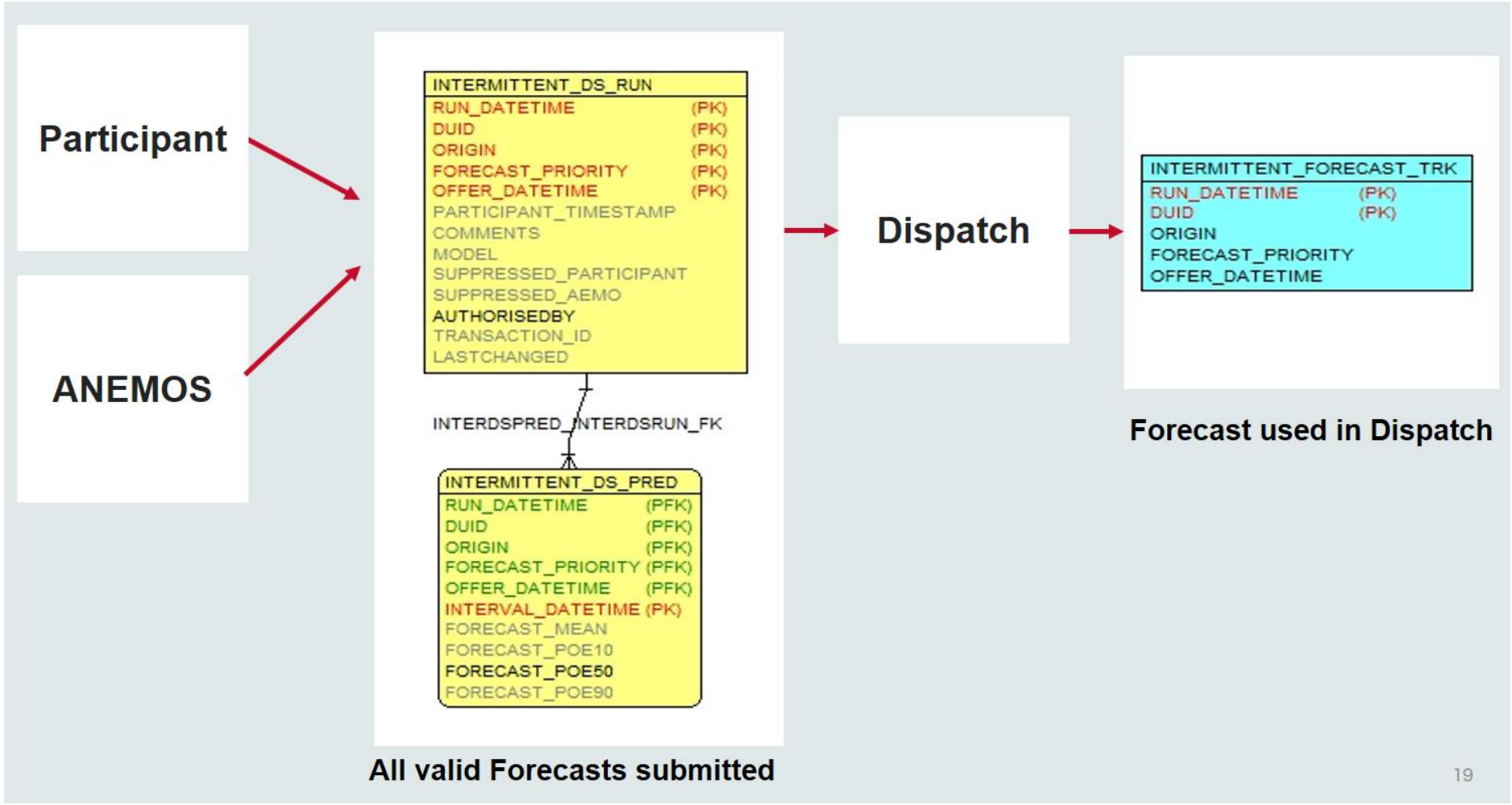
Currently, the PDR Loader and PDR Batcher 7.4.1 versions and PDR Monitor v1.0 are available in pre-production. The production release is scheduled for Thursday 22 November 2018.

4. Electricity Data Model v4.28

This Release has changes to the following packages (incomplete):

Participant systems incorrectly configured and not compliant with the Baseline Assumptions in the Data Interchange Framework and Glossary may suffer data loss.

Figure 1 Entity relationship diagram for Market Participant Self Forecast



4.1 Data Model changes summary

Package	Table name	Change	Details	PK
DEMAND_FO RECAST	INTERMITTENT_DS_RUN	New table	Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch	RUN_DATETIME, DUID, OFFERDATETIME, ORIGIN, FORECAST_PRIORITY
	INTERMITTENT_DS_PRED	New table	Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch	RUN_DATETIME, DUID, OFFERDATETIME, INTERVAL_DATETIME ORIGIN, FORECAST_PRIORITY
	INTERMITTENT_P5_RUN	New table	Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Predispatch	RUN_DATETIME, DUID, OFFERDATETIME, ORIGIN, FORECAST_PRIORITY
	INTERMITTENT_P5_PRED	New table	Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Predispatch	RUN_DATETIME, DUID, OFFERDATETIME, INTERVAL_DATETIME, ORIGIN, FORECAST_PRIORITY
	INTERMITTENT_CLUSTER_AVAIL	New table	A submission of expected plant availability for intermittent generators per period	TRADINGDATE, DUID, OFFERDATETIME, CLUSTERID, PERIODID
	INTERMITTENT_CLUSTER_AVAIL_DAY	New table	A submission of expected plant availability for intermittent generators – parent table	TRADINGDATE, DUID, OFFERDATETIME, CLUSTERID
	INTERMITTENT_GEN_LIMIT_DAY	New table	A submission of expected maximum availability for intermittent generators – parent table	TRADINGDATE, DUID, OFFERDATETIME

