EMMS - Technical Specification - Data Model v5.2 - May 2023

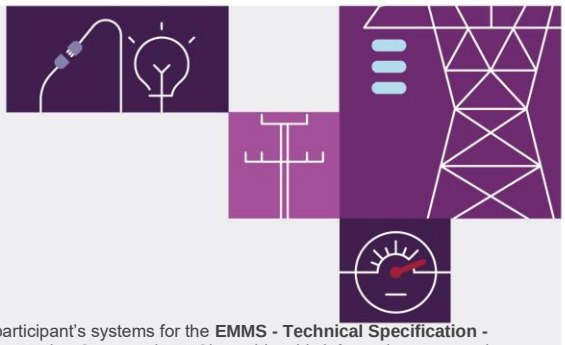
2.062.05 May 2023

Pre-production: 20 April 2023

Production: 23 May 2023

Release series: EMMSNEM2025

Style Definition: Lead In



Important notice

Purpose & audience

This document describes the technical changes required to participant's systems for the **EMMS - Technical Specification - Data** Model v5.2 - May 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 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 Electricity Rules** (Rules).

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Distribution

Available to the public.

Document Identification

Prepared by: Australia Energy Market Operator

Last update: Monday, 15 May 2023~~Monday, 8 May 2023~~ 10:02 AM~~10:58 AM~~

Version History

2.06 See the Changes in this version.

Documents made obsolete

The release of this document changes only the version of EMMS - Technical Specification - Data Model v5.2 - May 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 - Technical Specification - Data** Model v5.2 - May 2023 (Release) describes the changes to the Data Model v5.2 according to projects planned by AEMO from a participant perspective.

1.3 Status

Version	Status
2.06	The Data Model design is still uncertified but nearing completion.
2.01	The Data Model design is still uncertified but nearing completion. Changes in this version of the technical specification are for participant information only. There are no changes to the Data Model design. AEMO is seeking feedback on considerations for future releases, see **Increasing data volumes**
2.00	The Data Model design is in the testing phase and almost complete. Some changes may occur according to testing and participant feedback
1.00	This technical specification is for participant review only. The design may change as the technical requirements are streamlined. Please provide feedback in AEMO's website **contact us** form

1.4 Release dates

Scheduled for implementation in:

- Pre-production: 20 April 2023
- Production: 23 May 2023

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1.5 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.

1.6 Changes in this version

This version includes the following changes:

1.6.1 MMS Data Model v5.2 release update

In error, AEMO introduced several unrequired columns in the upgrade and apologise to participants for the inconvenience caused to their pre-production Data Model databases during the Data Model v5.2 upgrade.

Table	Column	Reason
P5MIN_UNITSOLUTION	RAISE1SECACTUALAVAILABILITY LOWER1SECACTUALAVAILABILITY	Unrequired
P5MIN_REGIONSOLUTION	RAISE1SECAPCFLAG LOWER1SECAPCFLAG PRE_AP_RAISE1_PRICE PRE_AP_LOWER1_PRICE RAISE1SECACTUALAVAILABILITY LOWER1SECACTUALAVAILABILITY	Unrequired
PREDISPATCHPRICE	RAISE1SECAPCFLAG LOWER1SECAPCFLAG RAISE1SECROP LOWER1SECROP PRE_AP_RAISE1_PRICE PRE_AP_LOWER1_PRICE	Unrequired

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If you have already applied the Data Model v5.2 upgrade, run the relevant SQL Server or Oracle delete script published to the Releases > Data Model folder manually to remove the unrequired columns from the impacted tables. You do not need to run the updated Data Model script.

~~1.6~~

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~~Removed from File Interface Changes > DEMAND_FORECASTS~~

~~INTERMITTENT_UNIT_SCADA~~	~~INTERMITTENT_GEN_FCST~~	~~INTERMITTENT_GEN_FCST,INTERMITTENT_UNIT_SCADA,1~~

Depending on how much data is retained online in the impacted tables, dropping columns in Oracle takes some time because it requires a full table scan.

If you haven't yet applied the Data Model v5.2 upgrade, updated Data Model scripts are available in the Releases > Data Model folder for you to apply when you are ready. The manual delete script is only required if you already applied the scripts released 20 April 2023.

1.6.2 Modified table: DUDETAILSUMMARY

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- The ADG_ID will populate a NULL value. AEMO will notify participants when we decide to populate this field.
- Removed the Important table changes message. This change is handled in a future release. AEMO will notify participants when this happens.

DUDetailSummary can be misleading and is a frequent point of confusion for participants. To overcome this, rather than reporting incremental changes to DUDETAILSUMMARY, we are supplying the full history of DUDETAILSUMMARY each day and modifying the transaction_type from INSERT-UPDATE to DELETE-INSERT.

DUDetailSummary includes an End_Date, which is actually the Start_Date of the next record as defined when the data set was created. This gives the From Date-To Date model. DUDetailSummary was created to assist participants comprehension of the complex interrelations between the component tables. Such a presentation is subject to changes in Registration, particularly retrospective changes occurring as registration information is clarified after the initial registration. The consequence of retrospective changes is further records can be created and replicated to participants. This creates ambiguity as participants can see two records indicating an overlap for the same DUIDs. Note that the presentation is an external construct and the internal AEMO tables are always unambiguous.

The operation to change the transaction type clears and reloads the DUDETAILSUMMARY table in a single database transaction.

In the event the operation fails, the current data remains without impact to participants. Participants always have the opportunity to repopulate this table from the BASELINE reports.

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1.6.3 Sparse model details

Previously, AEMO introduced the opt-in Sparse Model concept for some Data Model tables and requested participant feedback. This version adds more clarity for the Sparse model. See Increasing data volumes section.

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In v2.04	Current version
	See Sparse Model section.
1.6.4 Considerations	
AEMO are considering the following options for participant provision of sparse offers and bids and can discuss this in the next MSUG.	
Report overlap	
For the NEXT_DAY_OFFER_ENERGY and NEXT_DAY_OFFER_FCAS reports, provide an overlap where the LATEST report version is sparse, and the LEGACY report version is the full version.	
Hard change	
Implement a hard change over to the sparse model when FFR is delivered. This change requires participants to alter the way their Energy Offer data is interpreted in their participant systems.	
For this option, we advise participants to modify their analytical and offer systems prior to the June 2024 Data Model Release, ensuring downstream systems remain compliant with the sparse representation. Participants can implement this logic in their systems ahead of time as the interpretation of a fully qualified offer (as published now) is completely compatible with the sparse offer representation.	
Participant sparse bidding	
Implement the sparse model for participants bidding into the Market.	
Participant feedback required	
We are asking for participant feedback for the following:	
Implement the report overlap in the May 2023 Release.	
Implement the report overlap in the June 2024 Release.	
Implement a hard change in the June 2024 Release when FFR is delivered.	
Participants use the sparse model for bidding into the Market.	

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1.7 Rule and procedure changes

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Details	Effective
Standalone Power Systems	30 May 2023
Integrating energy storage systems into the NEM	9 August 2023
Fast frequency response market ancillary service	9 October 2023
Enhancing information on generator availability in MT PASA | AEMC > ERC0338 – National Electricity Amendment (Enhancing information on generator availability in MT PASA) Rule 2022 No. 7 (aemc.gov.au)	9 October

1.8 Related technical specifications

Title	Description
EMMS Technical Specification – August 2023	Details of the FFR project changes
EMMS Technical Specification – October 2023	Details of the MT PASA project changes
EMMS – Release Schedule – Data Interchange – April 2023	Details of changes to the Data Interchange products: Data Subscription and pdrLoader

1.9 Related documents

These guides and resources are updated according to this technical specification and published for the pre-production Release Date.

Once published, these resources take precedence over this technical specification

Title	Description	Published
Data Interchange Install Bundles	All the components for a new installation of Data Interchange	23 May 2023
Data Interchange Online Help	Online help provides the details about the updated screens and other details for the Markets Portal Help using Data Interchange and Data Model components	20 April 2023
Data Interchange Upgrade Software	Software components for upgrading an existing Data Interchange environment	20 April 2023 for pre-production environments

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Title	Description	Published
Data Model Reports	Explains the packages, tables, and reports in the Electricity and Gas Data Models	23 May 2023
Market Data NEMweb	Data Model, Current, and archived reports	23 May 2023
Release Documents	Release Notes and Technical Specifications	20 April 2023
Software Releases	Data Interchange component software	23 May 2023

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.**

1.10 Approval to change

AEMO requests approval to proceed from all participant change controllers by close of business Wednesday, 8 March 2023.

1.11 Market systems user group meetings

The Market Systems User Group (MSUG) is an industry user group established to discuss NEM 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.

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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	8 March 2023	Final date for participant change controller approval of this Release For details, see **Approval to change**
Revised Technical Specification	April 2023	If required AEMO releases new versions of this document as the technical requirements are streamlined. During the project this document is the source of truth. From the pre-production release, the technical specification is no longer updated, the guides and related documents become the source of truth, see **Related documents**
MSUG meeting: pre-production review	30 March 2023	Market Systems User Group Meeting (MSUG) to review the technical specification and ask AEMO technical SMEs questions This date is tentative. The project manager will provide an invitation one week prior to the meeting
Related Documents publication	20 April 2023	Release of guides and resources in **Related documents**
Pre-production Data Model auto subscription	20 April 2023	For any **existing** files with modified or new tables, if participants are subscribed, AEMO moves them to the Legacy version For more details, see **Auto-subscription**
Pre-production Data Model scripts and Data Model Manager release	20 April 2023	Participant Data Model scripts released for deployment to pre-production environments only. Do not apply these scripts to your production environment
Pre-production refresh	Complete 11 April 2023 – 17 April 2023 Refreshed with production data from Monday 3 April 2023	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

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Proposed Timeline

Milestone	Date	Description
Pre-production implementation	12 April 2023 – 19 April 2023	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 available	20 April 2023	Testing period begins for participants
Participant testing begins	20 April 2023	Unstructured participant testing in the pre-production environment
MSUG meeting: post-pre-production review	~~4 May 2023~~18 May 2023	Market systems user group meeting to review the implementation of this pre-production release This date is tentative. The project manager will provide an invitation one week prior to the meeting
Production implementation	15 May 2023 – 22 May 2023	AEMO implements the release to production
Production systems available	23 May 2023	Production release available to participants
Production Data Model auto subscription	23 May 2023	For any **existing** files with modified or new tables, if participants are subscribed, AEMO moves them to the Legacy version For details, see **Auto-subscription**
Production Data Model scripts and Data Model Manager release	23 May 2023	Participant Data Model scripts released
Data Model Bundles release	23 May 2023	Bundles for a full Data Model 5.2 installation.
Direction and RERT Recovery Data Reconciliation, SAPS Data Model and NEM reports release	May 2023	Direction and RERT Recovery Data Reconciliation Data Model and SAPS data and NEM reports released to production
MSUG meeting: post-production review	6 June 2023	Market systems user group meeting to review the implementation of the production release This date is tentative. The project manager will provide an invitation one week prior to the meeting
IESS Data Model and NEM reports release	August 2023	IESS Data Model data and NEM reports released to production
FFR and MT PASA Data Model and NEM reports release	9 October 2023	FFR and MT PASA Data Model data and NEM reports released to production

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3 Participant Impact

3.1 EMMS data model v5.2

Participants wanting to receive the new and updated Data Model information in their Data Interchange environments must upgrade to the latest version of the Data Model v5.2.

Participant systems incorrectly configured and not compliant with the Baseline Assumptions may suffer data loss.

3.1.1 Changes to DUDETAILSUMMARY

Be aware of changes to the **Modified table: DUDETAILSUMMARY** table.

3.2 Increasing data volumes

As a result of the following two factors, the content in the NEXT_DAY_OFFER_ENERGY report has exceeded 4 million rows and the content in the NEXT_DAY_OFFER_FCAS report has exceeded 20 million rows (vary from day to day depending on bidding activity):

1. The introduction of 5MS into the NEM moved the Trading Interval from 30-minute to 5-minutes, increasing by sixfold the data supplied to AEMO.
2. The continued growth of renewable Plant registered in the NEM as Semi-scheduled or Scheduled has increased the number of DUIDs.

The continued growth of these reports is presenting the following issues to participant systems:

- Time to download the content over the limited bandwidth available to MarketNet.
- Time to process the file into the Participant Data Model instance.

3.2.1 Fast frequency response

The NEM currently includes a total of 9 services: One Energy and 8 FCAS. The introduction of Fast Frequency Response (FFR) introduces 2 more services into the NEM, exasperating the emerging scale issue.

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3.2.2 Sparse Model

An analysis of the data by AEMO identified adopting a sparse data model, where repeated data is supressed, can potentially result in a 95% reduction in data volumes in these reports.

To ensure data volumes remain within acceptable limits, AEMO is moving to a sparse representation for Energy and FCAS Bids and Offers. This is necessary to allow us to continue meeting our Market data reporting obligations.

The sparse model stores the period row where offered values for period (n) differ from period (n-1). Yellow is persisted data.

Offer	P1	P2	P3	P4	P5	P6	P7	P8
First offer	5	5	5	10	10	5	5	5
Next offer	5	10	5	5	10	5	5	5

For full details about the ~~Sparce~~ Sparse Model and AEMO analysis, see **Increasing data volume analysis**.

Sparse Model update

Most participants agreed with the opt-in sparse model, so we have delivered the proposed functionality in pre-production for the following **NEXT_DAY_OFFER_* only** reports:

- NEXT_DAY_OFFER_ENERGY
- NEXT_DAY_OFFER_FCAS

All participants subscribed to the current version of the above files are now moved to the Legacy versions:

- NEXT_DAY_OFFER_ENERGY_LEGACY
- NEXT_DAY_OFFER_FCAS_LEGACY

I want to receive the same data as previously

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To receive the same data, remain on the Legacy versions of the above files.

I want to receive the sparse model

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To opt-in to receive the sparse data, subscribe to the latest versions of the above files.

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Forward plan for sparse offers

For Data Model v5.2, the Sparse Mode is delivered as opt-in only, in a future release it will become the standard representation of NEXT_DAY_OFFER_* data where functional changes are identified for this data set.

We advise participants to begin transitioning their downstream dependencies to interpret sparse offer data now in readiness for this future change.

Future consideration

In a future release, we are considering extending this same functionality for confidential offer reporting and offer submission.

3.193.3 Upgrading your data model

~~**3.4.0 Considerations**~~

~~AEMO are considering the following options for participant provision of sparse offers and bids and can discuss this in the next MSUG.~~

~~**Report overlap**~~

~~For the NEXT_DAY_OFFER_ENERGY and NEXT_DAY_OFFER_FCAS reports, provide an overlap where the LATEST report version is sparse, and the LEGACY report version is the full version.~~

~~**Hard change**~~

~~Implement a hard change over to the sparse model when FFR is delivered. This change requires participants to alter the way their Energy Offer data is interpreted in their participant systems.~~

~~For this option, we advise participants to modify their analytical and offer systems prior to the June 2024 Data Model Release, ensuring downstream systems remain compliant with the sparse representation. Participants can implement this logic in their systems ahead of time as the interpretation of a fully qualified offer (as published now) is completely compatible with the sparse offer representation.~~

~~**Participant sparse bidding**~~

~~Implement the sparse model for participants bidding into the Market.~~

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3.193.3 Upgrading your data model

~~We are asking for participant feedback for the following:~~

~~3. Implement the report overlap in the May 2023 Release.~~

~~3. Implement the report overlap in the June 2024 Release.~~

~~3. Implement a hard change in the June 2024 Release when FFR is delivered.~~

~~3. Participants use the sparse model for bidding into the Market.~~

~~3.19~~3.3 Upgrading your data model

You can upgrade your pre-production or production Data Model environments once you receive the Data Model scripts. Applying the scripts sets up the new Data Model structure on your local database. You receive the same data until the new versions of fields, files, and reports are released into pre-production or production and you update your subscriptions.

Depending on the project, some tables and reports populate at different stages. Unpopulated tables and reports either remain empty or display null values. For details about individual project release dates and when the data populates, see Projects.

