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# **MMS Data Model Upgrade Report**

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**MMS Data Model v5.1 Oracle**

15/09/2021

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## 2 Description of the model MMS Data Model v5.1 Oracle

### Background

The MMS Data Model is the definition of the interface to participants of data published by AEMO from the NEM system. A database conforming to the MMS Data Model can contain a local copy of all current participant-specific data recorded in the main NEM production database. The target databases have been called such names as the Participant Database, the Participant InfoServer and the Replica Database.

The MMS Data Model includes database tables, indexes and primary keys. The model is currently exposed as a physical model, so is different in presentation for each RDBMS. However, the same logical model underlies all the physical models published by AEMO.

The MMS Data Model is the target model for products transferring data from AEMO to each participant. Current product supplied by AEMO for data transfer is Participant Data Replication (PDR), with some support for the superseded Parser.

Compatibility of the transfer products with the MMS Data Model is the responsibility of those products and their configuration. AEMO's intention is to supply the data transfer products pre-configured to deliver data consistent with the MMS Data Model, noting differences where they occur (e.g. for historical reasons).

### Entity Diagrams

The entity diagrams show the key columns. Relationships have now been included in many cases.

### Note:

The National Electricity Market registration classification of Yarwun Power Station Unit 1 (dispatchable unit ID: YARWUN\_1) is market non-scheduled generating unit. However, it is a condition of the registration of this unit that the Registered Participant complies with some of the obligations of a Scheduled Generator. This unit is dispatched as a scheduled generating unit with respect to its dispatch offers, targets and generation outputs. Accordingly, information about YARWUN\_1 is reported as scheduled generating unit information.

## 3 Notes

Each table description has a Note providing some information relevant to the table.

### 3.1 Visibility

Visibility refers to the nature of confidentiality of data in the table. Each table has one of the following entries, each described here.

Private: meaning the data is confidential to the Participant (e.g. BILLINGFEES).

Public: meaning all Participants have access to the data (e.g. DISPATCHPRICE).

Private, Public Next-Day: meaning the data is confidential until available for public release at beginning of next day (i.e. 4am) (e.g. BIDDAYOFFER).

Private & Public: meaning some items are private and some are public (e.g. MARKETNOTICES).

## 4 Package: BIDS

*Name* BIDS

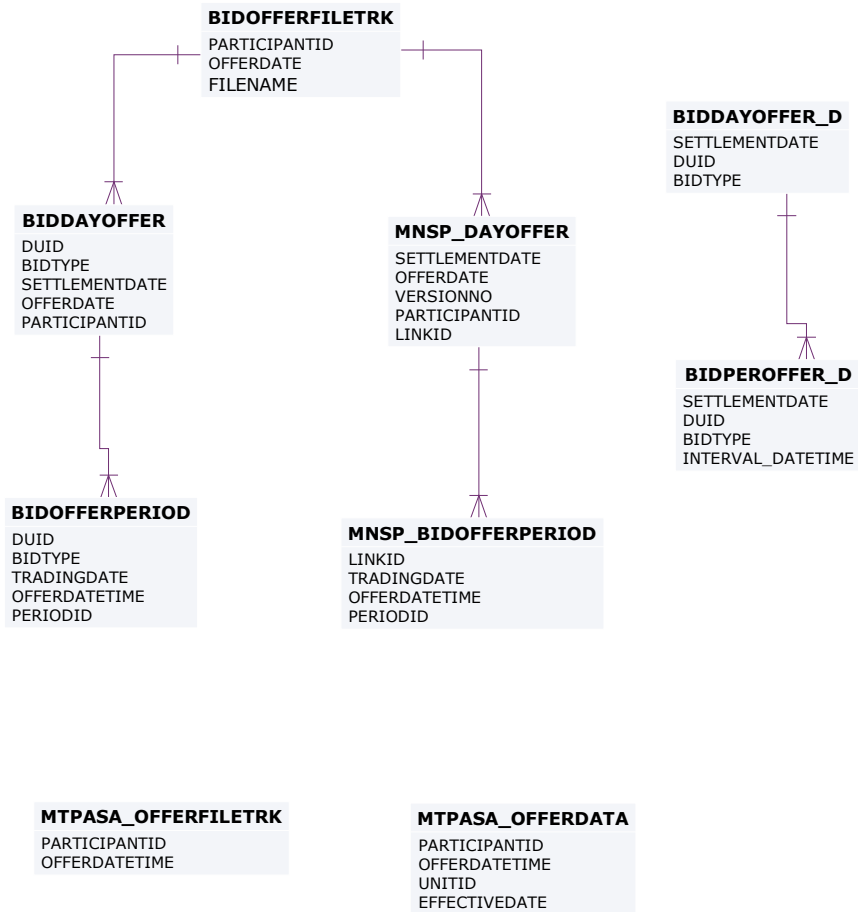
*Comment* Energy and Market Based FCAS Offers