Package	Table name	Change	Details	PK
DISPATCH	INTERMITTENT_GEN_LIMIT	New table	A submission of expected maximum availability for intermittent generators per period	TRADINGDATE, DUID, OFFERDATETIME, PERIODID
	MTPASA_INTERMITTENT_AVAIL	New table	A submission of expected plant availability for intermittent generators for use in MTPASA intermittent generation forecasts	TRADINGDATE, DUID, OFFERDATETIME, CLUSTERID
	MTPASA_INTERMITTENT_LIMIT	New table	A submission of expected maximum availability for intermittent generators for use in MTPASA intermittent generation forecasts	TRADINGDATE, DUID, OFFERDATETIME
	INTERMITTENT_FORECAST_TRK	New table	Uniquely tracks which Unconstrained Intermittent Generation Forecast (UIGF) was used for the DUID in which dispatch run	SETTLEMENTDATE, DUID
MTPASA	MTPASA_REGIONRESULT	Modified/new fields	Add TOTALSEMISCHEDULEGEN90, TOTALSEMISCHEDULEGEN50, TOTALSEMISCHEDULEGEN10	No change
	MTPASA_REGIONSUMMARY	Modified/new fields	Change data type precision to NUMBER(16,6) for WEIGHT	No change
P5MIN	P5MIN_CASESOLUTION	New field	Add Intervention field	See Storage options on page 38
	P5MIN_CONSTRAINTSOLUTION	New field	Add Intervention field	See Storage options on page 38

Package	Table name	Change	Details	PK
	P5MIN_INTERCONNECTORSOLN	New field	Add Intervention field	See Storage options on page 38
	P5MIN_REGIONSOLUTION	New field	Add Intervention field	See Storage options on page 38
	P5MIN_UNITSOLUTION	New field	Add Intervention field	See Storage options on page 38
PDPASA	PDPASA_REGIONSOLUTION	New fields	Add LCR, LCR2 and FUM	No change
STPASA	STPASA_REGIONSOLUTION	New fields	Add LCR, LCR2 and FUM	No change
GENERIC_CONSTRAINT	GENCONDATA	Modified table	Added new column FORCE_SCADA	No change

Package: DEMAND_FORECASTS

Tables for the Market Participant 5-minute Forecast.

Regional Demand Forecasts and Intermittent Generation forecasts.

4.1.1 New table: INTERMITTENT_DS_RUN

Comment	Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch
Visibility	Private, public next day
Trigger	Publication of Dispatch solution. Data includes all valid forecasts for that interval
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, DUID, OFFERDATETIME, ORIGIN, FORECAST_PRIORITY

New column

Field Name	Data type	Comment
RUN_DATETIME	Date	Date and Time when the forecast applies (dispatch interval ending)
DUID	Varchar2(20)	DUID where this forecast applies
OFFERDATETIME	Date	Date and Time when this forecast submission was loaded

Field Name	Data type	Comment
ORIGIN	Varchar2(20)	Origin of this forecast (PARTICIPANTID, AWEFS_ASEFS, or another vendor)
FORECAST_PRIORITY	Number(10,0)	Unsuppressed forecasts with higher priority values are used in Dispatch in preference to unsuppressed forecasts with lower priority values
AUTHORISEDBY	Varchar2(20)	Authorising officer of this forecast (applicable for participant forecasts only) **Not made available to the public** because it contains the authenticated user/account submitting the forecast. It is stored in AEMO's systems as part of the audit trail but is not made public because it may facilitate a malicious actor to mount a denial of service attack.
COMMENTS	Varchar2(200)	Comments relating to the forecast **Not made available to the public** because it contains a free text description optionally included in a participant forecast submission. Participants are in control of content, but it could include operating conditions, commentary around model construct/performance, etc.
LASTCHANGED	Date	Last date and time the record changed.
MODEL	Varchar2(30)	Metadata relating to the forecast. **Not made available to the public** because it contains a designation of the model construct used to generate the forecast. AEMO regards the model as participants' intellectual property.
PARTICIPANT_TIMESTAMP	Date	Participant can document when the forecast was created
SUPPRESSED_AEMO	Number(1,0)	Was this forecast suppressed by AEMO? Suppressed forecasts are not used in Dispatch Suppressed = 1 Not suppressed =0

Field Name	Data type	Comment
SUPPRESSED_PARTICIPANT	Number(1,0)	Was this forecast suppressed by the participant? Participant forecasts **are** not used in Dispatch Suppressed = 1 Not suppressed =0
TRANSACTION_ID	Varchar2(100)	Uniquely identifies this interaction

4.1.2 New table: INTERMITTENT_DS_PRED

Comment	Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch
Visibility	Private, public next day
Trigger	Publication of Dispatch solution. Data includes all valid forecasts for that interval
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, DUID, OFFERDATETIME, INTERVAL_DATETIME ORIGIN, FORECAST_PRIORITY

New column

Field Name	Data type	Comment
RUN_DATETIME	Date	Date and Time when the forecast applies (dispatch interval ending)
DUID	Varchar2(20)	DUID where this forecast applies