For help, see:

- **Upgrading your DI environments**
- **Updating your subscriptions**

3.203.4 Data subscription

3.20.13.4.1 Legacy files

On the **Release Dates**, AEMO moves participants subscribed to existing files to the Legacy version. After you have upgraded to v5.2, subscribe to the current files in Data Subscription. For help, see **Subscribe to Files**.

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3.20.23.4.2 Auto-subscription

Existing participants are automatically subscribed to the following new files and don't need to do anything:

File ID	Table
AGGREGATE_DISPATCH_GROUP	AGGREGATE_DISPATCH_GROUP
	ADG_DETAIL

3.213.5 Software

3.21.13.5.1 Data Model Manager

This Release has an upgrade to the **Data Model Manager** (pdrDataModelManager), version 1.1.0.

3.21.23.5.2 Data subscription and pdrLoader

EMMS – Release Schedule – Data Interchange – April 2023	**Details of changes to the Data Interchange products: Data Subscription and pdrLoader**

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4 Projects

The EMMS – Technical Specification – Data Model v5.2 – March 2023 provides the data model table details for the following projects.

4.1 NEM reform

AEMO, together with industry, is delivering a number of the Energy Security Board's (ESB) Post 2025 and other energy market reforms. The reforms provide for changes to key elements of the market design to facilitate a transition towards a modern energy system.

For details, see **NEM Reform Program**.

4.2 Direction and RERT Recovery Data Reconciliation

For release May 2023.

Changes to reconcile the Direction/RERT Recovery Data:

- Calculate the Excluded Energy from Scheduled Loads and capture it separately.
- Add extra participant information.
- Publish new and modified information to the participants in the Data Model. For details, see **Data model changes summary**.

4.3 Fast Frequency Response (FFR)

Part of NEM2025 for release 9 October 2023.

Fast frequency response (FFR) introduces two new market ancillary services: very fast raise and very fast lower. Fast frequency response refers to the delivery of a rapid active power increase or decrease by generation or load in a time frame of two seconds or less, to correct a supply demand imbalance and assist in managing power system frequency. FFR is a relatively new service offered by inverter-based technologies such as wind, solar photovoltaics (PV), batteries and demand-side resources.

For more information on FFR changes, see **Fast frequency response market ancillary service**.

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4.4 Integrating Energy Storage Systems (IESS)

Part of NEM2025 for release August 2023.

The Integrating Energy Storage Systems rule seeks to better integrate storage and hybrid systems into the NEM. There are significant changes to registration and dispatch arrangements as well as in areas such as non-energy cost recovery, performance standards, and participation options for aggregated portfolios of small resources as a part of IESS.

For details, see **Integrating Energy Storage Systems project**.

4.5 MT PASA

Part of NEM2025 for release October 2023.

Changes for Scheduled and Semi-Scheduled Generators when submitting MT PASA Offers. For details, see **EMMS – Technical Specification – October 2023**.

4.6 Stand-alone Power Systems (SAPS)

Part of NEM2025 for release May 2023.

Stand-alone power systems are an electricity supply arrangement not physically connected to the national grid. The new framework ensures the customers who receive SAPS retain their existing consumer protections, including access to retail competition and existing reliability standards. As such, individual customers are not disadvantaged where a DNSP determined it is more efficient to supply them on a stand-alone basis. The cost savings arising from the use of lower cost stand-alone systems flows through to all distribution network users, through lower network prices.

For details, see **Standalone Power Systems (SAPS)**.

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5 Data Interchange

5.1 Updated software

5.1.1 Data Model Manager

This Release has an upgrade to the **Data Model Manager** (pdrDataModelManager), version 1.1.0 with enhancements and defect fixes. We will provide more details in a future version of this technical specification.

5.2 Baseline assumptions

5.2.1 Data interchange components

Component	Current	Still supported
Electricity Data Model	5.2	5.1
PDR Loader	7.5.0	7.4.*
PDR Batcher	7.5	7.4.*
PDR Monitor	1.2.0	1.1.0
pdrDataModelManager	1.1.0	1.0.0

5.2.2 Compatible software

Component	Current
Java	11
Operating systems	Windows and Unix -like

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5.2.3 Database management systems

Due to multiple versions of available open-source database systems, it is difficult for AEMO to provide support for all versions. Performance issues are difficult to recreate due to hardware and other limitations. The Data Model versions AEMO provides are database agnostic and should work with most systems. If participants raise a support hub call for the open-source database systems, AEMO attempts to recreate the issue independently and provide as much assistance as possible, for example, issues related to queries, platform size, database tuning, indexes, or defects in AEMO application.

AEMO certified database management systems (DMS)

The database management systems below are certified by AEMO against the installer. However, we do not anticipate any issues running these installers in Oracle12c or a later version of Oracle.

Component	Current	Still supported
Microsoft SQL Server	2019	2017, 2014
Oracle	19c	18c, 12c

5.3 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

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6 Electricity Data Model 5.2

This Release contains an updated version of the Electricity Data Model 5.2. This section describes the affected packages, tables, files, reports, and interfaces.

Data Model tables for some tables and reports populate at different stages. Unpopulated tables and reports either remain empty or display null values. For details about individual project release dates, see Projects.

6.1 Data model changes summary

Table 1 MMS Data Model 5.2 modified packages and tables summary

Package	Table name	Change	Details	Project
BIDS	MTPASA_OFFERDATA	Modified	New columns: UNITSTATE1-7, RECALLTIME1-7	MT PASA
BILLING_RUN	BILLINGCPDATA	Modified	New columns: SOLDENERGY, SALES, and PURCHASEDENERGY Modified columns: PURCHASES	SAPS
	BILLINGASPAYMENTS	Modified	New columns: RAISE1SEC and LOWER1SEC	FFR
	BILLINGASRECOVERY	Modified	New columns: RAISE1SEC, LOWER1SEC, RAISE1SEC_GEN, LOWER1SEC_GEN	FFR
	BILLING_DIR_PROV_AMOUNT	New	The Billing Provisional Directions Payment Amount for Directed/Affected/Eligible participants	Direction and RERT Recovery Data Reconciliation

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Package	Table name	Change	Details	Project
	BILLING_DIR_FINAL_AMOUNT	New	The Billing Final Directions Payment Amount for Directed/Affected/Eligible participants	Direction and RERT Recovery Data Reconciliation
	BILLING_DIR_PROV_RECOVERY	New	The Billing Provisional Directions Recovery Amount for participants	Direction and RERT Recovery Data Reconciliation
	BILLING_DIR_FINAL_RECOVERY	New	The Billing Final Directions Recovery Amount for participants	Direction and RERT Recovery Data Reconciliation
	BILLING_DIR_RECOVERY_DETAIL	New	The Billing Directions Recovery Details for participants	Direction and RERT Recovery Data Reconciliation
	BILL~~ING~~RESERVETRADERRECOVERY	Modified	New column: EXCLUDEDENERGY	Direction and RERT Recovery Data Reconciliation
	BILLING_ENERGY_TRAN_SAPS	New	The SAPS Billing Transaction Details for participants	SAPS
DEMAND _FORECASTS	INTERMITTENT_GEN_FCST_DATA	Modified	Updated trigger information	Forecasting
	INTERMITTENT_GEN_SCADA	New	The SCADA Availability for every Intermittent Generating Unit, including Elements Available (wind turbines/solar inverters) and Local Limit	Forecasting
DISPATCH	DISPATCHLOAD	Modified	New columns: CONFORMANCE_MODE, UIGF, RAISE1SEC, RAISE1SECFLAGS, LOWER1SEC, LOWER1SECFLAGS, RAISE1SECACTUALAVAILABILITY, LOWER1SECACTUALAVAILABILITY Modified column: AVAILABILITY	Forecasting FFR IESS

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Package	Table name	Change	Details	Project
	DISPATCHREGIONSUM	Modified	New columns: SS_SOLAR_AVAILABILITY, SS_WIND_AVAILABILITY, RAISE1SECLOCALDISPATCH, LOWER1SECLOCALDISPATCH, RAISE1SECACTUALAVAILABILITY, LOWER1SECACTUALAVAILABILITY	Forecasting
	DISPATCHPRICE	Modified	New columns: RAISE1SECRRP, RAISE1SECROP, RAISE1SECAPCFLAG, LOWER1SECRRP, LOWER1SECROP, LOWER1SECAPCFLAG, PRE_AP_RAISE1_PRICE, PRE_AP_LOWER1_PRICE, CUMUL_PRE_AP_RAISE1_PRICE, CUMUL_PRE_AP_LOWER1_PRICE	FFR
	DISPATCH_UNIT_CONFORMANCE	Modified	New columns: ADG_ID, SEMIDISPATCHCAP, CONFORMANCE_MOD Modified description for DUID, ROC	IESS
FORCE _MAJEURE	APEVENTREGION	Modified	New columns: RAISE1SECAPFLAG, LOWER1SECAPFLAG	FFR
	MARKET_SUSPEND_SCHEDULE	Modified	New columns: L1_RRP, R1_RRP	FFR
METER _DATA	METERDATA_SAPS	New	The SAPS Meter data for MSRP and Retailer used in the Settlement Calculation	SAPS
MTPASA	MTPASA_DUIDAVAILABILITY	Modified	New columns: UNIT state, recall time	MT PASA
P5MIN	P5MIN_FCAS_REQUIREMENT	New	5-minute predispatch constraint tracking for regional FCAS recovery	FFR
	P5MIN_UNITSOLUTION	Modified	New columns: CONFORMANCE_MODE, UIGF, RAISE1SEC, RAISE1SECFLAGS, LOWER1SEC, LOWER1SECFLAGS~~,~~ ~~RAISE1SECACTUALAVAILABILITY, LOWER1SECACTUALAVAILABILITY~~	Forecasting IESS
	P5MIN_REGIONSOLUTION	Modified	New columns: SS_SOLAR_AVAILABILITY, SS_WIND_AVAILABILITY, RAISE1SECRRP, RAISE1SECROP~~, RAISE1SECAPCFLAG~~, LOWER1SECRRP, LOWER1SECROP~~, LOWER1SECAPCFLAG, PRE_AP_RAISE1_PRICE, PRE_AP_LOWER1_PRICE~~, RAISE1SECLOCALDISPATCH, LOWER1SECLOCALDISPATCH~~,~~ ~~RAISE1SECACTUALAVAILABILITY, LOWER1SECACTUALAVAILABILITY~~	Forecasting

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Package	Table name	Change	Details	Project
PDPASA	PDPASA_REGIONSOLUTION	Modified	Modified columns: SEMISCHEDULEDCAPACITY, LOR_ SEMISCHEDULEDCAPACITY, AGGREGATECAPACITYAVAILABLE, SS_SOLAR_UIGF, SS_SOLAR_CAPACITY, SS_SOLAR_CLEARED, SS_WIND_UIGF, SS_WIND_CAPACITY, SS_WIND_CLEARED	Forecasting
PRE _DISPATCH	PREDISPATCHLOAD	Modified	New columns: CONFORMANCE_MODE, UIGF, RAISE1SEC, RAISE1SECFLAGS, LOWER1SEC, LOWER1SECFLAGS, RAISE1SECACTUALAVAILABILITY, LOWER1SECACTUALAVAILABILITY Modified column: AVAILABILITY	Forecasting IESS
	PREDISPATCHPRICE	Modified	New columns: RAISE1SECRRP~~, RAISE1SECROP, RAISE1SECAPCFLAG~~, LOWER1SECRRP~~, LOWER1SECROP, LOWER1SECAPCFLAG, PRE_AP_RAISE1_PRICE, PRE_AP_LOWER1_PRICE~~	FFR
	PREDISPATCHREGIONSUM	Modified	New columns: SS_SOLAR_AVAILABILITY, SS_WIND_AVAILABILITY, RAISE1SECLOCALDISPATCH, LOWER1SECLOCALDISPATCH, RAISE1SECACTUALAVAILABILITY, LOWER1SECACTUALAVAILABILITY	Forecasting
PARTICIPANT_ REGISTRATION	AGGREGATE_DISPATCH_GROUP	New	Entity allowing for compliance monitoring over grouped DUIDs	IESS
	ADG_DETAIL	New	Tracks evolving aggregate dispatch group attributes	IESS
	DUDETAIL	Modified	New column: ADG_ID	IESS
	DUDETAILSUMMARY	Modified	New column: ADG_ID Updated transaction type from INSERT-UPDATE to DELETE-INSERT. For details see modified table: DUDETAILSUMMARY	Forecasting
SETTLEMENT _CONFIG	SETCFG_SAPS_SETT_PRICE	New	The Settlement Price for SAPS Energy in each Region	SAPS
SETTLEMENT _DATA	SETCPDATA	Modified	New columns: IMPORTENERGYCOST, EXPORTENERGYCOST Modified column: AFE	SAPS
	SET_FCAS_PAYMENT	Modified	New columns: RAISE1SEC_PAYMENT, LOWER1SEC_PAYMENT	FFR

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Package	Table name	Change	Details	Project
	SET_FCAS_RECOVERY	Modified	New columns: RAISE1SEC_RECOVERY, LOWER1SEC_RECOVERY, RAISE1SEC_RECOVERY_GEN, LOWER1SEC_RECOVERY_GEN	FFR
	SET_ENERGY_TRAN_SAPS	New	The transaction details for the SAPS connection points	SAPS
STPASA	STPASA_REGIONSOLUTION	Modified	Modified columns: UNCONSTRAINEDCAPACITY, CONSTRAINEDCAPACITY, SEMISCHEDULEDCAPACITY, LOR_ SEMISCHEDULEDCAPACITY, AGGREGATECAPACITYAVAILABLE, SS_SOLAR_UIGF, SS_SOLAR_CAPACITY, SS_SOLAR_CLEARED, SS_WIND_UIGF, SS_WIND_CAPACITY, SS_WIND_CLEARED	Forecasting
TRADING _DATA	TRADINGPRICE	Modified	New columns: RAISE1SECRRP, RAISE1SECROP, LOWER1SECRRP, LOWER1SECROP	FFR
VOLTAGE_ INSTRUCTIONS	VOLTAGE_INSTRUCTION	Modified	Modified target field	BAU

6.2 Package: BIDS

Energy Bids/Offers, Market-based FCAS Offers

6.2.1 Modified table: MTPASA_OFFERDATA

Comment	Participant submitted Offers for the MTPASA process
Visibility	Private
Data volume	Medium
Trigger	Participant submitted MT PASA offer
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports

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Primary key (in order)	EFFECTIVEDATE, OFFERDATETIME, PARTICIPANTID, UNITID

New columns

Field name	Data type	Primary key	Comment
UNITSTATE1	VARCHAR2(20)	No	The unit state value for day 1 Sunday
UNITSTATE2	VARCHAR2(20)	No	The unit state value for day 2 Monday
UNITSTATE3	VARCHAR2(20)	No	The unit state value for day 3 Tuesday
UNITSTATE4	VARCHAR2(20)	No	The unit state value for 4 Wednesday
UNITSTATE5	VARCHAR2(20)	No	The unit state value for day 5 Thursday
UNITSTATE6	VARCHAR2(20)	No	The unit state value for day 6 Friday
UNITSTATE7	VARCHAR2(20)	No	The unit state value for day 7 Saturday
RECALLTIME1	NUMBER(4)	No	The recall time associated with the unit state for day 1 Sunday
RECALLTIME2	NUMBER(4)	No	The recall time associated with the unit state for day 2 Monday
RECALLTIME3	NUMBER(4)	No	The recall time associated with the unit state for day 3 Tuesday
RECALLTIME4	NUMBER(4)	No	The recall time associated with the unit state for day 4 Wednesday
RECALLTIME5	NUMBER(4)	No	The recall time associated with the unit state for day 5 Thursday
RECALLTIME6	NUMBER(4)	No	The recall time associated with the unit state for day 6 Friday
RECALLTIME7	NUMBER(4)	No	The recall time associated with the unit state for day 7 Saturday

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6.3 Package: BILLING_RUN

Results from a published Billing Run. The settlement data and billing run data are updated daily between 6 am and 8 am for AEMO's prudential processes. In a normal week, AEMO publishes one PRELIM, one FINAL and two REVISION runs in addition to the daily runs. Each billing run is uniquely identified by contract year, week no and bill run no.