### 4.1 List of tables

Name	Comment
BIDOFFERFILETRK	BIDOFFERFILETRK shows an audit trail of all files submitted containing ENERGY/FCAS/MNSP bid, including corrupt bids and rebids.



## 4.2 Diagram: Entities: Bids



## 4.3 Table: BIDOFFERFILETRK

<i>Name</i>	BIDOFFERFILETRK
<i>Comment</i>	BIDOFFERFILETRK shows an audit trail of all files submitted containing ENERGY/FCAS/MNSP bid, including corrupt bids and rebids.

### 4.3.1 Description

BIDOFFERFILETRK data is confidential to the submitting participant.

The new ancillary service arrangements require availability and prices for each Frequency Control Ancillary Service to be bid on a similar basis to energy. Three new tables facilitate ancillary service bidding. The new tables (BIDOFFERFILETRK, BIDDAYOFFER and BIDOFFERPERIOD) are similar in structure to energy bidding tables (OFFERFILETRK, DAYOFFER and PEROFFER). The significant differences with the new tables are.

- The OFFERDATE field reflects the time the bid was loaded and this field alone provides the key for versioning of bids. The VERSIONNO field is retained for participant use as information only.
- The new tables support bids for multiple services. The BIDTYPE field defines the service to which the bid applies.
- There are no default bids. In the absence of a bid for a specific settlement date, the latest bid submitted for a previous settlement date applies.

#### Source

This data is updated as bids are processed. It includes all bids submitted including corrupt bids.

#### Volume

Approximately 100,000 records per year

#### Note

Confirmation is via CSV bid acknowledgement file

### 4.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 4.3.3 Primary Key Columns

Name  
FILENAME

### 4.3.4 Primary Key Columns

Name

OFFERDATE

PARTICIPANTID

### 4.3.5 Index Columns

Name

LASTCHANGED

### 4.3.6 Content

Name	Data Type	Mandatory	Comment
PARTICIPANTID	VARCHAR2(10)	X	Unique participant identifier
OFFERDATE	TIMESTAMP(3)	X	Time this bid was processed and loaded
FILENAME	VARCHAR2(80)	X	Submitted file name
STATUS	VARCHAR2(10)		Load status [SUCCESSFUL/CORRUPT]
LASTCHANGED	DATE		Last date and time record changed
AUTHORISED BY	VARCHAR2(20)		Participant agent who created the Offer
AUTHORISED DATE	DATE		When the Offer was processed - synonymous with LastChanged
TRANSACTION_ID	VARCHAR2(100)		A GUID used to identify the submission transaction in AEMOs systems
REFERENCE_ID	VARCHAR2(100)		A participant provided reference, which is required to be unique per submission (for a PARTICIPANTID)
SUBMISSION_TIMESTAMP	DATE		The participant provided date/time for the submission
COMMENTS	VARCHAR2(1000)		A participant provided comment
SUBMISSION_METHOD	VARCHAR2(20)		Method by which this submission was made typically FTP, API, WEB

## 5 Package: BILLING\_RUN

*Name* BILLING\_RUN

*Comment* Results from a published Billing Run. The settlement data and billing run data are updated daily between 6am and 8am 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.