Field Name	Data type	Comment
OFFERDATETIME	Date	Date and Time when this forecast submission was loaded
INTERVAL_DATETIME	Date	Date and Time when the forecast applies (dispatch interval ending)
ORIGIN	Varchar2(20)	Origin of this forecast (PARTICIPANTID, AWEFS_ASEFS, or another vendor)
FORECAST_PRIORITY	Number(10,0)	Unsuppressed forecasts with higher priority values are used in Dispatch in preference to unsuppressed forecasts with lower priority values
FORECAST_MEAN	Number(18,8)	Forecast MW value for this interval_DateTime
FORECAST_POE10	Number(18,8)	Forecast 10% POE MW value for this interval_DateTime
FORECAST_POE50	Number(18,8)	Forecast 50% POE MW value for this interval_DateTime. Used in Dispatch.
FORECAST_POE90	Number(18,8)	Forecast 90% POE MW value for this interval_DateTime

4.1.3 New table: INTERMITTENT_P5_RUN

This is the P5Min Participant Forecast parent table. We are providing the table structure in this release, but the data is not populated until a future release.

Comment	Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Predispatch
Visibility	Private
Trigger	Publication of 5-Minute Predispatch solution. Data includes all valid forecasts for that 5-Minute Predispatch run

Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, DUID, OFFERDATETIME, ORIGIN, FORECAST_PRIORITY

New columns

Field Name	Data type	Comment
RUN_DATETIME	Date	Date and Time of the first interval of 5-Minute Pre-dispatch where the forecast applies (dispatch interval ending)
DUID	Varchar2(20)	DUID where this forecast applies
OFFERDATETIME	Date	Date and Time when this forecast submission was loaded
ORIGIN	Varchar2(20)	Origin of this forecast (PARTICIPANTID, AWEFS_ASEFS, or vendor).
FORECAST_PRIORITY	Number(10,0)	Unsuppressed forecasts with higher priority values are used in 5-Minute Predispatch in preference to unsuppressed forecasts with lower priority values
AUTHORISEDBY	Varchar2(20)	Authorising officer of this forecast (applicable to participant forecasts only) **Not made available to the public**
COMMENTS	Varchar2(200)	Comments relating to the forecast **Not made available to the public**
LASTCHANGED	Date	Last date and time the offer changed
MODEL	Varchar2(30)	Meta data relating to the forecast **Not made available to the public**
PARTICIPANT_TIMESTAMP	Date	Participant can document when the forecast was created

Field Name	Data type	Comment
SUPPRESSED_AEMO	Number(1,0)	Was this forecast suppressed by AEMO? Suppressed forecasts are not used in 5-Minute Predispatch. Suppressed = 1 Not suppressed =0

Field name	Data type	Comment
SUPPRESSED_PARTICIPANT	Number(1,0)	Was this forecast suppressed by the participant? Suppressed participant forecasts are not used in 5-Minute Predispatch. Suppressed = 1 Not suppressed =0
TRANSACTION_ID	Varchar2(100)	Uniquely identifies this interaction

4.1.4 New table: INTERMITTENT_P5_PRED

This is the P5Min Participant Forecast child table. The table structure is provided in this release, but the data is not populated until a future release.

Comment	Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Predispatch
Visibility	Private
Trigger	Publication of 5-Minute Predispatch solution. Data includes all valid forecasts for that 5-Minute Predispatch run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports

Primary key (in order)	RUN_DATETIME, DUID, OFFERDATETIME, INTERVAL_DATETIME, ORIGIN, FORECAST_PRIORITY

New columns

Field Name	Data type	Comment
RUN_DATETIME	Date	Date and Time of the first interval of 5-Minute Predispatch where the forecast applies (dispatch interval ending)
DUID	Varchar2(20)	DUID where this forecast applies
OFFERDATETIME	Date	Date and Time when this forecast submission was loaded
INTERVAL_DATETIME	Date	Interval within the current RUN_DATETIME where this forecast applies (dispatch interval ending)
ORIGIN	Varchar2(20)	Origin of this forecast (PARTICIPANTID, AWEFS_ASEFS, or another vendor)
FORECAST_PRIORITY	Number(10,0)	Unsuppressed forecasts with higher priority values are used in 5-Minute Predispatch in preference to unsuppressed forecasts with lower priority values
FORECAST_MEAN	Number(18,8)	Forecast MW value for this INTERVAL_DATETIME
FORECAST_POE10	Number(18,8)	Forecast 10% POE MW value for this INTERVAL_DATETIME
FORECAST_POE50	Number(18,8)	Forecast 50% POE MW value for this INTERVAL_DATETIME
FORECAST_POE90	Number(18,8)	Forecast 90% POE MW value for this INTERVAL_DATETIME

4.1.5 New table: INTERMITTENT_CLUSTER_AVAIL

Comment	A submission of Elements Unavailable for an intermittent generating unit cluster, by Trading Day and Trading Interval
Visibility	Private
Trigger	On data submission
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DUID, TRADINGDATE, OFFERDATETIME, CLUSTERID, PERIODID

New columns

Field name	Data type	Null	Description	PK
TRADINGDATE	DATE	No	The trading day to which the availability submission applies	Y
DUID	VARCHAR2(20)	No	Unique Identifier of Dispatchable Unit	Y
OFFERDATETIME	DATE	No	Date and Time when this cluster availability submission was loaded	Y
CLUSTERID	VARCHAR2(20)	No	Unique Cluster Identifier for this cluster within the DUID	Y
PERIODID	NUMBER(3,0)	No	Trading interval number (1…48) within this TRADINGDATE for which ELEMENTS_UNAVAILABLE applies	Y
ELEMENTS_UNAVAILABLE	NUMBER(3,0)	No	Number of elements within this CLUSTERID (turbines for wind, or inverters for solar) that are not available for this TRADINGDATE and PERIODID (scheduled maintenance in ANEMOS). Value between 0 and the registered Number of Cluster Elements. Value = 0 means no elements unavailable.	