6.3.1 Modified table: BILLINGCPDATA

Comment	BILLINGCPDATA shows energy quantity purchased/sold and $ value purchased/sold per participant connection point
Visibility	Private
Trigger	Populated by the posting of a billing run, being several times each week
Data volume	Small
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	BILLRUNNO, CONNECTIONPOINTID, CONTRACTYEAR, MDA, PARTICIPANTID, WEEKNO

New columns

Field name	Data type	Primary key	Comment
SOLDENERGY	NUMBER(18,8)	No	Energy sold at the connection point by the participant in this billing run
SALES	NUMBER(18,8)	No	The total cost of energy sold at the connection point by the participant in this billing run
PURCHASEDENERGY	NUMBER(18,8)	No	The energy consumed at the connection point by the participant in this billing run

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Modified column

Field name	Data type	Primary key	Comment
PURCHASES	NUMBER(18,8)	No	The Purchase column has the dollar value of the Energy Purchased rather than Aggregate Energy Dollar

6.3.2 Modified table: BILLINGASPAYMENTS

Comment	BILLINGASPAYMENTS shows Ancillary Service payments for each billing period by each of the Ancillary Service types for each participant's connection points
Visibility	Private
Trigger	Updated with each billing run
Data volume	Small
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	CONTRACTYEAR, PARTICIPANTID, WEEKNO, BILLRUNNO, CONNECTIONPOINTID

New columns

Field name	Data type	Primary key	Comment
RAISE1SEC	NUMBER(18,8)	No	Payment amount for the very fast raise service
LOWER1SEC	NUMBER(18,8)	No	Payment amount for the very fast lower service

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6.3.3 Modified table: BILLINGASRECOVERY

Comment	BILLINGASRECOVERY shows participant charges for Ancillary Services for the billing period
Visibility	Private
Trigger	Updated with each billing run
Data volume	Small
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, PARTICIPANTID, REGIONID

New columns

Field name	Data type	Primary key	Comment
RAISE1SEC	NUMBER(18,8)	No	Customer recovery amount for the very fast raise service
LOWER1SEC	NUMBER(18,8)	No	Customer recovery amount for the very fast lower service
RAISE1SEC_GEN	NUMBER(18,8)	No	Generator recovery amount for the very fast raise service
LOWER1SEC_GEN	NUMBER(18,8)	No	Generator recovery amount for the very fast lower service

6.3.4 New table: BILLING_DIR_PROV_AMOUNT

Comment	The Billing Provisional Directions Payment Amount for Directed/Affected/Eligible Participants
Visibility	Private
Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run

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Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, DIRECTION_ID, PARTICIPANTID, COMPENSATION_TYPE

New columns

Field name	Data type	Primary key	Comment
CONTRACTYEAR	NUMBER(4,0)	Yes	The Billing Contract Year
WEEKNO	NUMBER(3,0)	Yes	The Billing Week number
BILLRUNNO	NUMBER(3,0)	Yes	The Billing Run numbero
DIRECTION_ID	VARCHAR2(20)	Yes	The Direction Unique Identifier
PARTICIPANTID	VARCHAR2(20)	Yes	The Direction Payment Participant ID
COMPENSATION_TYPE	VARCHAR2(40)	Yes	The Direction Payment Type, Directed_Comp, Affected_Comp, Eligible_Comp
COMPENSATION_AMOUNT	NUMBER(18,8)	No	The Direction Payment Amount
LASTCHANGED	DATE	No	The Last datetime record is updated

6.3.5 New table: BILLING_DIR_FINAL_AMOUNT

Comment	The Billing Final Directions Payment Amount for Directed/Affected/Eligible participants
Visibility	Private
Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run

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Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, DIRECTION_ID, PARTICIPANTID, COMPENSATION_TYPE

New columns

Field name	Data type	Primary key	Comment
CONTRACTYEAR	NUMBER(4,0)	Yes	The Billing Contract Year
WEEKNO	NUMBER(3,0)	Yes	The Billing WeekNo
BILLRUNNO	NUMBER(3,0)	Yes	The Billing RunNo
DIRECTION_ID	VARCHAR2(20)	Yes	The Direction Unique Identifier
PARTICIPANTID	VARCHAR2(20)	Yes	The Direction Payment Participant ID
COMPENSATION_TYPE	VARCHAR2(40)	Yes	The Direction Payment Type, Directed_Comp, Affected_Comp, Eligible_Comp
PROVISIONAL_AMOUNT	NUMBER(18,8)	No	The Direction Provisional Payment Amount
FINAL_AMOUNT	NUMBER(18,8)	No	The Direction Final Payment Amount
LASTCHANGED	DATE	No	The last datetime record is updated

6.3.6 New table: BILLING_DIR_PROV_RECOVERY

Comment	The Billing Provisional Directions Recovery Amount for the participants
Visibility	Private

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Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run
Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, DIRECTION_ID, PARTICIPANTID

New columns

Field name	Data type	Primary key	Comment
CONTRACTYEAR	NUMBER(4,0)	Yes	The Billing Contract Year
WEEKNO	NUMBER(3,0)	Yes	The Billing Week number
BILLRUNNO	NUMBER(3,0)	Yes	The Billing Run number
DIRECTION_ID	VARCHAR2(20)	Yes	The Direction Unique Identifier
PARTICIPANTID	VARCHAR2(20)	Yes	The Direction Payment Participant ID
CRA_AMOUNT	NUMBER(18,8)	No	The Direction Compensation Recovery Amount
RECOVERY_AMOUNT	NUMBER(18,8)	No	The Direction Recovery Amount
LASTCHANGED	DATE	No	The Last datetime record is updated

6.3.7 New table: BILLING_DIR_FINAL_RECOVERY

Comment	The Billing Final Directions Recovery Amount for the participants
Visibility	Private

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Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run
Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, DIRECTION_ID, PARTICIPANTID

New columns

Field name	Data type	Primary key	Comment
CONTRACTYEAR	NUMBER(4,0)	Yes	The Billing Contract Year
WEEKNO	NUMBER(3,0)	Yes	The Billing Week number
BILLRUNNO	NUMBER(3,0)	Yes	The Billing Run number
DIRECTION_ID	VARCHAR2(20)	Yes	The Direction Unique Identifier
PARTICIPANTID	VARCHAR2(20)	Yes	The Direction Payment Participant ID
CRA_AMOUNT	NUMBER(18,8)	No	The Direction Compensation Recovery Amount
PROVISIONAL_AMOUNT	NUMBER(18,8)	No	The Provisional Recovery Amount
FINAL_AMOUNT	NUMBER(18,8)	No	The Final Recovery Amount
LASTCHANGED	DATE	No	The Last datetime record is updated

6.3.8 New table: BILLING_DIR_RECOVERY_DETAIL

Comment	The Billing Directions Recovery Details for the participants

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Visibility	Private
Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run
Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, DIRECTION_ID, PARTICIPANTID, PARTICIPANTCATEGORYID, REGIONID

New columns

Field name	Data type	Primary key	Comment
CONTRACTYEAR	NUMBER(4,0)	Yes	The Billing Contract Year
WEEKNO	NUMBER(3,0)	Yes	The Billing Week number
BILLRUNNO	NUMBER(3,0)	Yes	The Billing Run number
DIRECTION_ID	VARCHAR2(20)	Yes	The Direction Unique Identifier
PARTICIPANTID	VARCHAR2(20)	Yes	The Direction Payment Participant ID
PARTICIPANTCATEGORYID	VARCHAR2(20)	Yes	The Participant Category for recovery Customer/Generator/SmallGen
REGIONID	VARCHAR2(20)	Yes	The Region ID for the recovery
RECOVERY_AMOUNT	NUMBER(18,8)	No	The Direction Recovery Amount
RECOVERY_ENERGY	NUMBER(18,8)	No	The Energy Value used for the Recovery
REGION_ENERGY	NUMBER(18,8)	No	The total Energy at the Region ID

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Field name	Data type	Primary key	Comment
EXCLUDED_ENERGY	NUMBER(18,8)	No	The Energy Value (Scheduled Loads) that is excluded
LASTCHANGED	DATE	No	The Last datetime record is updated

6.3.9 Modified table: BILLRESERVETRADERRECOVERY

Comment	The Billing Reserve Trader Recovery Details for the participants
Visibility	Private
Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run
Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, PARTICIPANTID, REGIONID, PUBLICATION_ID, PAYMENT_ID

New columns

Field name	Data type	Primary key	Comment
EXCLUDED_ENERGY	NUMBER(18,8)	No	The Energy Value (Scheduled Loads) that is excluded

6.3.10 New table: BILLING_ENERGY_TRAN_SAPS

Comment	The SAP Billing Transaction Details for the participants
Visibility	Private

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Data volume	Medium
Trigger	Daily Run and Posting a PRELIM/FINAL and REVISE Billing Run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CONTRACTYEAR, WEEKNO, BILLRUNNO, PARTICIPANTID, TNI

New columns

Field name	Data type	Primary key	Comment
CONTRACTYEAR	NUMBER(4,0)	Yes	The billing contract year
WEEKNO	NUMBER(3,0)	Yes	The billing week number
BILLRUNNO	NUMBER(3,0)	Yes	The billing run number
PARTICIPANTID	VARCHAR2(20)	Yes	The SAPS Participant ID
TNI	VARCHAR2(20)	Yes	The SAPS Connection Point ID
REGIONID	VARCHAR2(20)	No	The Region ID associated with the TNI
CONSUMED_ENERGY_MWH	NUMBER(18,8)	No	The Energy MWh Consumed for that TNI for the Participant Id in that Billing Week
SENTOUT_ENERGY_MWH	NUMBER(18,8)	No	The Energy MWh Sent Out for the TNI for the Participant Id in that Billing Week
CONSUMED_ENERGY_COST	NUMBER(18,8)	No	The Cost of the Consumed Energy
SENTOUT_ENERGY_COST	NUMBER(18,8)	No	The Cost of the Sent Out Energy
LASTCHANGED	DATE	No	The Last datetime record is updated

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6.4 Package: DEMAND_FORECASTS

Regional Demand Forecasts and Intermittent Generation forecasts.

6.4.1 Modified table: INTERMITTENT_GEN_FCST_DATA

Modifies the trigger information only. No change to the table structure.

Comment	Stores the forecast generation (MW) for each interval within a given forecast of an intermittent generator.
Visibility	Private
Data volume	Medium
Trigger	INTERMITTENT_GEN_FCST_DATA updates every 30 minutes when AEMO issues a new 30-minute forecast of wind generation out to 8 days ahead.
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DUID, INTERVAL_DATETIME, RUN_DATETIME

6.4.2 New table: INTERMITTENT_GEN_SCADA

Comment	INTERMITTENT_GEN_SCADA provides the SCADA Availability for every intermittent generating unit, including Elements Available (wind turbines/solar inverters) and Local Limit
Visibility	Private, public next day
Data volume	Large
Trigger	INTERMITTENT_GEN_SCADA shows data for every 5 minutes for all Intermittent Generating Units

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

New columns

Field name	Data type	Primary key	Comment
RUN_DATETIME	DATE	Yes	Date Time of the dispatch interval (interval ending)
DUID	VARCHAR2(20)	Yes	Dispatchable Unit Identifier

SCADA_TYPE	VARCHAR2(20)	Yes	SCADA snapshot for intermittent generating unit at start of interval for a specified SCADA signal type.
			ELAV = Total Elements Available (# turbines for wind farms, # inverters for solar farms);
			LOCL = Local Limit (MW).

SCADA_VALUE	NUMBER(15,5)	No	SCADA value snapshot for intermittent generating unit at start of interval for a specified SCADA signal type.
SCADA_QUALITY	VARCHAR2(20)	No	SCADA quality snapshot for intermittent generating unit at start of interval for a specified SCADA signal type.

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6.5 Package: DISPATCH

Results from a published Dispatch Run.

6.5.1 Modified table: DISPATCHLOAD

Comment	DISPATCHLOAD set out the current SCADA MW and target MW for each dispatchable unit, including relevant Frequency Control Ancillary Services (FCAS) enabling targets for each five minutes and additional fields to handle the new Ancillary Services functionality. Fast Start Plant status is indicated by dispatch mode
Visibility	Private, public next day
Data volume	Large
Trigger	DISPATCHLOAD shows data for every 5 minutes for all units, even zero targets
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DUID, INTERVENTION, RUNNO, SETTLEMENTDATE

New columns

Field name	Data type	Primary key	Comment
CONFORMANCE_MODE	NUMBER(6,0)	No	Mode specific to units within an aggregate. 0 – no monitoring, 1 – aggregate monitoring, 2 – individual monitoring due to constraint
UIGF	NUMBER(15,5)	No	For Semi-Scheduled units. Unconstrained Intermittent Generation Forecast value provided to NEMDE
RAISE1SEC	NUMBER(15,5)	No	Dispatched Raise1Sec – TraderSolution element R1Target attribute

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Field name	Data type	Primary key	Comment
RAISE1SECFLAGS	NUMBER(3,0)	No	TraderSolution element R1Flags attribute
LOWER1SEC	NUMBER(15,5)	No	Dispatched Lower1Sec – TraderSolution element L1Target attribute
LOWER1SECFLAGS	NUMBER(3,0)	No	TraderSolution element L1Flags attribute
RAISE1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Raise 1Sec Availability
LOWER1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Lower 1Sec Availability

Modified columns

Field name	Data type	Primary key	Comment
AVAILABILITY	NUMBER(15,5)	No	For Scheduled units, this is the MAXAVAIL bid availability. For Semi-scheduled units, this is the lower of MAXAVAIL bid availability and UIGF

6.5.2 Modified table: DISPATCHPRICE

Comment	DISPATCHPRICE records 5-minute dispatch prices for energy and FCAS, including whether an intervention has occurred, or price override (e.g. for Administered Price Cap). DISPATCHPRICE updates when price adjustments occur, in which case the new price is written to the RRP field, and the old price to the ROP field as an audit trail
Visibility	Public
Data volume	Large
Trigger	DISPATCHPRICE updates every 5 minutes

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Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DISPATCHINTERVAL, INTERVENTION, REGIONID, RUNNO, SETTLEMENTDATE

New columns

Field name	Data type	Primary key	Comment
RAISE1SECRRP	NUMBER(15,5)	No	Regional Raise 1Sec Price – R1Price attribute after capping/flooring
RAISE1SECROP	NUMBER(15,5)	No	Raise1Sec Regional Original Price – uncapped/unfloored and unscaled
RAISE1SECAPCFLAG	NUMBER(3,0)	No	BitFlag field for Price adjustments – "1" = Voll_Override; "4" = Floor_VoLL; "8" = Manual_Override; "16" = Price_Scaled
LOWER1SECRRP	NUMBER(15,5)	No	Regional Lower 1Sec Price – RegionSolution element L1Price attribute
LOWER1SECROP	NUMBER(15,5)	No	Lower1Sec Regional Original Price – uncapped/unfloored and unscaled
LOWER1SECAPCFLAG	NUMBER(3,0)	No	BitFlag field for Price adjustments – "1" = Voll_Override; "4" = Floor_VoLL; "8" = Manual_Override; "16" = Price_Scaled
PRE_AP_RAISE1_PRICE	NUMBER(15,5)	No	Price before AP capping or scaling – for Rolling Sum Price monitoring
PRE_AP_LOWER1_PRICE	NUMBER(15,5)	No	Price before AP capping or scaling – for Rolling Sum Price monitoring
CUMUL_PRE_AP_RAISE1_PRICE	NUMBER(15,5)	No	Cumulative price that triggers administered pricing event if above the threshold
CUMUL_PRE_AP_LOWER1_PRICE	NUMBER(15,5)	No	Cumulative price that triggers administered pricing event if above the threshold

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6.5.3 Modified table: DISPATCHREGIONSUM

Comment	DISPATCHREGIONSUM sets out the 5-minute solution for each dispatch run for each region, including the Frequency Control Ancillary Services (FCAS) services provided. Additional fields are for the Raise Regulation and Lower Regulation Ancillary Services plus improvements to demand calculations
Visibility	Public
Data volume	Large
Trigger	DISPATCHREGIONSUM updates every 5 minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DISPATCHINTERVAL, INTERVENTION, REGIONID, RUNNO, SETTLEMENTDATE

New columns

Field name	Data type	Primary key	Comment
SS_SOLAR_AVAILABILITY	NUMBER(15,5)	No	For Semi-Scheduled units. Aggregate Energy Availability from Solar units in that region
SS_WIND_AVAILABILITY	NUMBER(15,5)	No	For Semi-Scheduled units. Aggregate Energy Availability from Wind units in that region
RAISE1SECLOCALDISPATCH	NUMBER(15,5)	No	Total Raise1Sec Dispatched in Region – RegionSolution element R1Dispatch attribute
LOWER1SECLOCALDISPATCH	NUMBER(15,5)	No	Total Lower1Sec Dispatched in Region – RegionSolution element L1Dispatch attribute
RAISE1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Raise1Sec availability (summated from UnitSolution)
LOWER1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Lower1Sec availability (summated from UnitSolution)

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6.5.4 Modified table: DISPATCH_UNIT_CONFORMANCE

Comment	DISPATCH_UNIT_CONFORMANCE details the conformance of a scheduled units operation with respect to a cleared target on dispatch interval basis. Data is confidential
Visibility	Private
Data volume	Medium
Trigger	DISPATCH_UNIT_CONFORMANCE shows data for every 5 minutes for all scheduled units
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DUID, INTERVAL_DATETIME

New columns

Field name	Data type	Primary key	Comment
ADG_ID	VARCHAR2(20)	No	Aggregate Dispatch Group to which this dispatch unit belongs
SEMIDISPATCHCAP	NUMBER(3,0)	No	Boolean representation flagging if the Target is capped
CONFORMANCE_MODE	NUMBER(6,0)	No	For an individual unit in an aggregate dispatch group (where DUID <> ADG_ID), Mode specific to that unit. 0 – no monitoring, 1 – aggregate monitoring, 2 – individual monitoring due to constraint. For the aggregate dispatch group (where DUID = ADG_ID), 0 – no aggregate monitoring, 1 – aggregate monitoring

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Modified columns

Comment changes only.