### 5.1 List of tables

Name	Comment
BILLING_SUBST_DEMAND	Demand Values Substituted in Billing Calculation
BILLING_SUBST_RUN_VERSION	Details of settlement runs used as input in the substitute demand calculation
BILLING_WDR	Billing WDR Transaction Weekly Summary
BILLING_WDR_DETAIL	Billing WDR transaction detail summary
BILLINGREGIONFIGURES	BILLINGREGIONFIGURES sets out additional summary region details including ancillary service amounts for each billing run.



## 5.3 Table: BILLING\_SUBST\_DEMAND

<i>Name</i>	BILLING_SUBST_DEMAND
<i>Comment</i>	Demand Values Substituted in Billing Calculation

### 5.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 5.3.2 Primary Key Columns

Name

BILLRUNNO

CONTRACTYEAR

PARTICIPANTID

SETTLEMENTDATE

TNI

WEEKNO

### 5.3.3 Content

Name	Data Type	Mandatory	Comment
CONTRACTYEAR	NUMBER(4,0)	X	Billing contract year
WEEKNO	NUMBER(3,0)	X	Billing week number
BILLRUNNO	NUMBER(3,0)	X	Billing run number
SETTLEMENTDATE	DATE	X	Settlement Date
TNI	VARCHAR2(20)	X	Unique identifier for the connection point
PARTICIPANTID	VARCHAR2(20)	X	Unique identifier for the participant
REGIONID	VARCHAR2(20)		Unique identifier for the region to which

			the TNI belongs to on this settlement date
SUBSTITUTEDEMAND	NUMBER(18,8)		Substitute metered quantity for non-energy recovery in MWh for the TNI and participant in the trading interval. A negative value indicates net consumption and a positive value indicates net generation

## 5.4 Table: BILLING\_SUBST\_RUN\_VERSION

Name	BILLING_SUBST_RUN_VERSION
Comment	Details of settlement runs used as input in the substitute demand calculation

### 5.4.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 5.4.2 Primary Key Columns

Name

BILLRUNNO

CONTRACTYEAR

REFERENCESETTLEMENTDATE

REFERENCESETTLEMENTRUNNO

WEEKNO

### 5.4.3 Content

Name	Data Type	Mandatory	Comment
CONTRACTYEAR	NUMBER(4,0)	X	Billing contract year
WEEKNO	NUMBER(3,0)	X	Billing week number
BILLRUNNO	NUMBER(3,0)	X	Billing run number
REFERENCESETTLEMENTDATE	DATE	X	Settlement Date
REFERENCESETTLEMENTRUNNO	NUMBER(3,0)	X	The settlement run number matching the settlement date for a settlement run included in the reference period



## 5.5 Table: BILLING\_WDR

<i>Name</i>	BILLING_WDR
<i>Comment</i>	Billing WDR Transaction Weekly Summary

### 5.5.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 5.5.2 Primary Key Columns

Name  
 BILLRUNNO  
 CONTRACTYEAR  
 PARTICIPANTID  
 WEEKNO

### 5.5.3 Content

Name	Data Type	Mandatory	Comment
CONTRACTYEAR	NUMBER(4,0)	X	Contract year of the Billing run
WEEKNO	NUMBER(3,0)	X	Week number of the Billing run
BILLRUNNO	NUMBER(3,0)	X	Billing run number identifier
PARTICIPANTID	VARCHAR2(20)	X	DRSP or FRMP Participant Identifier
WDR_CREDIT_AMOUNT	NUMBER(18,8)		WDR credit transaction amount
WDR_DEBIT_AMOUNT	NUMBER(18,8)		WDR debit transaction amount