4.1.6 New Table: INTERMITTENT_CLUSTER_AVAIL_DAY

Comment	Summary record for an Elements Unavailable submission for an intermittent generating unit cluster for a Trading Day
Visibility	Private
Trigger	On data submission
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	TRADINGDATE, DUID, OFFERDATETIME, CLUSTERID

New columns

Field name	Data type	Null	Description	PK
TRADINGDATE	DATE	No	Trading Day for which this cluster availability submission applies	Y
DUID	VARCHAR2(20)	No	Unique Identifier of Dispatchable Unit	Y
OFFERDATETIME	DATE	No	Date and Time when this cluster availability submission was loaded	Y
CLUSTERID	VARCHAR2(20)	No	Unique Cluster Identifier for this cluster within the DUID	Y

4.1.7 New Table: INTERMITTENT_GEN_LIMIT

Comment	A submission of Upper MW Limit for an intermittent generating unit, by Trading Day and Trading Interval

Visibility	Private
Trigger	On data submission
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	TRADINGDATE, DUID, OFFERDATETIME, PERIODID

New columns

Field name	Data type	Null	Description	PK
TRADINGDATE	DATE	No	Trading Day for which this unit availability submission applies	Y
DUID	VARCHAR2(20)	No	Unique Identifier of Dispatchable Unit	Y
OFFERDATETIME	DATE	No	Date and Time when this unit availability submission was loaded	Y
PERIODID	NUMBER(3,0)	No	Trading interval number (1...48) within this TRADINGDATE for which UPPERMWLIMIT applies	Y
UPPERMWLIMIT	NUMBER(6)		Maximum imposed MW limit (down regulation in ANEMOS). Value between 0 and the registered DUID Maximum Capacity. Value = -1 means no limit applies.	

4.1.8 New Table: INTERMITTENT_GEN_LIMIT_DAY

Comment	Summary record for an Upper MW Limit submission for an intermittent generating unit for a Trading Day
Visibility	Private

Trigger	On data submission
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	TRADINGDATE, DUID, OFFERDATETIME

New columns

Field name	Data type	Null	Description	PK
DUID	VARCHAR2(20)	No	Unique Identifier of Dispatchable Unit	Y
TRADINGDATE	DATE	No	Trading Day for which this unit availability submission applies	Y
OFFERDATETIME	DATE	No	Date and Time when this unit availability submission was loaded	Y
PARTICIPANTID	VARCHAR2(10)		Unique participant identifier	
LASTCHANGED	DATE		Last date and time record changed	
AUTHORISEDBYUSER	VARCHAR2(20)		User entering the unit availability submission	
AUTHORISEDBYPARTICIPANTID	VARCHAR2(20)		Participant entering the unit availability submission	

4.1.9 New Table: MTPASA_INTERMITTENT_AVAIL

Tables for Elements Unavailable submissions for intermittent generating unit clusters, and Upper MW Limit submissions for intermittent generating units.

Comment	A submission of expected plant availability for intermittent generators for use in MTPASA intermittent generation forecasts
Visibility	Private
Trigger	On data submission
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	TRADINGDATE, DUID, OFFERDATETIME, CLUSTERID

New columns

Field name	Data type	Null	Description	PK
TRADINGDATE	DATE	No	Trading Day for which this cluster availability submission applies	Y
DUID	VARCHAR2(20)	No	Unique Identifier of Dispatchable Unit	Y
CLUSTERID	VARCHAR2(20)	No	Unique Cluster Identifier for this cluster within the DUID	Y
OFFERDATETIME	DATE	No	Date and Time when this cluster availability submission was loaded	Y
LASTCHANGED	DATE		Last date and time record changed	
ELEMENTS_UNAVAILABLE	NUMBER(3,0)	No	Number of elements within this CLUSTERID (turbines for wind, or inverters for solar) that are not available for this TRADINGDATE. Value between 0 and the registered Number of Cluster Elements. Value = 0 means no elements unavailable.	

4.1.10 New Table: MTPASA_INTERMITTENT_LIMIT

Comment	A submission of expected maximum availability for intermittent generators for use in MTPASA intermittent generation forecasts
Visibility	Private
Trigger	On data submission
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	TRADINGDATE, DUID, OFFERDATETIME

New columns

Field name	Data type	Null	Description	PK
TRADINGDATE	DATE	No	Trading Day for which this unit availability submission applies	Y
DUID	VARCHAR2(10)	No	Unique Identifier of Dispatchable Unit	Y
OFFERDATETIME	DATE	No	Date time file processed	Y
LASTCHANGED	DATE		Last date and time record changed	
UPPERMWLIMIT	NUMBER(6)	No	Maximum imposed MW limit. Value between 0 and the registered DUID Maximum Capacity. Value = -1 means no limit applies.	
AUTHORISEDBYUSER	VARCHAR2(20)		User entering the unit availability submission	
AUTHORISEDBYPARTICIPANTID	VARCHAR2(20)		Participant entering the unit availability submission	

4.1.11 File interface changes

Package ID	File ID	Description	Batcher file masks	Frequency	Modification	Auto-subscription
DEMAND_FORECASTS	INTERMITTENT_GEN_FCST	Intermittent Forecast Dispatch parent table	*_INTERMITTENT_GEN_FCST_*.CSV	On every dispatch run	Modified	No
		Tables for Elements Unavailable submissions for intermittent generating unit clusters, and Upper MW Limit submissions for intermittent generating units		On data submission	New	Yes