Field name	Data type	Primary key	Comment
DUID	VARCHAR2(20)	Yes	Dispatchable Unit Identifier, or Aggregate Dispatch Group identifier
ROC	NUMBER(16,6)	No	Rate of Change in direction of error MW per minute

6.6 Package: FORCE_MAJEURE

Market Suspensions and administer pricing event data.

6.6.1 Modified table: APEVENTREGION

Comment	APEVENTREGION is the region detail for an administered pricing event defined through APEVENT
Visibility	Public
Data volume	Small
Trigger	Administered pricing event
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	APEVENTID, REGIONID

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New columns

Field name	Data type	Primary key	Comment
RAISE1SECAPFLAG	NUMBER(3,0)	No	Flag indicating if the APEvent covers a Raise1Sec AP
LOWER1SECAPFLAG	NUMBER(3,0)	No	Flag indicating if the APEvent covers a Lower1Sec AP

6.6.2 Modified table: MARKET_SUSPEND_SCHEDULE

Comment	Trading prices applying in the event of a market suspension event updated weekly
Visibility	Public
Data volume	Small
Trigger	Weekly and ad hoc
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DAY_TYPE, EFFECTIVEDATE, PERIODID, REGIONID

New columns

Field name	Data type	Primary key	Comment
L1_RRP	NUMBER(15,5)	No	Lower 1Sec contingency Price applied for this period for this Day Type
R1_RRP	NUMBER(15,5)	No	Raise 1Sec contingency Price applied for this period for this Day Type

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6.7 Package: METER_DATA

The Customer and Generator Metering Data used in the calculation of Settlements.

6.7.1 New table: METERDATA_SAPS

Comment	The SAPS Meter data for MSRP and Retailer used in the Settlement Calculation
Visibility	Public
Data volume	Large
Trigger	Posting a Prelim/Final or Revise Billing Run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	CASE_ID, SETTLEMENTDATE, CONNECTIONPOINT_ID, METER_TYPE, FRMP, LR, PERIODID

New columns

Field name	Data type	Primary key	Comment
CASE_ID	NUMBER(15,0)	Yes	The Metering Case ID used for Settlements
SETTLEMENTDATE	DATE	Yes	The Settlement Date for that week
CONNECTIONPOINT_ID	VARCHAR2(20)	Yes	The SAPS Connection Point Id
METER_TYPE	VARCHAR2(20)	Yes	The Meter Type Identifier, CUSTOMER or MSRP
FRMP	VARCHAR2(20)	Yes	The Financial Responsible Market Participant
LR	VARCHAR2(20)	Yes	The Local Retailer

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Field name	Data type	Primary key	Comment
PERIODID	NUMBER(4,0)	Yes	The Period ID Identifier
IMPORTVALUE	NUMBER(18,8)	No	The Sent Out Energy in MWh
EXPORTVALUE	NUMBER(18,8)	No	The Consumed Energy in MWh
LASTCHANGED	DATE	No	The Date time of the record last updated or inserted

6.8 Package: MTPASA

Results from a published Medium Term PASA Run and region-aggregate offered PASA Availability of Scheduled GeneratorsPackage.

6.8.1 Modified table: MTPASA_DUIDAVAILABILITY

Comment	Offered PASA Availability of the scheduled generator DUID for each day over the Medium Term PASA period. The data in this table is input data to the MT PASA process. It is not part of the MTPASA solution. The availability does not reflect any energy limitations in the MT PASA offers
Visibility	Public
Data volume	Large
Trigger	After each MT PASA run (approximately every three hours)
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\CSV\REPORTS
Primary key (in order)	DAY, DUID, PUBLISH_DATETIME, REGIONID

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New columns

Field name	Data type	Primary key	Comment
PASAUNITSTATE	VARCHAR2(20)	No	The unit state value
PASARECALLTIME	NUMBER(4)	No	The recall time value

6.9 Package: P5MIN

Results from a published Five-minute Predispatch Run.

6.9.1 Modified table: P5MIN_FCAS_REQUIREMENT

Comment	5-minute Predispatch constraint tracking for Regional FCAS recovery
Visibility	Private, public next day
Trigger	Updates against each 5-minute pre-dispatch run
Data volume	Large
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	RUN_DATETIME, INTERVAL_DATETIME, CONSTRAINTID, BIDTYPE, REGIONID

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New columns

Field name	Data type	Primary key	Comment
RUN_DATETIME	DATE	Yes	First interval of the 5-minute Predispatch case
INTERVAL_DATETIME	DATE	Yes	Datetime of the 5-minute Predispatch interval
CONSTRAINTID	VARCHAR2(20)	Yes	ConstraintID – Join to table GenConData
REGIONID	VARCHAR2(20)	Yes	Region Identifier
BIDTYPE	VARCHAR2(10)	Yes	DUID offered type
INTERVENTION	NUMBER(2,0)	No	Intervention flag
CONSTRAINT_EFFECTIVEDATE	DATE	No	Constraint EffectiveDate – Join to table GenConData
CONSTRAINT_VERSIONNO	NUMBER(18,8)	No	Constraint Version number – Join to table GenConData
MARGINALVALUE	NUMBER(18,8)	No	Marginal $ value for energy
BASE_COST	NUMBER(18,8)	No	The base cost of the constraint for this service, before the regulation/contingency split
ADJUSTED_COST	NUMBER(18,8)	No	The adjusted cost of the constraint for this service, after the regulation/contingency split
ESTIMATED_CMPF	NUMBER(18,8)	No	An estimated value for the constraint CMPF, based on 5-minute Predispatch data
ESTIMATED_CRMPF	NUMBER(18,8)	No	An estimated value for the constraint CRMPF, based on 5-minute Predispatch data
RECOVERY_FACTOR_CMPF	NUMBER(18,8)	No	Estimated recovery factor for CMPF based recovery
RECOVERY_FACTOR_CRMPF	NUMBER(18,8)	No	Estimated recovery for CRMPF based recovery
LASTCHANGED	DATE	No	Last changed date for the record

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6.9.2 Modified table: P5MIN_UNITSOLUTION

Comment	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods P5MIN_UNITSOLUTION shows the Unit results from the capacity evaluations for each period of the study
Visibility	Private
Data volume	Large
Trigger	P5MIN_UNITSOLUTION updates every 5 minutes for all units, even zero targets
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	DUID, INTERVAL_DATETIME, RUN_DATETIME

New columns

Field name	Data type	Primary key	Comment
CONFORMANCE_MODE	NUMBER(6,0)	No	Mode specific to units within an aggregate. 0 – no monitoring, 1 – aggregate monitoring, 2 – individual monitoring due to constraint
UIGF	NUMBER(15,5)	No	For Semi-Scheduled units. Unconstrained Intermittent Generation Forecast value provided to NEMDE
RAISE1SEC	NUMBER(15,5)	No	Dispatched Raise1Sec – TraderSolution element R1Target attribute
RAISE1SECFLAGS	NUMBER(3,0)	No	TraderSolution element R1Flags attribute
LOWER1SEC	NUMBER(15,5)	No	Dispatched Lower1Sec – TraderSolution element L1Target attribute
LOWER1SECFLAGS	NUMBER(3,0)	No	TraderSolution element L1Flags attribute

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Field name	Data type	Primary key	Comment
~~RAISE1SECACTUALAVAILABILITY~~	~~NUMBER(16,6)~~	~~No~~	~~Trapezium adjusted Raise 1Sec Availability~~
~~LOWER1SECACTUALAVAILABILITY~~	~~NUMBER(16,6)~~	~~No~~	~~Trapezium adjusted Lower 1Sec Availability~~

Modified columns

Field name	Data type	Primary key	Comment
AVAILABILITY	NUMBER(15,5)	No	For Scheduled units, this is the MAXAVAIL bid availability For Semi-scheduled units, this is the lower of MAXAVAIL bid availability and UIGF

6.9.3 Modified table: P5MIN_REGIONSOLUTION

Comment	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods P5MIN_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study
Visibility	Public
Data volume	Medium
Trigger	P5MIN_REGIONSOLUTION updates every 5 minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	INTERVAL_DATETIME, REGIONID, RUN_DATETIME

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New columns

Field name	Data type	Primary key	Comment
SS_SOLAR_AVAILABILITY	NUMBER(15,5)	No	For Semi-Scheduled units. Aggregate Energy Availability from Solar units in that region
SS_WIND_AVAILABILITY	NUMBER(15,5)	No	For Semi-Scheduled units. Aggregate Energy Availability from Wind units in that region
RAISE1SECRRP	NUMBER(15,5)	No	Regional Raise 1Sec Price – R1Price attribute after capping/flooring
RAISE1SECROP	NUMBER(15,5)	No	Raise1Sec Regional Original Price – uncapped/unfloored and unscaled
~~RAISE1SECAPCFLAG~~	~~NUMBER(3,0)~~	~~No~~	~~BitFlag field for Price adjustments - "1" = Voll_Override; "4" = Floor_VoLL; "8" = Manual_Override; "16" = Price_Scaled~~
LOWER1SECRRP	NUMBER(15,5)	No	Regional Lower 1Sec Price – RegionSolution element L1Price attribute
LOWER1SECROP	NUMBER(15,5)	No	Lower1Sec Regional Original Price – uncapped/unfloored and unscaled
~~LOWER1SECAPCFLAG~~	~~NUMBER(3,0)~~	~~No~~	~~BitFlag field for Price adjustments - "1" = Voll_Override; "4" = Floor_VoLL; "8" = Manual_Override; "16" = Price_Scaled~~
~~PRE_AP_RAISE1_PRICE~~	~~NUMBER(15,5)~~	~~No~~	~~Price before AP capping or scaling - for Rolling Sum Price monitoring~~
~~PRE_AP_LOWER1_PRICE~~	~~NUMBER(15,5)~~	~~No~~	~~Price before AP capping or scaling - for Rolling Sum Price monitoring~~
RAISE1SECLOCALDISPATCH	NUMBER(15,5)	No	Total Raise1Sec Dispatched in Region – RegionSolution element R1Dispatch attribute
LOWER1SECLOCALDISPATCH	NUMBER(15,5)	No	Total Lower1Sec Dispatched in Region – RegionSolution element L1Dispatch attribute
~~RAISE1SECACTUALAVAILABILITY~~	~~NUMBER(16,6)~~	~~No~~	~~Trapezium adjusted Raise1Sec availability (summated from UnitSolution)~~
~~LOWER1SECACTUALAVAILABILITY~~	~~NUMBER(16,6)~~	~~No~~	~~Trapezium adjusted Lower1Sec availability (summated from UnitSolution)~~

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6.206.10 Package: PARTICIPANT_REGISTRATION

Participant registration data.

6.20.16.10.1 New table: AGGREGATE_DISPATCH_GROUP

Comment	Entity allowing for compliance monitoring over grouped DUIDs
Visibility	Private, public next day
Data volume	Small
Trigger	TBC
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	ADG_ID

New columns

Field name	Data type	Primary key	Comment
ADG_ID	VARCHAR2(20)	Yes	Aggregate Dispatch Group ID
COMMENTS	VARCHAR2(100)	No	A participant provided comment
LASTCHANGED	DATE	No	Last date and time record changed

~~6.20.2~~6.10.2 New table: ADG_DETAIL

Comment	Table for tracking evolving Aggregate Dispatch Group attributes

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Visibility	Private, public next day
Data volume	Small
Trigger	TBC
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	ADG_ID, EFFECTIVEDATE, VERSION_DATETIME

New columns

Field name	Data type	Primary key	Comment
ADG_ID	VARCHAR2(20)	Yes	Identifies the Aggregate Dispatch Group
EFFECTIVEDATE	DATE	Yes	Effective calendar date of record
VERSION_DATETIME	DATE	Yes	Date and time of the version of Dispatchable Unit details
ADG_TYPE	VARCHAR2(20)	No	Conformance Type for the Aggregate Dispatch Group. One of the following: 'CAP', 'MIXED', 'TARGET'
AUTHORISEDDATE	DATE	No	Date record authorised
AUTHORISEDBY	VARCHAR2(15)	No	User authorising record
LASTCHANGED	DATE	No	Last date and time record changed

~~6.20.3~~6.10.3 Modified table: DUDETAIL

Comment	DUDETAIL sets out records specific details for each unit including start type and whether normally on or offload. Much of this data is information only and is not used in dispatch or settlements

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Visibility	Public
Data volume	Medium
Trigger	DUDETAILSUMMARY updates only when registration details change
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	DUID, EFFECTIVEDATE, VERSIONNO

New columns

Field name	Data type	Primary key	Comment
ADG_ID	VARCHAR2(20)	No	Aggregate Dispatch Group to which this dispatch unit belongs

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6.20.46.10.4 Modified table: DUDETAILSUMMARY

Important table changes	~~DUDetailSummary can be misleading and is a frequent point of confusion for participants. To overcome this, rather than reporting incremental changes to DUDETAILSUMMARY, we are supplying the full history of DUDETAILSUMMARY each day and modifying the transaction_type from INSERT-UPDATE to DELETE-INSERT.~~ ~~DUDetailSummary includes an End_Date, which is actually the Start_Date of the next record as defined when the data set was created. This gives the From Date-To Date model. DUDetailSummary was created to assist participants comprehension of the complex interrelations between the component tables. Such a presentation is subject to changes in Registration, particularly retrospective changes occurring as registration information is clarified after the initial registration. The consequence of retrospective changes is further records can be created and replicated to participants. This creates ambiguity as participants can see two records indicating an overlap for the same DUIDs. Note that the presentation is an external construct and the internal AEMO tables are always unambiguous.~~ ~~The operation to change the transaction type clears and reloads the DUDETAILSUMMARY table in a single database transaction.~~ ~~In the event the operation fails, the current data remains without impact to participants. Participants always have the opportunity to repopulate this table from the BASELINE reports.~~See **Changes in this version.**
Comment	DUDETAILSUMMARY sets out a single summary unit table so reducing the need for participants to use the various dispatchable unit detail and owner tables to establish generating unit-specific details
Visibility	Public
Data volume	Medium
Trigger	DUDETAILSUMMARY updates only when registration details change
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	DUID, START_DATE

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New columns

Field name	Data type	Primary key	Comment
ADG_ID	VARCHAR2(20)	No	Aggregate Dispatch Group to which this dispatch unit belongs

~~6.21~~6.11 Package: PDPASA

The PDPASA package provides a 30-minute solving process to the Market systems. The current methodology for calculating reserves in the PreDispatch timeframe is determined in a post-processing step using a heuristic calculation based the results and Interconnector limits from the PreDispatch run. The calculation is a reserve assessment based on the PASA solver similar to existing ST and MT PASA business processes. The process reflects all intra-regional and inter-regional network constraints as an input to the process.