## 5.6 Table: BILLING\_WDR\_DETAIL

Name	BILLING_WDR_DETAIL
Comment	Billing WDR transaction detail summary

### 5.6.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 5.6.2 Primary Key Columns

Name

BILLRUNNO

CONTRACTYEAR

DRSP

FRMP

REGIONID

WDRRRPERIOD

WEEKNO

### 5.6.3 Content

Name	Data Type	Mandatory	Comment
CONTRACTYEAR	NUMBER(4,0)	X	Contract year of the Billing run
WEEKNO	NUMBER(3,0)	X	Week number of the Billing run
BILLRUNNO	NUMBER(3,0)	X	Billing run number identifier
WDRRRPERIOD	VARCHAR2(20)	X	Unique identifier for the period to which the WDRRR applies. For quarter-based periods, this will be equal to YYYY[Q]NN, for example, 2020Q3 for 2020 Quarter 3.

REGIONID	VARCHAR2(20)	X	Region identifier
FRMP	VARCHAR2(20)	X	Financial Responsible Market Participant Identifier
DRSP	VARCHAR2(20)	X	Demand Response Service Provider Identifier
WDRSQ	NUMBER(18,8)		WDR Settlement Quantity capped in MWh
WDRRR	NUMBER(18,8)		WDR reimbursement rate in \$/MWh
WDRTA	NUMBER(18,8)		WDR transaction amount in \$ for demand response

## 5.7 Table: BILLINGREGIONFIGURES

<i>Name</i>	BILLINGREGIONFIGURES
<i>Comment</i>	BILLINGREGIONFIGURES sets out additional summary region details including ancillary service amounts for each billing run.

### 5.7.1 Description

BILLINGREGIONFIGURES is public data, and is available to all participants.

### Source

BILLINGREGIONFIGURES is populated by the posting of a billing run.

### Volume

Five records inserted per billing run, or 55 records inserted per week.

### 5.7.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 5.7.3 Primary Key Columns

Name  
 BILLRUNNO  
 CONTRACTYEAR  
 REGIONID  
 WEEKNO

### 5.7.4 Index Columns

Name  
 LASTCHANGED

### 5.7.5 Content

Name	Data Type	Mandat	Comment
------	-----------	--------	---------

		ory	
CONTRACTYEAR	NUMBER(4,0)	X	AEMO Contract Year number starting in week containing 1st January
WEEKNO	NUMBER(3,0)	X	Week no within the contract year. Week no 1 is the week containing 1st January
BILLRUNNO	NUMBER(3,0)	X	Unique run no within a given contract year and week no
REGIONID	VARCHAR2(10)	X	Unique region identifier
ENERGYOUT	NUMBER(16,6)		MWh Energy output in the region during the billing period
VALUEOUT	NUMBER(16,6)		\$ Value of energy output in region during billing period
ENERGYPURCHASED	NUMBER(16,6)		MWh Amount of energy purchased in region during billing period
VALUEPURCHASED	NUMBER(16,6)		\$ Value of energy purchased during billing period
EXCESSGEN	NUMBER(16,6)		This field is populated with 0
RESERVETRAIDING	NUMBER(16,6)		This field is populated with 0
INTCOMPO	NUMBER(16,6)		This field is populated with 0
ADMINPRICECOMPO	NUMBER(16,6)		This field is populated with 0
SETTSURPLUS	NUMBER(16,6)		Intraregional residues in \$
ASPAYMENT	NUMBER(16,6)		Ancillary service payments in \$
POOLFEES	NUMBER(16,6)		This field is populated with 0
LASTCHANGED	DATE		Last date and time record changed
WDRSQ	NUMBER(18,8)		WDR Settlement Quantity Capped in MWh
WDRTA	NUMBER(18,8)		WDR transaction amount in \$

## 6 Package: DEMAND\_FORECASTS

*Name* DEMAND\_FORECASTS

*Comment* Regional Demand Forecasts and Intermittent Generation forecasts.