4.1.12 Participant interfaces changes

Package Name	MMS Data Model table	File ID	CSV report type	Change
DEMAND_FORECASTS	INTERMITTENT_DS_RUN	INTERMITTENT_GEN_FCST	DEMAND_FORECAST,INTERMITTENT_DS_RUN_CV,1	new
	INTERMITTENT_DS_PRED	INTERMITTENT_GEN_FCST	DEMAND_FORECAST,INTERMITTENT_DS_PRED,1	new
	INTERMITTENT_P5_RUN	INTERMITTENT_GEN_FCST	DEMAND_FORECAST,INTERMITTENT_P5_RUN,1	new

Package Name	MMS Data Model table	File ID	CSV report type	Change
	INTERMITTENT_P5_PRED	INTERMITTENT_GEN_FCST	DEMAND_FORECAST,INTERMITTENT_P5_PRED,1	new
	INTERMITTENT_CLUSTER_AVAIL		DEMAND_FORECAST,AVAIL_SUBMISS_CLUSTER_PER,1	new
	INTERMITTENT_CLUSTER_AVAIL_DAY		DEMAND_FORECAST, AVAIL_SUBMISS_CLUSTER,1	new
	INTERMITTENT_GEN_LIMIT_DAY		DEMAND_FORECAST, AVAIL_SUBMISS_DAY,1	new
	INTERMITTENT_GEN_LIMIT		DEMAND_FORECAST, AVAIL_SUBMISS_PERIOD,1	new
	MTPASA_INTERMITTENT_AVAIL		DEMAND_FORECAST, AVAIL_MTPASA_CLUSTER,1	new
	MTPASA_INTERMITTENT_LIMIT		DEMAND_FORECAST, AVAIL_MTPASA_DUID,1	new

4.1.13 Discontinued reports

No discontinued reports for DEMAND_FORECASTS.

Package: DISPATCH

Tables for the Market Participant 5-minute Forecast.

Results from a published Dispatch Run

4.1.14 New table: INTERMITTENT_FORECAST_TRK

Comment	Uniquely tracks which Intermittent Generation forecast was used for the DUID in which Dispatch run
Visibility	Private
Trigger	Dispatch run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	SETTLEMENTDATE, DUID

New columns

Field Name	Data type	Comment
SETTLEMENTDATE	Date	Date and Time of the Dispatch run (dispatch interval ending)
DUID	Varchar2(20)	Tracks to INTERMITTENT_DS_RUN.DUID
ORIGIN	Varchar2(20)	Tracks TO INTERMITTENT_DS_RUN. SCADA is written to ORIGIN if no forecast is discovered.

Field Name	Data type	Comment
FORECAST_PRIORITY	Number(10,0)	Tracks to INTERMITTENT_DS_RUN.FORECAST_PRIORITY - except for -1 and 0, which denote ''Last Target'' and ''SCADA'' used respectively'
OFFERDATETIME	Date	Tracks to INTERMITTENT_DS_RUN.OFFERDATETIME

4.1.15 Participant interfaces changes

Package Name	MMS Data Model table	File ID	CSV report type	Change
	INTERMITTENT_FORECAST_TRK	NEXT_DAY_DISPATCH	DISPATCH,INTERMITTENT_FORECAST_TRK,1	new
	INTERMITTENT_FORECAST_TRK	DISPATCHIS	DISPATCH,INTERMITTENT_FORECAST_TRK,1	new
	INTERMITTENT_DS_RUN	NEXT_DAY_DISPATCH	DEMAND_FORECAST,INTERMITTENT_DS_RUN,1	new
	INTERMITTENT_DS_PRED	NEXT_DAY_DISPATCH	DEMAND_FORECAST,INTERMITTENT_DS_PRED,1	new

4.1.16 File interface changes

Package ID	File ID	Description	Batcher file masks	Frequency	Modification	Auto-subscription
DISPATCH	NEXT_DAY_DISPATCH	Uniquely tracks which Intermittent Generation forecast was used for the DUID in which Dispatch run	*_NEXT_DAY_DISPATCH_*.CSV	Next day	Modified	No

Package ID	File ID	Description	Batcher file masks	Frequency	Modification	Auto-subscription
	DISPATCHIS	Uniquely tracks which Intermittent Generation forecast was used for the DUID in which Dispatch run	*_DISPATCHIS_*.CSV	On every dispatch run	Modified	No

Participants must ensure that all internal dependencies on these tables are removed prior to the deployment of this Release otherwise participant processes may be impacted.

4.1.17 Discontinued reports

MMS Data Model table	File ID	Delivered in file	CSV report type	Replaced by
DISPATCHCONSTRAINT	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH,DISPATCHCONSTRAINT,4	DISPATCH,DISPATCHCONSTRAINT,5
DISPATCHCONSTRAINT	NEXT_DAY_DISPATCH	*_NEXT_DAY_DISPATCH_*.CSV	DISPATCH,DISPATCHCONSTRAINT,4	DISPATCH,DISPATCHCONSTRAINT,5
DISPATCHLOAD	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH,DISPATCHLOAD,1	DISPATCH,DISPATCHLOAD,2
DISPATCHLOAD	NEXT_DAY_DISPATCH	*_NEXT_DAY_DISPATCH_*.CSV	DISPATCH,DISPATCHLOAD,1	DISPATCH,DISPATCHLOAD,2
DISPATCHCASESOLUTION	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH, CASE_SOLUTION,1	DISPATCH,CASE_SOLUTION,2