~~6.21.1~~6.11.1 Modified table: PDPASA_REGIONSOLUTION

Comment	The PDPASA region solution data
Visibility	Public
Data volume	Medium
Trigger	PDPASA_REGIONSOLUTION is updated each PDPASA run (i.e. half-hourly).
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	INTERVAL_DATETIME, REGIONID, RUN_DATETIME, RUNTYPE

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Modified columns

Field name	Data type	Primary key	Comment
SEMISCHEDULEDCAPACITY	NUMBER(15,5)	No	Aggregate Regional availability of Semi-scheduled units limited by MAXAVAIL bid
LOR_ SEMISCHEDULEDCAPACITY	NUMBER(15,5)	No	Aggregate Regional availability of Semi-scheduled units limited by MAXAVAIL bid for LOR
AGGREGATECAPACITYAVAILABLE	NUMBER(15,5)	No	Sum of MAXAVAIL quantities offered by all Scheduled units and Availability of all semi-scheduled units limited by MAXAVAIL in a given Region for a given PERIODID
SS_SOLAR_UIGF	NUMBER(12,2)	No	Unconstrained Intermittent Generation Forecast for solar for the region. For RELIABILITY_LRC and OUTAGE_LRC run this is the POE90 forecast (determined by LRCUIGFOption in CaseSolution). For LOR run this is the POE50 forecast
SS_SOLAR_CAPACITY	NUMBER(12,2)	No	Constrained generation forecast for solar for the region. For RELIABILITY_LRC run solar generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run solar generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.
SS_SOLAR_CLEARED	NUMBER(12,2)	No	Constrained generation forecast for solar for the region. For RELIABILITY_LRC run solar generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run solar generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.
SS_WIND_UIGF	NUMBER(12,2)	No	Unconstrained Intermittent Generation Forecast for wind for the region. For RELIABILITY_LRC and OUTAGE_LRC run this is the POE90 forecast (determined by LRCUIGFOption in CaseSolution). For LOR run this is the POE50 forecast
SS_WIND_CAPACITY	NUMBER(12,2)	No	Constrained generation forecast for wind for the region. For RELIABILITY_LRC run wind generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run wind generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.

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Field name	Data type	Primary key	Comment
SS_WIND_CLEARED	NUMBER(12,2)	No	Constrained generation forecast for wind for the region. For RELIABILITY_LRC run wind generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run wind generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.

~~6.22~~6.12 Package: PRE_DISPATCH

Results from a published Predispatch Run.

~~6.22.1~~6.12.1 Modified table: PREDISPATCHLOAD

Comment	PREDISPATCHLOAD shows pre-dispatch targets for each dispatchable unit, including additional fields to handle the Ancillary Services functionality. No record is written where a unit is not dispatched. PREDISPATCHLOAD shows all the results for each period.
Visibility	Private, public next day
Data volume	Large
Trigger	Own (confidential) data updates every thirty minutes, with whole market data for the day before available as part of next day market data
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DATETIME, DUID

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New columns

Field name	Data type	Primary key	Comment
CONFORMANCE_MODE	NUMBER(6,0)	No	Mode specific to units within an aggregate. 0 - no monitoring, 1 - aggregate monitoring, 2 - individual monitoring due to constraint.
UIGF	NUMBER(15,5)	No	For Semi-Scheduled units. Unconstrained Intermittent Generation Forecast value provided to NEMDE
RAISE1SEC	NUMBER(15,5)	No	Dispatched Raise1Sec - TraderSolution element R1Target attribute
RAISE1SECFLAGS	NUMBER(3,0)	No	TraderSolution element R1Flags attribute
LOWER1SEC	NUMBER(15,5)	No	Dispatched Lower1Sec - TraderSolution element L1Target attribute
LOWER1SECFLAGS	NUMBER(3,0)	No	TraderSolution element L1Flags attribute
RAISE1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Raise 1Sec Availability
LOWER1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Lower 1Sec Availability

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Modified columns

Field name	Data type	Primary key	Comment
AVAILABILITY	NUMBER(15,5)	No	For Scheduled units, this is the MAXAVAIL bid availability. For Semi-scheduled units, this is the lower of MAXAVAIL bid availability and UIGF

~~6.22.2~~6.12.2 Modified table: PREDISPATCHREGIONSUM

Comment	PREDISPATCHREGIONSUM sets out the overall regional Pre-Dispatch results for base case details (excluding price) PREDISPATCHREGIONSUM includes the forecast demand (total demand) and Frequency Control Ancillary Services (FCAS) requirements (specifically, for the Raise Regulation and Lower Regulation Ancillary Services plus improvements to demand calculations). PREDISPATCHREGIONSUM updates each half-hour with the latest Pre-dispatch details for the remaining period. Regional demand can be calculated as total demand plus dispatchable load (i.e. Regional demand = Total Demand + Dispatchable Load)
Visibility	Public
Data volume	Medium
Trigger	PREDISPATCHREGIONSUM updates every thirty minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DATETIME, REGIONID

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New columns

Field name	Data type	Primary key	Comment
SS_SOLAR_AVAILABILITY	NUMBER(15,5)	No	For Semi-Scheduled units. Aggregate Energy Availability from Solar units in that region
SS_WIND_AVAILABILITY	NUMBER(15,5)	No	For Semi-Scheduled units. Aggregate Energy Availability from Wind units in that region
RAISE1SECLOCALDISPATCH	NUMBER(15,5)	No	Total Raise1Sec Dispatched in Region - RegionSolution element R1Dispatch attribute
LOWER1SECLOCALDISPATCH	NUMBER(15,5)	No	Total Lower1Sec Dispatched in Region - RegionSolution element L1Dispatch attribute
RAISE1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Raise1Sec availability (summated from UnitSolution)
LOWER1SECACTUALAVAILABILITY	NUMBER(16,6)	No	Trapezium adjusted Lower1Sec availability (summated from UnitSolution)

~~6.22.3~~6.12.3 Modified table: PREDISPATCHPRICE

Comment	The PDPASA region solution data
Visibility	Public
Data volume	Medium

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Trigger	PREDISPATCHPRICE updates with every thirty-minute predispatch run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DATETIME, REGIONID

New columns

Field name	Data type	Primary key	Comment
RAISE1SECRRP	NUMBER(15,5)	No	Regional Raise 1Sec Price - R1Price attribute after capping/flooring
~~RAISE1SECROP~~	~~NUMBER(15,5)~~	~~No~~	~~Raise1Sec Regional Original Price - uncapped/unfloored and unscaled~~
~~RAISE1SECAPCFLAG~~	~~NUMBER(3,0)~~	~~No~~	~~BitFlag field for Price adjustments - "1" = Voll_Override; "4" = Floor_VoLL; "8" = Manual_Override; "16" = Price_Scaled~~
LOWER1SECRRP	NUMBER(15,5)	No	Regional Lower 1Sec Price - RegionSolution element L1Price attribute
~~LOWER1SECROP~~	~~NUMBER(15,5)~~	~~No~~	~~Lower1Sec Regional Original Price - uncapped/unfloored and unscaled~~
~~LOWER1SECAPCFLAG~~	~~NUMBER(3,0)~~	~~No~~	~~BitFlag field for Price adjustments - "1" = Voll_Override; "4" = Floor_VoLL; "8" = Manual_Override; "16" = Price_Scaled~~
~~PRE_AP_RAISE1_PRICE~~	~~NUMBER(15,5)~~	~~No~~	~~Price before AP capping or scaling - for Rolling Sum Price monitoring~~
~~PRE_AP_LOWER1_PRICE~~	~~NUMBER(15,5)~~	~~No~~	~~Price before AP capping or scaling - for Rolling Sum Price monitoring~~

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6.436.13 Package: SETTLEMENT_CONFIG

The configuration data needed for the Settlement Run.

6.43.16.13.1 New table: SETCFG_SAPS_SETT_PRICE

Comment	The Settlement Price for SAPS Energy in each Region
Visibility	Public
Data volume	Small
Trigger	Triggering of a new SAPS Pricing Calculation for the Eligible Application Period in Settlements
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVREPORTS
Primary key (in order)	FROMDATE, TODATE, REGIONID, VERSION_DATETIME

New columns

Field name	Data type	Primary key	Comment
FROMDATE	DATE	Yes	The From Date of the SAPS Pricing Application Period
TODATE	DATE	Yes	The To Date of the SAPS Pricing Application Period
REGIONID	VARCHAR2(20)	Yes	The Region ID for which the calculated SAPS Price is applicable
VERSION_DATETIME	DATE	Yes	The Date time of the record generation
SAPS_RRP	NUMBER(18,8)	No	The Region Reference Price for SAPS in the Region
ISFIRM	NUMBER(3,0)	No	Whether the SAPS Price is Firm or Non-firm

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Field name	Data type	Primary key	Comment
LASTCHANGED	DATE	No	The Last Changed Date time of the record

~~6.44~~6.14 Package: SETTLEMENT_DATA

Results from a published Settlements Run. The settlement data and billing run data are updated daily between 6 am and 8 am for AEMO's prudential processes. In a normal week, AEMO publishes one PRELIM, one FINAL and two REVISION runs in addition to the daily runs.

~~6.44.1~~6.14.1 Modified table: SETCPDATA

Comment	SETCPDATA shows meter settlement data for each connection point. This is the key view for retailers to verify energy charges. A regional summary view is also provided. As the view has values for each connection point by period, for each meter data file, it is a very large view.
Visibility	Private
Trigger	SETCPDATA updates with each Settlement run
Data volume	Medium
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	MDA, PARTICIPANTID, PERIODID, SETTLEMENTDATE, TCPID, VERSIONNO

New columns

Field name	Data type	Primary key	Comment
IMPORTENERGYCOST	NUMBER(18,8)	No	The total cost of energy sold at the connection point by the participant in this settlement interval

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EXPORTENERGYCOST	NUMBER(18,8)	No	The total cost of energy purchased at the connection point by the participant in this settlement interval

Modified columns

Field name	Data type	Primary key	Comment
AFE	NUMBER(18,8)	No	Accounted For Energy for this Market Customer FRMP and TNI in the Settlements Trading Interval, excluding any UFEA component

~~6.44.2~~6.14.2 Modified table: SET_FCAS_PAYMENT

Comment	SET_FCAS_PAYMENT sets out the enabling payment details for frequency controlled Ancillary Services
Visibility	Private
Trigger	Posting of a billing run
Data volume	Large
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	DUID, PERIODID, SETTLEMENTDATE, VERSIONNO

New columns

Field name	Data type	Primary key	Comment
RAISE1SEC_PAYMENT	NUMBER(18,8)	No	Payment amount for the very fast raise service
LOWER1SEC_PAYMENT	NUMBER(18,8)	No	Payment amount for the very fast lower service

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6.44.36.14.3 Modified table: SET_FCAS_RECOVERY

Comment	SET_FCAS_RECOVERY shows reimbursements for the Frequency Control Ancillary Services (FCAS) to be recovered from participants. Beware of potential confusion with the table SETFCASRECOVERY, which reports reimbursements for Frequency Control Ancillary Services Compensation (now unused).
Visibility	Private
Trigger	TBC
Data volume	Large
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	PARTICIPANTID, PERIODID, REGIONID, SETTLEMENTDATE, VERSIONNO

New columns

Field name	Data type	Primary key	Comment
RAISE1SEC_RECOVERY	NUMBER(18,8)	No	Customer recovery amount for the very fast raise service
LOWER1SEC_RECOVERY	NUMBER(18,8)	No	Customer recovery amount for the very fast lower service
RAISE1SEC_RECOVERY_GEN	NUMBER(18,8)	No	Generator recovery amount for the very fast raise service
LOWER1SEC_RECOVERY_GEN	NUMBER(18,8)	No	Generator recovery amount for the very fast lower service

~~6.44.4~~6.14.4 New table: SET_ENERGY_TRAN_SAPS

Comment	The table shows the Transaction Details for the SAPS Connection Points. The table contains both the MSRPs and Retailers data

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Visibility	Private
Data volume	Medium
Trigger	Daily Billing Run & Posting a PRELIM/FINAL and REVISE Billing Run
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	SETTLEMENTDATE, VERSIONNO, PERIODID, PARTICIPANTID, TNI

New columns

Field name	Data type	Primary key	Comment
SETTLEMENTDATE	DATE	Yes	The Settlement Date of the Billing Week
VERSIONNO	NUMBER(3,0)	Yes	The Settlement Run number
PERIODID	NUMBER(3,0)	Yes	The Period Id identifier
PARTICIPANTID	VARCHAR2(20)	Yes	The Participant ID for the SAPS TNI
TNI	VARCHAR2(20)	Yes	The SAPS Connection Point Identifier
REGIONID	VARCHAR2(20)	No	The SAPS Region ID
SAPS_RRP	NUMBER(18,8)	No	The SAPS Settlement Price for the Region
CONSUMED_ENERGY_MWH	NUMBER(18,8)	No	The Energy MWh Consumed for that TNI for the Participant ID
SENTOUT_ENERGY_MWH	NUMBER(18,8)	No	The Energy MWh Sent Out for the TNI for the Participant Id

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Field name	Data type	Primary key	Comment
CONSUMED_ENERGY_COST	NUMBER(18,8)	No	The Cost of the Consumed Energy
SENTOUT_ENERGY_COST	NUMBER(18,8)	No	The Cost of the Sent Out Energy
LASTCHANGED	DATE	No	The Last changed Date time of the record

~~6.45~~6.15 Package: STPASA_SOLUTION

Results from a published Short Term PASA run.

~~6.45.1~~6.15.1 Modified table: STPASA_REGIONSOLUTION

Comment	STPASA_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study
Visibility	Public
Data volume	Large
Trigger	STPASA_REGIONSOLUTION is updated each STPASA run (approximately every 2 hours)
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	INTERVAL_DATETIME, REGIONID, RUN_DATETIME, RUNTYPE

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Modified columns

Field name	Data type	Primary key	Comment
UNCONSTRAINEDCAPACITY	NUMBER(12,0)	No	In a Region, capacity from generation/Load with no Daily Energy Constraint, subject to network security constraints
CONSTRAINEDCAPACITY	NUMBER(12,0)	No	In a Region, capacity from generation/Load with non-zero Daily Energy Constraint, subject to network security constraints
SEMISCHEDULEDCAPACITY	NUMBER(15,5)	No	Aggregate Regional availability of Semi-scheduled units limited by MAXAVAIL bid
LOR_ SEMISCHEDULEDCAPACITY	NUMBER(15,5)	No	Aggregate Regional availability of Semi-scheduled units limited by MAXAVAIL bid for LOR
AGGREGATECAPACITYAVAILABLE	NUMBER(15,5)	No	Sum of MAXAVAIL quantities offered by all Scheduled units and Availability of all semi-scheduled units limited by MAXAVAIL in a given Region for a given PERIODID
SS_SOLAR_UIGF	NUMBER(12,2)	No	Unconstrained Intermittent Generation Forecast for solar for the region. For RELIABILITY_LRC and OUTAGE_LRC run this is the POE90 forecast (determined by LRCUIGFOption in CaseSolution). For LOR run this is the POE50 forecast
SS_SOLAR_CAPACITY	NUMBER(12,2)	No	Constrained generation forecast for solar for the region. For RELIABILITY_LRC run solar generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run solar generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.
SS_SOLAR_CLEARED	NUMBER(12,2)	No	Constrained generation forecast for solar for the region. For RELIABILITY_LRC run solar generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run solar generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.
SS_WIND_UIGF	NUMBER(12,2)	No	Unconstrained Intermittent Generation Forecast for wind for the region. For RELIABILITY_LRC and OUTAGE_LRC run this is the POE90 forecast (determined by LRCUIGFOption in CaseSolution). For LOR run this is the POE50 forecast
SS_WIND_CAPACITY	NUMBER(12,2)	No	Constrained generation forecast for wind for the region. For RELIABILITY_LRC run wind generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run wind generation is

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			constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.
SS_WIND_CLEARED	NUMBER(12,2)	No	Constrained generation forecast for wind for the region. For RELIABILITY_LRC run wind generation is constrained only by System Normal constraints. For OUTAGE_LRC run and LOR run wind generation is constrained by both System Normal and Outage constraints. All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.