### 6.1 List of tables

Name	Comment
DEMANDOPERATIONALACTUAL	Shows Actual Operational Demand for a particular date time interval.
INTERMITTENT_CLUSTER_AVAIL	A submission of expected plant availability for an intermittent generating unit cluster, by Trading Day and Trading Interval.
MTPASA_INTERMITTENT_AVAIL	A submission of expected plant availability for intermittent generators for use in MTPASA intermittent generation forecasts

## 6.2 Diagram: Entities: Demand Forecasts



## 6.3 Table: DEMANDOPERATIONALACTUAL

<i>Name</i>	DEMANDOPERATIONALACTUAL
<i>Comment</i>	Shows Actual Operational Demand for a particular date time interval.

### 6.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 6.3.2 Primary Key Columns

Name  
 INTERVAL\_DATETIME  
 REGIONID

### 6.3.3 Index Columns

Name  
 INTERVAL\_DATETIME  
 REGIONID

### 6.3.4 Content

Name	Data Type	Mandatory	Comment
INTERVAL_DATETIME	date	X	Date time interval for operational demand value
REGIONID	Varchar2(20)	X	Region identifier
OPERATIONAL_DEMAND	number(10,0)		Average 30-minute measured operational demand MW value (unadjusted)
LASTCHANGED	date		Last date and time record changed
OPERATIONAL_DEMAND_ADJ	NUMBER(10,0)		Adjustment value containing the



USTMENT			estimated amount of activated RERT and involuntary load shedding that occurred as a result of a NER 4.8.9 instruction for load shedding from AEMO.
WDR_ESTIMATE	NUMBER(10)		Estimated average 30-minute MW amount of Wholesale Demand Response that occurred

## 6.4 Table: INTERMITTENT\_CLUSTER\_AVAIL

<i>Name</i>	INTERMITTENT_CLUSTER_AVAIL
<i>Comment</i>	A submission of expected plant availability for an intermittent generating unit cluster, by Trading Day and Trading Interval.

### 6.4.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private; Public Next-Day

### 6.4.2 Primary Key Columns

Name

CLUSTERID

DUID

OFFERDATETIME

PERIODID

TRADINGDATE

### 6.4.3 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	DATE	X	The trading day to which the availability submission applies
DUID	VARCHAR2(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	DATE	X	Date and Time when this cluster availability submission was loaded
CLUSTERID	VARCHAR2(20)	X	Unique Cluster Identifier for this cluster within the DUID
PERIODID	NUMBER(3,0)	X	Trading interval number (1...48) within this TRADINGDATE for which ELEMENTS_UNAVAILABLE applies

ELEMENTS_UNAVAILABLE	NUMBER(5,0)		Number of elements within this CLUSTERID (turbines for wind, or inverters for solar) that are not available for this TRADINGDATE and PERIODID (scheduled maintenance in AWEFS/ASEFS). Value between 0 and the registered Number of Cluster Elements. Value = 0 means no elements unavailable
ELEMENTS_AVAILABLE	NUMBER(5,0)		Number of elements within this CLUSTERID (turbines for wind, or inverters for solar) that are available for this TRADINGDATE and PERIODID (scheduled maintenance in AWEFS/ASEFS). Value between 0 and the registered Number of Cluster Elements. Value = 0 means no elements available

## 6.5 Table: MTPASA\_INTERMITTENT\_AVAIL

*Name* MTPASA\_INTERMITTENT\_AVAIL

*Comment* A submission of expected plant availability for intermittent generators for use in MTPASA intermittent generation forecasts