MMS Data Model table	File ID	Delivered in file	CSV report type	Replaced by
DISPATCHCONSTRAINT	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH,CONSTRAINT,4	DISPATCH, CONSTRAINT,5
DISPATCHCONSTRAINT	NEXT_DAY_DISPATCH	*_NEXT_DAY_DISPATCH_*.CSV	DISPATCH,CONSTRAINT,4	DISPATCH, CONSTRAINT,5
DISPATCHINTERCONNECTORRES	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH, INTERCONNECTORRES,2	DISPATCH, INTERCONNECTORRES,3
DISPATCHPRICE	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH, PRICE,3	DISPATCH, PRICE,4
DISPATCHREGIONSUM	DISPATCHIS	*_DISPATCHIS_*.CSV	DISPATCH, REGIONSUM,3	DISPATCH, REGIONSUM,4

Package: GENERIC_CONSTRAINT

4.1.18 Modified table: GENCONDATA

Comment	GENCONDATA sets out the generic constraints contained within a generic constraint set invoked in PASA, predispatch and dispatch. Fields enable selective application of invoked constraints in the Dispatch, Predispatch, ST PASA or MT PASA processes.
Visibility	Public
Trigger	Dispatch run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	EFFECTIVEDATE , VERSIONNO , GENCONID (no change)

New column

Field Name	Data type	Comment
Force_SCADA	Number(1)	Flags constraints. NEMDE must use "InitialMW" values instead of "WhatIfInitialMW" for Intervention Pricing runs.

Package: MTPASA

Changes due to the MTPASA redevelopment project.

Results from a published Medium Term PASA Run and region-aggregate offered PASA Availability of scheduled generators

4.1.19 Modified table: MTPASA_REGIONRESULT

Comment	**Region results for interval of max demand per day.**
Visibility	Public
Trigger	Generated when MTPASA run is published (usually once per week)
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	RUN_DATETIME, RUN_NO, RUNTYPE, DEMAND_POE_TYPE, DAY, REGIONID (no change)

Modified column

Field name	Data type	Description	PK
TOTALSEMISCHEDULEGEN90	NUMBER(12,2)	The 90% percentile for semi-scheduled generation across iterations and reference years (MW)	No
TOTALSEMISCHEDULEGEN50	NUMBER(12,2)	The 50% percentile for semi-scheduled generation across iterations and reference years (MW)	No
TOTALSEMISCHEDULEGEN10	NUMBER(12,2)	The 10% percentile for semi-scheduled generation across iterations and reference years (MW)	No

4.1.20 Modified table: MTPASA_REGIONSUMMARY

Comment	**Region Results summary over aggregation periods.**
Visibility	Public
Trigger	Generated when MTPASA run is published (usually once per week)
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	RUN_DATETIME, RUN_NO, RUNTYPE, DEMAND_POE_TYPE, AGGREGATION_PERIOD, PERIOD_ENDING, REGIONID

Modified column

Field name	Data type	Description	PK
Weight	NUMBER(16,6)	Fixed Values of 0.696 for 50 POE and 0.304 for 10 POE.	No
USE_WEIGHTED_AVG	NUMBER(16,6)	Weighted average USE per region = (USE_AVERAGE_POE10/NATIVE_DEMAND_POE_10*WEIGHT_POE_10 + USE_AVERAGE_POE50/NATIVE_DEMAND_POE_50*WEIGHT_POE_50)*100	No

4.1.21 Participant interfaces changes

Package	Data Model table	File ID	CSV report type	Change
MTPASA	MTPASA_REGIONSUMMARY	MTPASA	MTPASA,REGIONSUMMARY,1	No change to Data Model because this table was modified in v4.27
	MTPASA_REGIONRESULTS	MTPASA	MTPASA,REGIONRESULT,1	No change to Data Model because this table was modified in v4.27

4.1.22 File interface changes

Package	File ID	Description	Batcher file masks	Frequency	Change	Auto-subscription
MTPASA	MTPASA	Results from a published Medium Term PASA run and region-aggregate offered PASA availability of scheduled generators	*_MTPASA_*.CSV	Normally once per week	Modified reports	No

4.1.23 Discontinued reports

No discontinued reports for MTPASA.

Package: P5MIN

Results from a published Five-Minute Predispatch Run

The change to all P5MIN tables adds an Intervention field for participants wanting to add Intervention Pricing to their primary keys.

4.1.24 Storage options

There are two options for defining the P5MIN table primary keys (PKs) to define which data is loaded to the database and which data is retained.

Option 1 (default)

Retain only the pricing records for tables relating to price data and physical records for tables relating to physical data (for example, targets).

Primary keys

- **P5Min_UnitSolution**: Run_DateTime, DUID, Interval_DateTime
- **P5Min_InterconnectorSoln**: Run_DateTime, InterconnectorID, Interval_DateTime
- **P5Min_ConstraintSolution**: Run_DateTime, ConstraintID, Interval_DateTime
- **P5Min_RegionSolution**: Run_DateTime, RegionID, Interval_DateTime

Option 2

Retain both physical and pricing data for intervention runs. If intervention cases are stored in entirety, you must select the data carefully. Option 2 doubles the storage of option 1 but ONLY for Intervened cases.

The logic is the same as for Dispatch, for example:

- Intervention Pricing is always where intervention = 0

- Physical data is where intervention = P5Min_CaseSolution.Intervention for the same Run_DateTime.