~~6.4~~6.16 Package: TRADING_DATA

30-minute Trading interval results.

~~6.4.1~~6.16.1 Modified table: TRADINGPRICE

Comment	TRADINGPRICE sets out 5 minutes spot market price, including fields to handle the Ancillary Services functionality. If prices are adjusted, the final price is recorded in the regional reference price (RRP) field with price before adjustment recorded in the regional original price (ROP) field. Prior to 5 Minute Settlements, this was half-hourly spot market values, which was calculated as the average of the six 5-minute dispatch intervals within the 30 minute period
Visibility	Public
Data volume	Medium
Trigger	TRADINGPRICE updates every 30 minutes
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	PERIODID, REGIONID, RUNNO, SETTLEMENTDATE

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New columns

Field name	Data type	Primary key	Comment
RAISE1SECRRP	NUMBER(15,5)	No	Regional Raise 1Sec Price - R1Price attribute after capping/flooring
RAISE1SECROP	NUMBER(15,5)	No	Raise1Sec Regional Original Price - uncapped/unfloored and unscaled
LOWER1SECRRP	NUMBER(15,5)	No	Regional Lower 1Sec Price - RegionSolution element L1Price attribute
LOWER1SECROP	NUMBER(15,5)	No	Lower1Sec Regional Original Price - uncapped/unfloored and unscaled

~~6.47~~6.17 Package: VOLTAGE_INSTRUCTIONS

Instructions for MVAr Dispatch.

~~6.47.1~~6.17.1 Modified table: VOLTAGE_INSTRUCTION

Comment	Child record for Voltage Instructions (MVAr Dispatch)
Visibility	Public
Data volume	Large
Trigger	Signal or instructions issued
Participant file share location	<#INTRFACE>\<#PARTICIPANTID>\IMPORT\REPORTS\CSVReports
Primary key (in order)	EMS_ID, VERSION_DATETIME, EMS_ID

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Modified columns

Field name	Data type	Primary key	Comment
TARGET	NUMBER(20,5)	No	Instruction for the device, for this interval – null denotes no instruction

~~6.48~~6.18 File interface changes

Package	File ID	Description	Batcher file masks	Frequency	Modification	Auto-subscription
BIDS	MTPASA_OFFERFILETRK	Participant submitted offers for the MT PASA process	*_BID_*.CSV	Participant submitted MT PASA offer	Modified	No
BILLING _RUN	BILLING	Results from a published Billing Run	*_BILLING_*.CSV	Weekly	Modified	No
DEMAND _FORECASTS	INTERMITTENT_GEN_FCST	Regional Demand and Intermittent Generation forecasts	*_INTERMITTENT_GEN_FCST_*.CSV	Ad hoc	Modified	No
DISPATCH	DISPATCHIS	Results from a published dispatch run	*_DISPATCHIS_*.CSV	Every 5 minutes	Modified	No
FORCE_MAJEURE	APEVENTREGION	Market suspensions and administer pricing event data	*_AP_EVENT_*.CSV	On participant submission	Modified	No
	MARKET_SUSPEND_SCHEDULE		*_MARKET_*_*.CSV	On suspension	Modified	No

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METER_DATA	METER_DATA	The Customer and Generator meter data used in the calculation of Settlements	*_METER_DATA_*.CSV	After a Billing Run	Modified	No
MTPASA	MTPASADUIDAVAILABILITY	Offered MT PASA availability for each day over the MT PASA period	*_MTPASADUIDAVAILABILITY_*.CSV	Weekly	Modified	No
P5MIN	P5MIN	Results from a published five-minute pre-dispatch run	*_P5MIN_*.CSV	Every 5 minutes	Modified	No
PARTICIPANT _REGISTRATION	DUDETAIL DUDETAILSUMMARY	Modifies the DUDETAIL, DUDETAILSUMMART tables to add Aggregate Dispatch Group.	*_PARTICIPANT_REGISTRATION_*.CSV	When registration details change	Modified	No
	AGGREGATE_DISPATCH_GROUP	Entity allowing for compliance monitoring over grouped DUIDs	*_AGGREGATE_DISPATCH_GROUP_*	When registration details change	New	Yes
	ADG_DETAIL	Table for tracking evolving Aggregate Dispatch Group attributes	*_AGGREGATE_DISPATCH_GROUP_*	When registration details change	New	Yes
PDPASA	PDPASA	Provides a 30-minute solving process to the market systems	*_PDPASA_*.CSV	Every 30 minutes	Modified	No
PRE _DISPATCH	PREDISPATCHIS	Results from a published pre-dispatch run	*_PREDISPATCHIS_*.CSV	After a pre-dispatch run	Modified	No

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SETTLEMENT_CONFIG	SETTLEMENT_CONFIG	Configuration and input data for the settlements process	*_SETTLEMENT_CONFIG_*.CSV	After a settlement run	Modified	No
SETTLEMENT_DATA	SETTLEMENTS	Results from a published settlements run	*_SETTLEMENTS_*.CSV	Daily	Modified	No
STPASA_SOLUTION	STPASA	Results from a published short term PASA run	*_STPASA_*.CSV	Every 2 hours	Modified	No
TRADING_DATA	TRADINGPRICE	30-minute trading interval results	*_TRADINGPRICE_*.CSV	Every dispatch interval	Modified	No
VOLTAGE_INSTRUCTIONS	VOLTAGE_INSTRUCTION	Instructions for MVAr Dispatch	*_VOLTAGE_INSTRUCTIONS_*.CSV	Approx. every 15 mins and as required	Modified	No

~~6.49~~6.19 Participant interfaces changes

Package	Data model table	File ID	CSV report type	Change
BIDS	MTPASA_OFFERDATA	MTPASA_OFFERFILETRK	MTPASA_OFFERFILETRK,MTPASA_OFFERDATA,1	Modified
BILLING_RUN	BILLINGCPDATA	BILLING	BILLING,BILLINGCPDATA,7	Modified
	BILLINGASPAYMENTS	BILLING	BILLING,BILLINGASPAYMENTS,7	Modified

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	BILLINGASRECOVERY	BILLING	BILLING,BILLINGASRECOVERY,8	Modified
	BILLING_DIR_PROV_AMOUNT	BILLING	BILLING,BILLING_DIR_PROV_AMOUNT,1	New
	BILLING_DIR_FINAL_AMOUNT	BILLING	BILLING, BILLING_DIR_FINAL_AMOUNT,1	New
	BILLING_DIR_PROV_RECOVERY	BILLING	BILLING, BILLING_DIR_PROV_RECOVERY,1	New
	BILLING_DIR_FINAL_RECOVERY	BILLING	BILLING, BILLING_DIR_FINAL_RECOVERY,1	New
	BILLING_DIR_RECOVERY_DETAIL	BILLING	BILLING, BILLING_DIR_ RECOVERY_DETAIL,1	New
	BILLRESERVETRADERRECOVERY	BILLING	BILLING,BILLING_RES_TRADER_RECOVERY,2	Modified
	BILLING_ENERGY_TRAN_SAPS	BILLING	BILLING,BILLING_ENERGY_TRAN_SAPS,1	New
DEMAND_FORECASTS	INTERMITTENT_GEN_FCST_DATA	INTERMITTENT_GEN_FCST	INTERMITTENT_GEN_FCST,INTERMITTENT_GEN_FCST_DATA,1	Modified
	INTERMITTENT_GEN_SCADA	INTERMITTENT_GEN_FCST	INTERMITTENT_GEN_FCST,INTERMITTENT_GEN_SCADA,1	New
	SET_ENERGY_TRAN_SAPS	INTERMITTENT_GEN_FCST	INTERMITTENT_GEN_FCST,SET_ENERGY_TRAN_SAPS,1	New
DISPATCH	DISPATCHLOAD	DISPATCHIS	DISPATCHIS,DISPATCHLOAD,4	Modified
	DISPATCHLOAD	NEXT_DAY_DISPATCH	NEXT_DAY_DISPATCH,DISPATCHLOAD,4	Modified
	DISPATCHPRICE	DISPATCHIS	DISPATCHIS,DISPATCHPRICE,5	Modified

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	DISPATCHPRICE	PRICE_REVISION_DISPATCHIS	PRICE_REVISION_DISPATCHIS,DISPATCHPRICE,5	Modified
	DISPATCHREGIONSUM	DISPATCHIS	DISPATCHIS,DISPATCHREGIONSUM,7	Modified
	DISPATCH_UNIT_CONFORMANCE	DISPATCH_CONFORMANCE	DISPATCH_CONFORMANCE,DISPATCH_CONFORMANCE,2	Modified
FORCE_MAJEURE	APEVENTREGION	AP_EVENT	AP_EVENT,APEVENTREGION,2	Modified
	MARKET_SUSPEND_SCHEDULE	SUSPENSION_SCHEDULE	SUSPENSION_SCHEDULE,MARKET_SUSPEND_SCHEDULE,2	Modified
METER_DATA	METERDATA_SAPS	METER_DATA	METER_DATA,METERDATA_SAPS,1	New
MTPASA	MTPASA_DUIDAVAILABILITY	MTPASADUIDAVAILABILITY	MTPASA,MTPASA_DUIDAVAILABILITY,2	Modified
P5MIN	P5MIN_FCAS_REQUIREMENT	P5MIN	P5MIN,P5MIN_FCAS_REQUIREMENT,1	New
	P5MIN_UNITSOLUTION	P5MIN	P5MIN,P5MIN_UNITSOLUTION,5	Modified
	P5MIN_REGIONSOLUTION	P5MIN	P5MIN,P5MIN_REGIONSOLUTION,8	Modified
	P5MIN_FCAS_REQUIREMENT	P5MIN	P5MIN,P5MIN_FCAS_REQUIREMENT,1	New
PARTICIPANT_REGISTRATION	AGGREGATE_DISPATCH_GROUP	AGGREGATE_DISPATCH_GROUP	AGGREGATE_DISPATCH_GROUP,AGGREGATE_DISPATCH_GROUP,1	New
	ADG_DETAIL	AGGREGATE_DISPATCH_GROUP	AGGREGATE_DISPATCH_GROUP,ADG_DETAIL,1	New

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	DUDETAIL	DUDETAIL	PARTICIPANT_REGISTRATION,DUDETAIL,5	Modified
	DUDETAILSUMMARY	DUDETAIL SUMMARY	PARTICIPANT_REGISTRATION,DUDETAIL_SUMMARY,6	Modified
PDPASA	PSPASA_REGIONSOLUTION	PDPASA	PDPASA,PSPASA_REGIONSOLUTION,8	Modified
PRE_DISPATCH	PREDISPATCHLOAD	PREDISPATCH	PREDISPATCH,PREDISPATCHLOAD,3	Modified
	PREDISPATCHLOAD	NEXT_DAY_PREDISPATCH_D	NEXT_DAY_PREDISPATCH_D,PREDISPATCHLOAD,3	Modified
	PREDISPATCHPRICE	PREDISPATCHIS	PREDISPATCHIS, PREDISPATCHPRICE,2	Modified
	PREDISPATCHREGIONSUM	PREDISPATCH	PREDISPATCH,PREDISPATCHREGIONSUM,7	Modified
SETTLEMENT_CONFIG	SETCFG_SAPS_SETT_PRICE	SETTLEMENT_CONFIG	SETTLEMENT_CONFIG,SETCFG_SAPS_SETT_PRICE,1	New
SETTLEMENT_DATA	SETCPDATA	SETTLEMENTS	SETTLEMENTS,SETCPDATA,7	Modified
	SET_FCAS_PAYMENT	SETTLEMENTS	SETTLEMENTS,FCAS_RECOVERY,7	Modified
	SET_FCAS_RECOVERY	SETTLEMENTS	SETTLEMENTS,FCAS_PAYMENT,6	Modified
	SET_ENERGY_TRAN_SAPS	SETTLEMENTS	SETTLEMENTS,SET_ENERGY_TRAN_SAPS,1	New
STPASA_SOLUTION	STPASA_REGIONSOLUTION	STPASA	STPASA,STPASA_REGIONSOLUTION,8	Modified

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TRADING_DATA	TRADINGPRICE	PRICE_REVISION_TRADINGIS	TRADINGIS,TRADINGPRICE,3	Modified
VOLTAGE_INSTRUCTIONS	VOLTAGE_INSTRUCTIONS	VOLTAGE_INSTRUCTIONS	VOLTAGE_INSTRUCTIONS,VOLTAGE_INSTRUCTIONS,3	Modified

~~6.5~~6.20 Discontinued reports

Data model table	File ID	Delivered in file	CSV report type	Replaced by
BILLING_APC_COMPENSATION	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLING_APC_COMPENSATION,1	BILLING,BILLING_APC_COMPENSATION,2
BILLING_APC_RECOVERY	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLING_APC_RECOVERY,1	BILLING,BILLING_APC_RECOVERY,2
BILLING_GST_DETAIL	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLING_GST_DETAIL,4	BILLING,BILLING_GST_DETAIL,5
BILLING_GST_SUMMARY	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLING_GST_SUMMARY,4	BILLING,BILLING_GST_SUMMARY,5
BILLINGASPAYMENTS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGASPAYMENTS,5	BILLING,BILLINGASPAYMENTS,6
BILLINGASRECOVERY	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGASRECOVERY,6	BILLING,BILLINGASRECOVERY,7
BILLINGCPDATA	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGCPDATA,5	BILLING,BILLINGCPDATA,6
BILLINGDAYTRK	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGDAYTRK,4	BILLING,BILLINGDAYTRK,5
BILLINGFEES	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGFEES,4	BILLING,BILLINGFEES,5
BILLINGFINANCIALADJUSTMENTS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGFINANCIALADJUSTMENTS,4	BILLING,BILLINGFINANCIALADJUSTMENTS,5
BILLINGGENDATA	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGGENDATA,4	BILLING,BILLINGGENDATA,5

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BILLINGINTERRESIDUES	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGINTERRESIDUES,4	BILLING,BILLINGINTERRESIDUES,5
BILLINGINTRARESIDUES	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGINTRARESIDUES,4	BILLING,BILLINGINTRARESIDUES,5
BILLINGIRAUCSURPLUS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGIRAUCSURPLUS,4	BILLING,BILLINGIRAUCSURPLUS,5
BILLINGIRAUCSURPLUSSUM	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGIRAUCSURPLUSSUM,6	BILLING,BILLINGIRAUCSURPLUSSUM,7
BILLINGIRNSPSURPLUS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGIRNSPSURPLUS,4	BILLING,BILLINGIRNSPSURPLUS,5
BILLINGIRNSPSURPLUSSUM	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGIRNSPSURPLUSSUM,5	BILLING,BILLINGIRNSPSURPLUSSUM,6
BILLINGIRPARTSURPLUS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGIRPARTSURPLUS,4	BILLING,BILLINGIRPARTSURPLUS,5
BILLINGIRPARTSURPLUSSUM	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGIRPARTSURPLUSSUM,6	BILLING,BILLINGIRPARTSURPLUSSUM,7
BILLINGPRIORADJUSTMENTS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGPRIORADJUSTMENTS,4	BILLING,BILLINGPRIORADJUSTMENTS,5
BILLINGREALLOC	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGREALLOC,4	BILLING,BILLINGREALLOC,5
BILLINGREALLOC_DETAIL	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGREALLOC_DETAIL,4	BILLING,BILLINGREALLOC_DETAIL,5
BILLINGREGIONEXPORTS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGREGIONEXPORTS,4	BILLING,BILLINGREGIONEXPORTS,5
BILLINGREGIONFIGURES	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGREGIONFIGURES,5	BILLING,BILLINGREGIONFIGURES,6
BILLINGREGIONIMPORTS	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGREGIONIMPORTS,4	BILLING,BILLINGREGIONIMPORTS,5
BILLINGRUNTRK	BILLING	*_BILLING_LEGACY_*.CSV	BILLING,BILLINGRUNTRK,4	BILLING,BILLINGRUNTRK,5