### 6.5.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 6.5.2 Primary Key Columns

Name

CLUSTERID

DUID

OFFERDATETIME

TRADINGDATE

### 6.5.3 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	DATE	X	Trading Day for which this cluster availability submission applies
DUID	VARCHAR2(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	DATE	X	Date and Time when this cluster availability submission was loaded
CLUSTERID	VARCHAR2(20)	X	Unique Cluster Identifier for this cluster within the DUID
LASTCHANGED	DATE		Last date and time record changed
ELEMENTS_UNAVAILABLE	NUMBER(5,0)		Number of elements within this CLUSTERID (turbines for wind, or inverters for solar) that are not available for this TRADINGDATE. Value between 0

			and the registered Number of Cluster Elements. Value = 0 means no elements unavailable
ELEMENTS_AVAILABLE	NUMBER(5,0)		Number of elements within this CLUSTERID (turbines for wind, or inverters for solar) that are available for this TRADINGDATE. Value between 0 and the registered Number of Cluster Elements. Value = 0 means no elements available

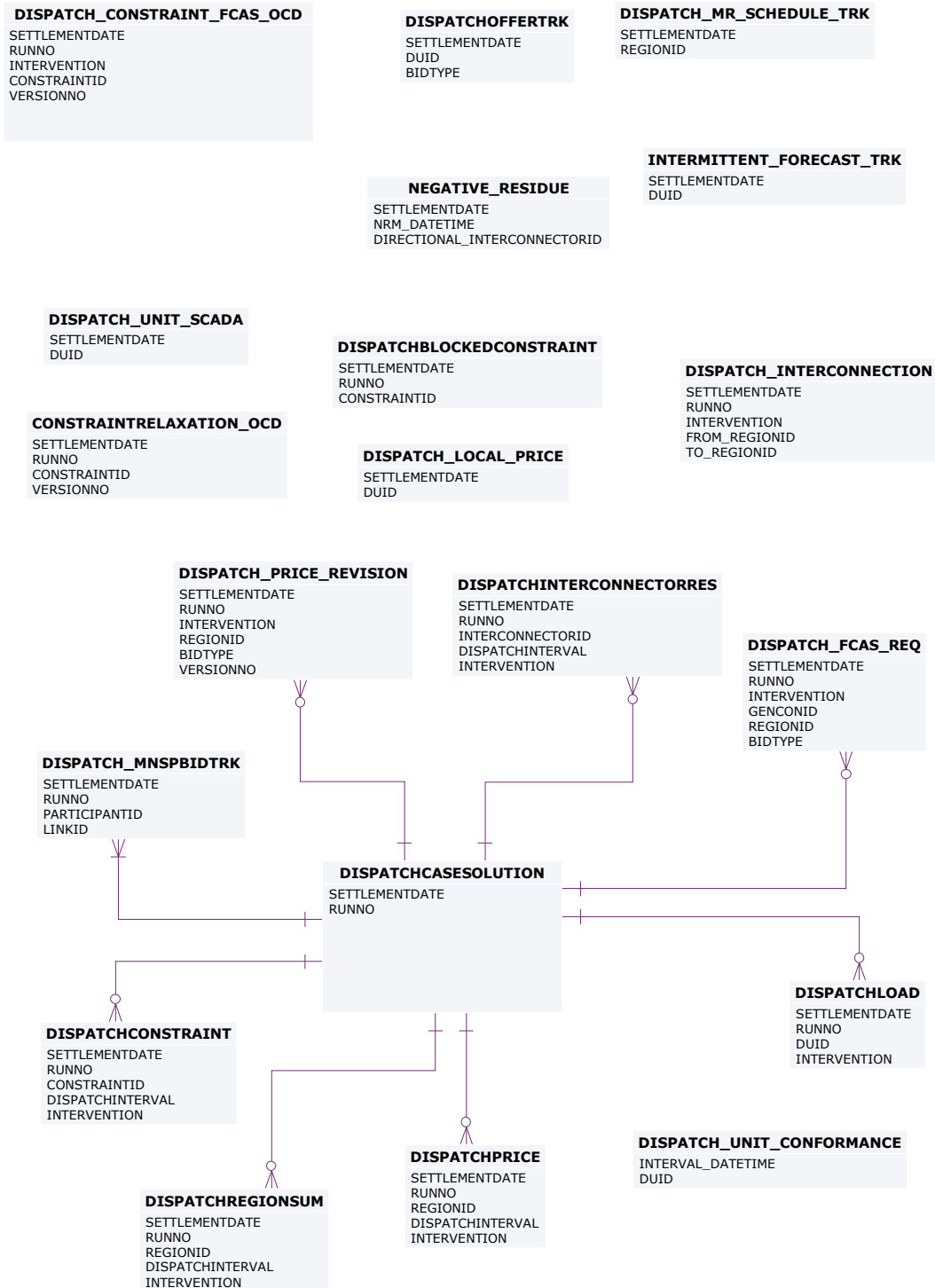
## 7 Package: DISPATCH

<i>Name</i>	DISPATCH
<i>Comment</i>	Results from a published Dispatch Run

### 7.1 List of tables

Name	Comment
DISPATCHLOAD	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.
DISPATCHREGIONSUM	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.

## 7.2 Diagram: Entities: Dispatch



## 7.3 Table: DISPATCHLOAD

<i>Name</i>	DISPATCHLOAD
<i>Comment</i>	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.

### 7.3.1 Description

DISPATCHLOAD data is confidential for the current day, showing own details for participant and becomes public after close of business yesterday, and is available to all participants.

#### Source

DISPATCHLOAD shows data for every 5 minutes for all units, even zero targets.

#### Volume

Expect 40-50,000 records per day. All units are repeated, even zero targets.