Primary keys

- P5Min_UnitSolution: Run_DateTime, Intervention, DUID, Interval_DateTime
- P5Min_InterconnectorSoln: Run_DateTime, Intervention, InterconnectorID, Interval_DateTime
- P5Min_ConstraintSolution: Run_DateTime, Intervention, ConstraintID, Interval_DateTime
- P5Min_RegionSolution: Run_DateTime, Intervention, RegionID, Interval_DateTime

Storage option notes

The ordering of data in the P5MIN file is so the pdrLoader either:

1. Writes the relevant data first and discards the subsequent irrelevant data.
2. Writes the subsequent data first, depending on how the PKs are defined.

You can order the PKs in a different order, depending on your local requirements. Any decision to change the PK column composition or order must consider the functional and performance impacts to existing applications or queries.

The TRANSACTION_TYPE default in the PDR_REPORT_RECORDS management tables for PREDISPATCH* tables is UPDATE-INSERT.

The pdrLoader caches PK definitions for performance reasons so any change to the PKs requires a restart of the application.

4.1.25 Modified table: P5MIN_CASESOLUTION

Comment	Shows one record containing results pertaining to the entire solution.
Visibility	Public
Trigger	Every 5 minutes

Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME

New column

Field name	Data type	Description	PK
Intervention	Number(2,0)	Flag to indicate if this Predispatch case includes an intervention pricing run: 0 = case does not include an intervention pricing run, 1 = case does include an intervention pricing run. This field has a default value of 0 and is not nullable'	See Storage options on page 38

4.1.26 Modified table: P5MIN_CONSTRAINTSOLUTION

Comment	Shows binding and violated constraint results from the capacity evaluation, including the RHS value.
Visibility	Private & Public
Trigger	Every 5 minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, CONSTRAINTID, INTERVAL_DATETIME

New column

Field name	Data type	Description	PK
Intervention	Number(2,0)	Flag to indicate if this result set was sourced from the pricing run (INTERVENTION=0) or the physical run (INTERVENTION=1). In the event there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0	See Storage options on page 38

4.1.27 Modified table: P5MIN_INTERCONNECTORSOLN

Comment	Sets out the results of the capacity evaluation for interconnectors, including the calculated limits for the interval.
Visibility	Public
Trigger	Every 5 minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, INTERCONNECTORID, INTERVAL_DATETIME

New column

Field name	Data type	Description	PK
Intervention	Number(2,0)	Flag to indicate if this result set was sourced from the pricing run (INTERVENTION=0) or the physical run (INTERVENTION=1). In the event there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0	See Storage options on page 38

4.1.28 Modified table: P5MIN_REGIONSOLUTION

Comment	Shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.
Visibility	Public
Trigger	Every 5 minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, REGIONID, INTERVAL_DATETIME,

New column

Field name	Data type	Description	PK
Intervention	Number(2,0)	Flag to indicate if this result set was sourced from the pricing run (INTERVENTION=0) or the physical run (INTERVENTION=1). In the event there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0	See Storage options on page 38

4.1.29 Modified table: P5MIN_UNITSOLUTION

Comment	Shows the unit results from the capacity evaluations for each period of the study.
Visibility	Private
Trigger	Every 5 minutes

Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME , DUID, INTERVAL_DATETIME

New column

Field name	Data type	Description	PK
Intervention	Number(2,0)	Flag to indicate if this result set was sourced from the pricing run (INTERVENTION=0) or the physical run (INTERVENTION=1). In the event there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0	See Storage options on page 38

4.1.30 Participant interfaces changes

Package	Data Model table	File ID	CSV report type	Change
P5MIN	P5MIN_CASESOLUTION	P5MIN	P5MIN,P5MIN_CASESOLUTION,2	Modified
	P5MIN_CONSTRAINTSOLUTION	P5MIN	P5MIN,P5MIN_CONSTRAINTSOLUTION,6	Modified
	P5MIN_INTERCONNECTORSOLN	P5MIN	P5MIN,P5MIN_INTERCONNECTORSOLN,4	Modified
	P5MIN_REGIONSOLUTION	P5MIN	P5MIN,P5MIN_REGIONSOLUTION,5	Modified
	P5MIN_UNITSOLUTION	P5MIN	P5MIN,P5MIN_UNITSOLUTION,3	Modified

4.1.31 File interface changes

Package	File ID	Description	Batcher file masks	Frequency	Change	Auto-subscription
P5MIN	P5MIN	Results from a published Five-Minute Predispatch Run	*_P5MIN_*.CSV	Every 5 minutes	Modified	No

4.1.32 Discontinued reports

Participants must ensure that all internal dependencies on these tables are removed prior to the deployment of this Release otherwise participant processes may be impacted.

MMS Data Model table	File ID	Delivered in file	CSV report type	Replaced by
P5MIN_CONSTRAINTSOLUTION	P5MIN	*_P5MIN_*.CSV	P5MIN,P5MIN_CONSTRAINTSOLUTION,5	P5MIN,P5MIN_CONSTRAINTSOLUTION,6
P5MIN_INTERCONNECTORSOLN	P5MIN	*_P5MIN_*.CSV	P5MIN,P5MIN_INTERCONNECTORSOLN,3	P5MIN,P5MIN_INTERCONNECTORSOLN,4
P5MIN_REGIONSOLUTION	P5MIN	*_P5MIN_*.CSV	P5MIN,P5MIN_REGIONSOLUTION,4	P5MIN,P5MIN_REGIONSOLUTION,5
P5MIN_UNITSOLUTION	P5MIN	*_P5MIN_*.CSV	P5MIN, P5MIN_UNITSOLUTION,2	P5MIN, P5MIN_UNITSOLUTION,3

Package: PDPASA

Changes for the Improvements to Projected Assessment of System Adequacy (PDPASA and STPASA) systems.