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DAYTRACK	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,DAYTRACK,5	SETTLEMENTS,DAYTRACK,6
DISPATCHCASESOLUTION	DISPATCHIS	*_DISPATCHIS_LEGACY_*.CSV	DISPATCHIS,DISPATCHCASESOLUTION,1	DISPATCHIS,DISPATCHCASESOLUTION,2
DISPATCHCONSTRAINT	DISPATCHIS	*_DISPATCHIS_LEGACY_*.CSV	DISPATCHIS,DISPATCHCONSTRAINT,4	DISPATCHIS,DISPATCHCONSTRAINT,5
DISPATCHINTERCONNECTORRES	DISPATCHIS	*_DISPATCHIS_LEGACY_*.CSV	DISPATCHIS,DISPATCHINTERCONNECTORRES,2	DISPATCHIS,DISPATCHINTERCONNECTORRES,3
DISPATCHLOAD	DISPATCHIS	*_DISPATCHIS_LEGACY_*.CSV	DISPATCHIS,DISPATCHLOAD,2	DISPATCHIS,DISPATCHLOAD,3
DISPATCHPRICE	DISPATCHIS	*_DISPATCHIS_LEGACY_*.CSV	DISPATCHIS,DISPATCHPRICE,3	DISPATCHIS,DISPATCHPRICE,4
DISPATCHREGIONSUM	DISPATCHIS	*_DISPATCHIS_LEGACY_*.CSV	DISPATCHIS,DISPATCHREGIONSUM,5	DISPATCHIS,DISPATCHREGIONSUM,6
DUDETAIL	DUDETAIL	*_PARTICIPANT_REGISTRATION__LEGACY_*.CSV	DUDETAIL,DUDETAIL,3	DUDETAIL,DUDETAIL,4
DUDETAILSUMMARY	DUDETAILSUMMARY	*_PARTICIPANT_REGISTRATION__LEGACY_*.CSV	DUDETAILSUMMARY,DUDETAILSUMMARY,4	DUDETAILSUMMARY,DUDETAILSUMMARY,5
MTPASA_DUIDAVAILABILITY	MTPASADUIDAVAILABILITY	*_MTPASADUIDAVAILABILITY_LEGACY*.CSV	MTPASA,MTPASA_DUIDAVAILABILITY,1	MTPASA,MTPASA_DUIDAVAILABILITY,2
P5MIN_CASESOLUTION	P5MIN	*_P5MIN__LEGACY_*.CSV	P5MIN,P5MIN_CASESOLUTION,1	P5MIN,P5MIN_CASESOLUTION,2
P5MIN_CONSTRAINTSOLUTION	P5MIN	*_P5MIN__LEGACY_*.CSV	P5MIN,P5MIN_CONSTRAINTSOLUTION,5	P5MIN,P5MIN_CONSTRAINTSOLUTION,6
P5MIN_INTERCONNECTORSOLN	P5MIN	*_P5MIN__LEGACY_*.CSV	P5MIN,P5MIN_INTERCONNECTORSOLN,3	P5MIN,P5MIN_INTERCONNECTORSOLN,4
P5MIN_REGIONSOLUTION	P5MIN	*_P5MIN__LEGACY_*.CSV	P5MIN,P5MIN_REGIONSOLUTION,6	P5MIN,P5MIN_REGIONSOLUTION,7

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P5MIN_UNITSOLUTION	P5MIN	*_P5MIN__LEGACY_*.CSV	P5MIN,P5MIN_UNITSOLUTION,3	P5MIN,P5MIN_UNITSOLUTION,4
PDPASA_CASESOLUTION	PDPASA	*_PDPASA__LEGACY_*.CSV	PDPASA,PDPASA_CASESOLUTION,2	PDPASA,PDPASA_CASESOLUTION,3
PDPASA_REGIONSOLUTION	PDPASA	*_PDPASA__LEGACY_*.CSV	PDPASA,PDPASA_REGIONSOLUTION,6	PDPASA,PDPASA_REGIONSOLUTION,7
PREDISPATCHCONSTRAINT	PREDISPATCHIS	*_PREDISPATCHIS_LEGACY_*.CSV	REDISPATCHIS,PREDISPATCHCONSTRAINT,4	REDISPATCHIS,PREDISPATCHCONSTRAINT,5
PREDISPATCHINTERCONNECTORRES	PREDISPATCHIS	*_PREDISPATCHIS_LEGACY_*.CSV	REDISPATCHIS,PREDISPATCHINTERCONNECTORRES,2	REDISPATCHIS,PREDISPATCHINTERCONNECTORRES,3
PREDISPATCHLOAD	PREDISPATCHIS	*_PREDISPATCHIS_LEGACY_*.CSV	REDISPATCHIS,PREDISPATCHLOAD,1	REDISPATCHIS,PREDISPATCHLOAD,2
PREDISPATCHREGIONSUM	PREDISPATCHIS	*_PREDISPATCHIS_LEGACY_*.CSV	PREDISPATCHIS,PREDISPATCHREGIONSUM,5	REDISPATCHIS,PREDISPATCHREGIONSUM,6
SET_ANCILLARY_SUMMARY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_ANCILLARY_SUMMARY,4	SETTLEMENTS,SET_ANCILLARY_SUMMARY,5
SET_FCAS_PAYMENT	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_FCAS_PAYMENT,4	SETTLEMENTS,SET_FCAS_PAYMENT,5
SET_FCAS_RECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_FCAS_RECOVERY,5	SETTLEMENTS,SET_FCAS_RECOVERY,6
SET_FCAS_REGULATION_TRK	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_FCAS_REGULATION_TRK,1	SETTLEMENTS,SET_FCAS_REGULATION_TRK,2
SET_MR_PAYMENT	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_MR_PAYMENT,4	SETTLEMENTS,SET_MR_PAYMENT,5
SET_MR_RECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_MR_RECOVERY,4	SETTLEMENTS,SET_MR_RECOVERY,5

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SET_NMAS_RECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_NMAS_RECOVERY,1	SETTLEMENTS,SET_NMAS_RECOVERY,2
SET_RUN_PARAMETER	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SET_RUN_PARAMETER,4	SETTLEMENTS,SET_RUN_PARAMETER,5
SETCPDATA	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETCPDATA,5	SETTLEMENTS,SETCPDATA,6
SETCPDATAREGION	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETCPDATAREGION,4	SETTLEMENTS,SETCPDATAREGION,5
SETFCASCOMP	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETFCASCOMP,4	SETTLEMENTS,SETFCASCOMP,5
SETFCASREGIONRECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETFCASREGIONRECOVERY,4	SETTLEMENTS,SETFCASREGIONRECOVERY,5
SETGENDATA	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETGENDATA,4	SETTLEMENTS,SETGENDATA,5
SETGENDATAREGION	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETGENDATAREGION,4	SETTLEMENTS,SETGENDATAREGION,5
SETINTERVENTION	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETINTERVENTION,4	SETTLEMENTS,SETINTERVENTION,5
SETINTERVENTIONRECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETINTERVENTIONRECOVERY,4	SETTLEMENTS,SETINTERVENTIONRECOVERY,5
SETINTRAREGIONRESIDUES	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETINTRAREGIONRESIDUES,4	SETTLEMENTS,SETINTRAREGIONRESIDUES,5
SETIRAUCSURPLUS	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETIRAUCSURPLUS,4	SETTLEMENTS,SETIRAUCSURPLUS,5
SETIRNSPSURPLUS	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETIRNSPSURPLUS,4	SETTLEMENTS,SETIRNSPSURPLUS,5

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SETIRPARTSURPLUS	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETIRPARTSURPLUS,4	SETTLEMENTS,SETIRPARTSURPLUS,5
SETIRSURPLUS	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETIRSURPLUS,4	SETTLEMENTS,SETIRSURPLUS,5
SETLSHEDPAYMENT	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETLSHEDPAYMENT,4	SETTLEMENTS,SETLSHEDPAYMENT,5
SETMARKETFEES	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETMARKETFEES,4	SETTLEMENTS,SETMARKETFEES,5
SETREALLOCATIONS	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETREALLOCATIONS,4	SETTLEMENTS,SETREALLOCATIONS,5
SETRESERVERECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETRESERVERECOVERY,5	Discontinued - moved to historic package
SETRESTARTPAYMENT	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETRESTARTPAYMENT,5	SETTLEMENTS,SETRESTARTPAYMENT,6
SETRESTARTRECOVERY	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETRESTARTRECOVERY,5	SETTLEMENTS,SETRESTARTRECOVERY,6
SETRPOWERPAYMENT	SETTLEMENTS	*_SETTLEMENTS_LEGACY_*.CSV	SETTLEMENTS,SETRPOWERPAYMENT,5	SETTLEMENTS,SETRPOWERPAYMENT,6
STPASA_CASESOLUTION	STPASA	*_STPASA__LEGACY_*.CSV	STPASA,STPASA_CASESOLUTION,2	STPASA,STPASA_CASESOLUTION,3
STPASA_CONSTRAINTSOLUTION	STPASA	*_STPASA__LEGACY_*.CSV	STPASA,STPASA_CONSTRAINTSOLUTION,2	STPASA,STPASA_CONSTRAINTSOLUTION,3
STPASA_INTERCONNECTORSOLN	STPASA	*_STPASA__LEGACY_*.CSV	STPASA,STPASA_INTERCONNECTORSOLN,2	STPASA,STPASA_INTERCONNECTORSOLN,3
STPASA_REGIONSOLUTION	STPASA	*_STPASA__LEGACY_*.CSV	STPASA,STPASA_REGIONSOLUTION,6	STPASA,STPASA_REGIONSOLUTION,7

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TRADINGPRICE	PRICE_REVISION_TRADINGIS	*_PRICE_REVISION_TRADINGIS__LEGACY_*.CSV	PRICE_REVISION_TRADINGIS,TRADINGPRICE,1	PRICE_REVISION_TRADINGIS,TRADINGPRICE,2
VOLTAGE_INSTRUCTIONS	VOLTAGE_INSTRUCTIONS	*_VOLTAGE_INSTRUCTIONS__LEGACY_*.CSV	VOLTAGE_INSTRUCTIONS,VOLTAGE_INSTRUCTIONS,1	VOLTAGE_INSTRUCTIONS,VOLTAGE_INSTRUCTIONS,2

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7 Reports

7.1 Settlement report (SR report)

A new section for Standalone Power Systems Sales (Purchases) by Transmission Connection Point is now available in the SR report. The following image shows an example layout of the new section:

Non Market Ancillary Service Transactions by Region and Type - Recovery

NMAS Type	Service	RegionId	Availability	Enablement/Usage	Compensation	Testing	Total
SRAS	System Restart	NSW1	-$207.70	$0.00	$0.00	$0.00	-$207.70
SRAS	System Restart	QLD1	-$41.19	$0.00	$0.00	$0.00	-$41.19
SRAS	System Restart	SA1	-$45.13	$0.00	$0.00	$0.00	-$45.13
SRAS	System Restart	VIC1	-$250.94	$0.00	$0.00	$0.00	-$250.94
Total Recovery (Payment To AEMO)			-$544.95	$0.00	$0.00	$0.00	-$544.95

Standalone Power Systems Sales (Purchases) by Transmission Connection Point

Transmission Node	Description	Trading Amount ($)	Load Wtd Avg. Price ($/MWh)	Aggregate Energy (MWh)	DME (MWh)	UFEA (MWh)
[redacted]	[redacted]	-$35,159.60	$80.00	-439.495	-0	0

If there are no SAPS entries for the participant in the billing run, this section is excluded from the report for that participant.

7.2 Updated reports

New SAPS line items and GST transaction amounts are added to the following NEM invoice and statement types:

- Non-Final Statement (PDFNONFINAL)
- Final Statement (PDFFINALS)
- Tax Invoice (PDFTAXINVOICE)
- Recipient Created Tax Invoice (PDFRCTAXINVOICE)
- Adjustment Note (PDFADJNOTE)
- Recipient Created Adjustment Note (PDFRCADJNOTE)
- Shortfall Adjustment Note (PDFSHORTADJINV)
- Makeup Adjustment Note(PDFMAKEUPNOTE)

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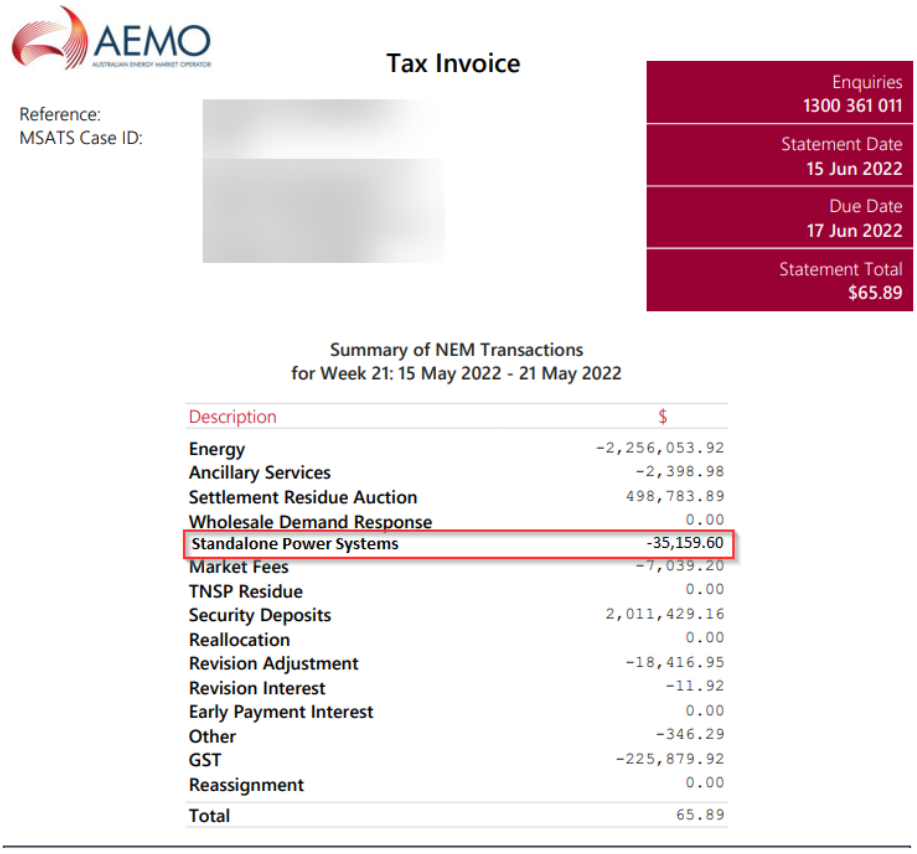
- The following images display an example layout of the new line item and the GST section:



AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Tax Invoice

Reference:
MSATS Case ID:

Enquiries **1300 361 011**
Statement Date **15 Jun 2022**
Due Date **17 Jun 2022**
Statement Total **$65.89**

Summary of NEM Transactions
for Week 21: 15 May 2022 - 21 May 2022

Description	$
Energy	-2,256,053.92
Ancillary Services	-2,398.98
Settlement Residue Auction	498,783.89
Wholesale Demand Response	0.00
Standalone Power Systems	-35,159.60
Market Fees	-7,039.20
TNSP Residue	0.00
Security Deposits	2,011,429.16
Reallocation	0.00
Revision Adjustment	-18,416.95
Revision Interest	-11.92
Early Payment Interest	0.00
Other	-346.29
GST	-225,879.92
Reassignment	0.00
Total	65.89

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Supplies made by AEMO

Taxable Supplies

Description		GST Exclusive ($)	GST ($)	Sub Total ($)
Energy	-7,932 MWh	-2,256,053.92	-225,605.39	-2,481,659.31
Wholesale Demand Response		0.00	0.00	0.00
Standalone Power Systems	-438.495 MWh	$35,159.60	$3,515.96	$38,675.56
Ancillary Service		-2,398.98	-239.90	-2,638.88
Compensation		-346.29	-34.63	-380.92
Pool Fee - EUA		0.00	0.00	0.00
Pool Fee - Nem		0.00	0.00	0.00
Manual Adjustment		0.00	0.00	0.00
Total		-2,258,799.18	-225,879.92	-2,484,679.10

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8 FAQs

8.1 Data Model 5.2 - Sparse Model

8.1.1 Does sparse bidding apply to public or private data?

Public next day data.