#### Note

\*\* A flag exists for each ancillary service type such that a unit trapped or stranded in one or more service type can be immediately identified. The flag is defined using the low 3 bits as follows:

Flag Name	Bit	Description
Enabled	0	The unit is enabled to provide this ancillary service type.
Trapped	1	The unit is enabled to provide this ancillary service type, however the profile for this service type is causing the unit to be trapped in the energy market.
Stranded	2	The unit is bid available to provide this ancillary service type, however, the unit is operating in the energy market outside of the profile for this service type and is stranded from providing this service.

Interpretation of the bit-flags as a number gives the following possibilities (i.e. other combinations are not possible):

Numeric Value	Bit (2,1,0)	Meaning
0	000	Not stranded, not trapped, not enabled.
1	001	Not stranded, not trapped, is enabled.
3	011	Not stranded, is trapped, is enabled.
4	100	Is stranded, not trapped, not enabled.

For example, testing for availability can be done by checking for odd (=available) or even (=unavailable) number (e.g.  $\text{mod}(\text{flag}, 2)$  results in 0 for unavailable and 1 for available).

\*\*\* "Actual FCAS availability" is determined in a post-processing step based on the energy target (TotalCleared) and bid FCAS trapezium for that interval. However, if the unit is outside the bid FCAS trapezium at the start of the interval (InitialMW), the "Actual FCAS availability" is set to zero. For regulation services, the trapezium is the most restrictive of the bid/SCADA trapezium values.



### 7.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private; Public Next-Day

### 7.3.3 Primary Key Columns

Name  
 DUID  
 INTERVENTION  
 RUNNO  
 SETTLEMENTDATE

### 7.3.4 Index Columns

Name  
 LASTCHANGED

### 7.3.5 Index Columns

Name  
 DUID  
 LASTCHANGED

### 7.3.6 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Market date and time starting at 04:05
RUNNO	NUMBER(3,0)	X	Dispatch run no; always 1
DUID	VARCHAR2(10)	X	Dispatchable unit identifier
TRADETYPE	NUMBER(2,0)		Not used