Provides a 30-minute solving process to the market systems

4.1.33 Modified table: PDPASA_REGIONSOLUTION

Comment	The PDPASA region solution data
Visibility	Public
Trigger	Generated when PDASA is run (half-hourly)
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	INTERVAL_DATETIME, REGIONID, RUN_DATETIME, RUNTYPE (no change)

Modified and new column attributes

Field	Data type	Description	PK
LCR	NUMBER(16,6)	Largest Credible Risk. MW value for highest credible contingency	No
LCR2	NUMBER(16,6)	Two Largest Creditable Risks. MW value for highest two credible contingencies.	No
FUM	NUMBER(16,6)	Forecasting Uncertainty Measure. MW value of reserve calculated as defined in the Reserve Level Declaration Guidelines	No

4.1.34 Participant interfaces changes

Package	Data Model table	File ID	CSV report type	Change
PDPASA	PDPASA_REGIONSOLUTION	PDPASA	PDPASA,REGIONSOLUTION,4	Modified

4.1.35 File interface changes

Package	File ID	Description	Batcher file masks	Frequency	Change	Auto-subscription
PDPASA	PDPASA	Provides a 30-minute solving process to the market systems	*_PDPASA_*.CSV	Each PDPASA run (1/2 hourly)	Modified reports	No

Participants must ensure that all internal dependencies on these tables are removed prior to the deployment of this Release otherwise participant processes may be impacted.

4.1.36 Discontinued reports

MMS Data Model table	File ID	Delivered in file	CSV report type	Replaced by
PDPASA_CASESOLUTION	PDPASA	*_PDPASA_*.CSV	PDPASA,CASESOLUTION,2	PDPASA,CASESOLUTION,3

MMS Data Model table	File ID	Delivered in file	CSV report type	Replaced by
PDPASA_REGIONSOLUTION	PDPASA	*_PDPASA_*.CSV	PDPASA,REGIONSOLUTION,3	PDPASA,REGIONSOLUTION,4

Package: STPASA_SOLUTION

Changes for the Improvements to Projected Assessment of System Adequacy (PDPASA and STPASA) systems.

Results from a published Short Term PASA Run

4.1.37 Modified table: STPASA_REGIONSOLUTION

Comment	The STPASA region solution data
Visibility	Public
Trigger	Generated when STPASA is run (half-hourly)
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	RUN_DATETIME, RUNTYPE, INTERVAL_DATETIME, REGIONID (no change)

Modified and new column attributes

Field	Data type	Description	PK
LCR	NUMBER(16,6)	Largest Credible Risk. MW value for highest credible contingency	No
LCR2	NUMBER(16,6)	Two Largest Credible Risks. MW value for highest two credible contingencies.	No
FUM	NUMBER(16,6)	Forecasting Uncertainty Measure. MW value of reserve calculated as defined in the Reserve Level Declaration Guidelines	No

4.1.38 Participant interfaces changes

Package	Data Model table	File ID	CSV report type	Change
STPASA	STPASA_REGIONSOLUTION	STPASA	STPASA,REGIONSOLUTION,4	Modified

4.1.39 File interface changes

Package	File ID	Description	Batcher file masks	Frequency	Change	Auto-subscription
STPASA	STPASA	Provides a 30-minute solving process to the market systems	*_STPASA_*.CSV	Each STPASA run (1/2 hourly)	Modified reports	No

4.1.40 Discontinued reports

MMS Data Model table	File ID	Delivered in file	CSV report type	Replaced by
STPASA_CASESOLUTION	STPASA	*_STPASA_*.CSV	STPASA,CASESOLUTION,2	STPASA,CASESOLUTION,3
STPASA_CONSTRAINTSOLUTION	STPASA	*_STPASA_*.CSV	STPASA,CONSTRAINTSOLUTION,1	STPASA,CONSTRAINTSOLUTION,2
STPASA_INTERCONNECTORSOLN	STPASA	*_STPASA_*.CSV	STPASA,INTERCONNECTORSOLN,1	STPASA,INTERCONNECTORSOLN,2
STPASA_REGIONSOLUTION	STPASA	*_STPASA_*.CSV	STPASA,REGIONSOLUTION,3	STPASA,REGIONSOLUTION,4

4.2 Non-functional changes

4.2.1 Package: PRE_DISPATCH

There is a change to the wording in the Package: PRE_DISPATCH > storage options > notes to read:

The data in the PredispatchIS file is always ordered so the pdrLoader writes the relevant data first and discards the subsequent irrelevant data, or writes the subsequent data, depending on how the PKs are defined.

The incorrect statement was:

The data in the PredispatchIS file is always ordered so the pdrLoader overwrites earlier data or adds each data set in its entirety, depending on how the PKs are defined.

5. Implementation

To maintain systems in-line with AEMO's market systems, participants need to:

- Review and assess the impact on their market systems with respect to the changes implemented as part of this Release.
- Change their systems prior to the implementation of this Release.
- Schedule staff and resources to upgrade their market systems for the production implementation of this Release.

5.1 Risks

- No critical impacts to participants identified.

5.2 What happens if I do not upgrade?

Not upgrading may result in the following issues:

- New data and tables are not received because the data model elements are not created in your database.
- Participants not subscribed to the latest versions of files, using the Data Subscriptions web application, will not receive the new data.
- Content in legacy files may change after deployment of this Release.
- If participants have a system dependency on the formats of the non-Data Model reports they need to manage these dependencies using the detail provided in this technical specification. Participants need to review and assess the impact on their market systems with respect to the changes implemented in this Release.