8.1.2 Will the current next day data remain?

Yes, we're not removing the current next day offer reports. We are providing a new next day Energy and FCAS report version with a sparse data representation.

Participants can opt into the sparse representation NEXT_DAY_OFFER report when they have modified their reporting/analytic systems to have a capability to interpret a sparse offer representation.

8.1.3 Will AEMO accept sparse offers and bids?

It's not a step we will take initially but we are considering it for the future because it might decrease the impact on participants' systems.

If AEMO were to implement this feature it would have no impact on participants who choose to continue to submit a fully qualified offer because the logic to interpret a sparse offer submission is compatible with a fully qualified offer.

8.1.4 Does the sparse model refer to just the transport of data to the participant database?

The sparse concept applies equally to both the data in transit and the footprint within the local participant database.

AEMO analysis indicates that moving to the sparse representation could reduce the amount of NEXT_DAY_OFFER data by up to 95%.

8.1.5 What will PDR Loader load by default?

The PDR Loader will load the data participants are subscribed to. If a participant has opted into the sparse NEXT_DAY_OFFER report, then this is what is loaded into the participant's database.

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The PDR Loader does not have a capability to expand a sparse offer representation to a fully qualified offer.

8.1.6 Will AEMO provide scripts for participants to retrospectively adjust the tables, so they are not always historically sparse?

We are not proposing it, but participants can do it themselves to reduce the size of their local data store if desired.

The reason we are not proposing it is because the logic to interpret a sparse bid works equally well against a fully qualified bid.

There is therefore no real requirement to have a logic cut over at a point in time when opting into the sparse offer data.

For example, if you're looking at period 2 and it doesn't exist, then you would roll forward period 1 to emulate period 2. If period 2 does exist either because it is different from period 1 (sparse) or its fully qualified offer, then you would use the period 2 data already existing.

8.1.7 For this release, are we only considering the two next-day energy and next day FCAS offer tables?

Yes, FCAS and Energy next day only with opt-in for the sparse model for the existing data model tables. The full table data will remain the default report subscription. The sparse model is not mandatory, you can still receive the fully qualified next-day offers as the standard set of subscriptions, but we would potentially be looking to make the sparse data model the standard in a future data model release so encourage participants to begin this transition now. We're introducing the sparse model in this release for participants having specific pain points who are ready to opt-in now.

AEMO would like to discuss if it makes sense to the industry to begin a transition pathway where the sparse data models become the standard way we deliver data because we understand it affects the reporting and analytics in participants' systems. If we do want to move to the sparse model as the standard delivery of next-day data, we can do that in a future release, possibly June 2024, discontinuing the fully qualified next-day reports.

We can also discuss extending the sparse model with opt-in to:

- The confidential reports.
- Energy and FCAS bid/offer submissions.

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8.1.8 Will there be a separate next-day offer energy and FCAS sparse report?

Providing, at a future date, we begin migration to a sparse data representation as the standard, our intention is to denote the existing NEXT_DAY_OFFER reports as LEGACY and introduce new versions of these reports with a sparse data representation. There will be no difference between these reports in terms of the reported columns. Participants can opt into the report aligning with the capabilities of their analytic tools.

8.1.9 Can the csv payload be in period order?

Yes, we guarantee it can be in period order.

8.2 PDR Data Model Manager 1.1.0

8.2.1 What is the purpose of the pdrDataModelManager?

It replaced the GUI installers since the Gas Data Model v2.2 to simplify the way we deliver Data Model updates.

8.2.2 Why is there a pdrDataModelManager upgrade?

There are no new significant features or changes in how you use pdrDataModelManager v1.1.0, it is a maintenance release.

There is a minor enhancement in the v1.1.0 release to support the ability to specify a different schema for the PDR_* management tables. This allows the tool to support a Data Interchange deployment configuration where the definition of the PDR management tables and the Data Model tables are hosted in different schemas, for example, some Participant SQL Server installations choose to create one schema for the Electricity Data Model and another for the Gas Data Model, putting the PDR tables in either the default schema or somewhere else.

The upgrade fixes several issues with running Data Model Manager in Linux-type environments:

- An issue with running the GUI installer as a console-based application in a headless Linux server (e.g. within an SSH terminal session)
- The interpretation of the Data Model package zip file on Linux-like environments due to a Windows file-based qualifier (backslash). We have implemented a workaround, allowing the Data Model Manager to correctly interpret Data Model Package files with a windows format directory separator "\". We are not proposing to rebuild the historical deliverables in the Gas v2.2 or MMS 5.1 Data Models that were packaged this way. The Data Model v5.2 release is packaged with a directory qualifier matching the zip standard "/".

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8.2.3 Must I upgrade to pdrDataModelManager v1.1.0?

The new data model v5.2 upgrade packages are compatible with pdrDataModelManager versions 1.0.0 and 1.1.0. You can continue to use v1.0.0, there is nothing in the Data Model 5.2 release requiring you to perform an upgrade. You can opt-in if you're running a Linux-type environment.

8.2.4 Are you discontinuing the CLI installers?

Yes, the CLI installers are discontinued from the Data Model v5.2 release.

8.3 Operational Forecasting

8.3.1 When is the data released to the tables for the forecasting project?

The tentative date is 24 May 2023.

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9 Implementation

9.1 Transition

See **Participant Impact**.

9.2 Implications

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.

9.3 Risks

Participant systems incorrectly configured and not compliant with the Baseline Assumptions may suffer data loss.

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10 Terms

10.1 Rules Terms

You can find the following terms defined in the **National Electricity Rules (NER)** and the **Settlements Residue Auction Rules**.

Term	Term	Term
AEMO	NEM	Settlements Process
Dispatch	Pre-dispatch	
Market Participants	Registered Participant	
Metering Data	Settlements	

10.2 Glossary

You can find a full list of AEMO glossary terms in **Industry Terminology** on AEMO's website.

Abbreviation/Term	Explanation
AEST	Australian Eastern Standard Time
EMMS	Electricity Market Management System, software, hardware, network and related processes to implement the wholesale energy market
FCAS	Frequency Control Ancillary Services
FTP	File transfer protocol
NER	National Electricity Rules
Release	EMMS - Technical Specification - Data Model v5.2 - May 2023
Release Dates	Pre-production: 20 April 2023? Production: 23 May 2023
TBC	To be confirmed

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11 References

Connecting to Market Systems: Explains the IT interfaces available to participants and how to access them.

11.1 Data interchange and data model resources

11.1.1 About

Information about setting up a Data Interchange environment: Data Interchange Help > **About Data Interchange**.

11.1.2 Help

- **Data interchange online help**

11.1.3 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 146.178.211.25 > Data Interchange, pdrBatcher, pdrLoader, or pdrMonitor.

11.1.4 Reports

- Data Interchange Help > **Data Model Reports**.

11.1.5 Releases

- Data Interchange Help > **Release Documents**.

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A1. Increasing data volume analysis

Baseline – Store all 288 intervals for all accepted offers – yellow is persisted data

Offer	P1	P2	P3	P4	P5	P6	P7	P8
First offer	5	5	5	10	10	5	5	5
Next offer	5	10	5	5	10	5	5	5

Row count for October 2022 Week 1: 150,831,072

```
select count(1)
from bidofferperiod t
where t.tradingdate between to_date('01-10-2022','DD-MM-YYYY') and to_date('07-
10-2022','DD-MM-YYYY')
```

Model 1 – Store updates to period rows where there has been a change from the previously accepted offer – yellow is persisted data

Offer	P1	P2	P3	P4	P5	P6	P7	P8
First offer	5	5	5	10	10	5	5	5
Next offer	5	10	5	5	10	5	5	5

Row count for October 2022 Week 1: 7,568,399 95% reduction

```
select count(1) from
(
select distinct
duid, bidtype, tradingdate,
--offerdatetime,
periodid, maxavail, fixedload,
rampuprate, rampdownrate, enablementmin,
enablementmax, lowbreakpoint, highbreakpoint,
bandavail1, bandavail2, bandavail3, bandavail4, bandavail5, bandavail6,
bandavail7, bandavail8, bandavail9, bandavail10,
pasaavailability
from bidofferperiod t
where t.tradingdate between to_date('01-10-2022','DD-MM-YYYY') and to_date('07-
10-2022','DD-MM-YYYY')
)
```

- Sparse model is achieved by only storing the actual delta change for each period from the previously accepted offer
- Assembly of current offer is derived by overlay of multiple historical offers for each period at time of consumption
- Requires a knowledge of existing offer state to define which periods to store

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- Existing PK definition would need to be modified to have offerdatetime as last element

Sparse Model – Store period row where offered values for period (n) differ from period (n-1) – yellow is persisted data

Offer	P1	P2	P3	P4	P5	P6	P7	P8
First offer	5	5	5	10	10	5	5	5
Next offer	5	10	5	5	10	5	5	5

Row count for October 2022 Week 1: 6,527,358 96% reduction

```
select count(1) from (
  SELECT
    tradingdate,
                bidtype,
                duid,
                offerdatetime,
                periodid,
                bandavail1
                || ',' || bop.bandavail2
                || ',' || bop.bandavail3
                || ',' || bop.bandavail4
                || ',' || bop.bandavail5
                || ',' || bop.bandavail6
                || ',' || bop.bandavail7
                || ',' || bop.bandavail8
                || ',' || bop.bandavail9
                || ',' || bop.bandavail10
                || ',' || bop.maxavail
                || ',' || nvl(bop.fixedload,-1)
                || ',' || nvl(bop.rampuprate,-1)
                || ',' || nvl(bop.rampdownrate,-1)
                || ',' || nvl(bop.enablementmin,-1)
                || ',' || nvl(bop.enablementmax,-1)
                || ',' || nvl(bop.lowbreakpoint,-1)
                || ',' || nvl(bop.highbreakpoint,-1) as bandavail_curr
    ,
    LAG(bandavail1
        || ',' || bop.bandavail2
        || ',' || bop.bandavail3
        || ',' || bop.bandavail4
        || ',' || bop.bandavail5
        || ',' || bop.bandavail6
        || ',' || bop.bandavail7
        || ',' || bop.bandavail8
        || ',' || bop.bandavail9
        || ',' || bop.bandavail10
        || ',' || bop.maxavail
        || ',' || nvl(bop.fixedload,-1)
        || ',' || nvl(bop.rampuprate,-1)
        || ',' || nvl(bop.rampdownrate,-1)
        || ',' || nvl(bop.enablementmin,-1)
        || ',' || nvl(bop.enablementmax,-1)
        || ',' || nvl(bop.lowbreakpoint,-1)
```

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```
        || ',' || nvl(bop.highbreakpoint,-1)
      ) OVER (
      PARTITION BY tradingdate,
                   bidtype,
                   duid,
                   offerdatetime
      ORDER BY periodid
    ) bandavail_prev
  FROM
    bidofferperiod bop
  where bop.tradingdate between to_date('01-10-2022','DD-MM-YYYY') and
to_date('07-10-2022','DD-MM-YYYY')
)
where ((periodid = 1) or (bandavail_curr != bandavail_prev))
```

- Sparse model is achieved by only storing data for a period within a single offer where it differs from the preceding period
- Interpretation requires inheriting of previous period values where a period is not explicitly specified within a single offer
- Existing PK definition can remain
- Can be processed without any reference to existing offer state

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A2. Version history

12.1 V2.04

Removed from File Interface Changes > DEMAND_FORECASTS

INTERMITTENT_UNIT_SCADA	INTERMITTENT_GEN_FCST	INTERMITTENT_GEN_FCST,INTERMITTENT_UNIT_SCADA,1

~~12.1~~12.2 V2.03

FAQs added from the MSUG 30 March 2023 meeting.

~~12.2~~12.3 V2.02

- Updates the data model summary table as per the latest changes. Some columns were previously missing in this table, and others were incorrectly added as New while they were Modified columns.
- Updates the following data model tables based on the certification testing:

Package	Table	Columns	Change
DEMAND_FORCASTS	INTERMITTENT_GEN_SCADA	SCADA_TYPE SCADA_VALUE SCADA_QUALITY	Updates table to add new SCADA_* columns and removes ELAV, ELAV_QUALITY, LOCL, LOCL_QUALITY columns Changes primary key order and adds SCADA_TYPE to primary key Changes data volume to Large
P5MIN	P5MIN_FCAS_REQUIREMENT	RUN_DATETIME INTERVAL_DATETIME CONSTRAINT_EFFECTIVEDATE LASTCHANGED	Changes datatype from DATETIME to DATE Changes data volume to Large

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Package	Table	Columns	Change
SETTLEMENT_CONFIG	SETCFG_SAPS_SETT_PRICE	VERSION_DATETIME LASTCHANGED	Changes datatype from DATETIME to DATE
SETTLEMENT_DATA	SET_ENERGY_TRAN_SAPS	LASTCHANGED	Changes datatype from DATETIME to DATE
METER_DATA	METER_DATA_SAPS	METER_TYPE	Adds METER_TYPE to primary key Changes data volume to Large
PDPASA_SOLUTION	PDPASA_REGIONSOLUTION	SS_SOLAR_CAPACITY SS_SOLAR_CLEARED SS_WIND_CAPACITY SS_WIND_CLEARED	Updates comment from “Only LOR run incorporates MAXAVAIL limits whereas RELIABILITY_LRC and OUTAGE_LRC do not.” to “All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.”
STPASA_SOLUTION	STPASA_REGIONSOLUTION	SS_SOLAR_CAPACITY SS_SOLAR_CLEARED SS_WIND_CAPACITY SS_WIND_CLEARED	Updates comment from “Only LOR run incorporates MAXAVAIL limits whereas RELIABILITY_LRC and OUTAGE_LRC do not.” to “All three run types (RELIABILITY_LRC, OUTAGE_LRC, LOR) incorporate MAXAVAIL limits.”
DISPATCH	DISPATCHREGIONSUM	RAISE1SECACTUALAVAILABILITY LOWER1SECACTUALAVAILABILITY	Updates comment from RAISE6SEC to RAISE1SEC and LOWER1SEC
	DISPATCHLOAD	RAISE1SEC LOWER1SEC	Swaps the column position

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Package	Table	Columns	Change
FORECE_MAJEURE	MARKET_SUSPEN_SCHEDULE	L1_RRP R1_RRP	Updates comment to Lower1Sec contingency and Raise1Sec contingency
P5MIN	P5MIN_REGIONSOLUTION	RAISE1SECACTUALAVAILABILITY LOWER1SECACTUALAVAILABILITY	Updates comment from RAISE6SEC to RAISE1SEC and LOWER1SEC
	P5MIN_UNITSOLUTION	RAISE1SEC LOWER1SEC	Swaps the column position
PREDISPATCH	PREDISPATCHREGIONSUM	RAISE1SECACTUALAVAILABILITY LOWER1SECACTUALAVAILABILITY	Updates comment from RAISE6SEC to RAISE1SEC and LOWER1SEC
	PREDISPATCHLOAD	RAISE1SEC LOWER1SEC	Swaps the column position
BILLING	BILLING_ENERGY_TRAN_SAPS	CONTRACTYEAR	Datatype changes from NUMBER(3,0) to NUMBER(4,0)

~~12.3~~12.4 V2.01

- Changes to DUDETAILSUMMARY table.
- Increasing data volumes.

~~12.4~~12.5 V2.00

- Changes to Release Dates:
  - Pre-production: 20 April 2023
  - Production: 23 May 2023
- Changes to DM design in several tables.
- Additional table updates for the MT PASA project.

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12.512.6 v1.00

- Updates the Data model changes summary table to clarify entries for PDPASA, STPASA tables as updates to existing column descriptions.
- Fixes data type for WEEKNO, BILLRUNNO, PARTICIPANTID columns on some tables.
- Clarifies description for CONFORMANCE_MODE column in the DISPATCH_UNIT_CONFORMANCE table, add SEMIDISPATCHCAP column and updates the comment for DUID column.
- Updates Data volume field for each table.

12.612.7 v0.01

Initial draft.

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