DISPATCHINTERVAL	NUMBER(22,0)		Dispatch period identifier, from 001 to 288 in format YYYYMMDDPPP.
INTERVENTION	NUMBER(2,0)	X	Intervention flag if intervention run
CONNECTIONPOINTID	VARCHAR2(12)		Connection point identifier for DUID
DISPATCHMODE	NUMBER(2,0)		Dispatch mode for fast start plant (0 to 4).
AGCSTATUS	NUMBER(2,0)		AGC Status from EMS * 1 = on * 0 = off
INITIALMW	NUMBER(15,5)		Initial MW at start of period
TOTALCleared	NUMBER(15,5)		Target MW for end of period
RAMPDOWNRATE	NUMBER(15,5)		Ramp down rate used in dispatch (lesser of bid or telemetered rate).
RAMPUPRATE	NUMBER(15,5)		Ramp up rate (lesser of bid or telemetered rate).
LOWER5MIN	NUMBER(15,5)		Lower 5 min reserve target
LOWER60SEC	NUMBER(15,5)		Lower 60 sec reserve target
LOWER6SEC	NUMBER(15,5)		Lower 6 sec reserve target
RAISE5MIN	NUMBER(15,5)		Raise 5 min reserve target
RAISE60SEC	NUMBER(15,5)		Raise 60 sec reserve target
RAISE6SEC	NUMBER(15,5)		Raise 6 sec reserve target
DOWNEPF	NUMBER(15,5)		Not Used
UPEPF	NUMBER(15,5)		Not Used
MARGINAL5MINVALUE	NUMBER(15,5)		Marginal \$ value for 5 min
MARGINAL60SECVALUE	NUMBER(15,5)		Marginal \$ value for 60 seconds
MARGINAL6SECVALUE	NUMBER(15,5)		Marginal \$ value for 6 seconds
MARGINALVALUE	NUMBER(15,5)		Marginal \$ value for energy
VIOLATION5MINDEGREE	NUMBER(15,5)		Violation MW 5 min
VIOLATION60SECDEGREE	NUMBER(15,5)		Violation MW 60 seconds
VIOLATION6SECDEGREE	NUMBER(15,5)		Violation MW 6 seconds

VIOLATIONDEGREE	NUMBER(15,5)		Violation MW energy
LASTCHANGED	DATE		Last date and time record changed
LOWERREG	NUMBER(15,5)		Lower Regulation reserve target
RAISEREG	NUMBER(15,5)		Raise Regulation reserve target
AVAILABILITY	NUMBER(15,5)		Bid energy availability
RAISE6SECFLAGS	NUMBER(3,0)		Raise 6sec status flag - see
RAISE60SECFLAGS	NUMBER(3,0)		Raise 60sec status flag - see
RAISE5MINFLAGS	NUMBER(3,0)		
RAISEREGFLAGS	NUMBER(3,0)		Raise Reg status flag - see
LOWER6SECFLAGS	NUMBER(3,0)		Lower 6sec status flag - see
LOWER60SECFLAGS	NUMBER(3,0)		Lower 60sec status flag
LOWER5MINFLAGS	NUMBER(3,0)		Lower 5min status flag
LOWERREGFLAGS	NUMBER(3,0)		Lower Reg status flag - see
RAISEREGAVAILABILITY	NUMBER(15,5)		RaiseReg availability - minimum of bid and telemetered value
RAISEREGENABLEMENTMAX	NUMBER(15,5)		RaiseReg enablement max point - minimum of bid and telemetered value
RAISEREGENABLEMENTMIN	NUMBER(15,5)		RaiseReg Enablement Min point - maximum of bid and telemetered value
LOWERREGAVAILABILITY	NUMBER(15,5)		Lower Reg availability - minimum of bid and telemetered value
LOWERREGENABLEMENTMAX	NUMBER(15,5)		Lower Reg enablement Max point - minimum of bid and telemetered value
LOWERREGENABLEMENTMIN	NUMBER(15,5)		Lower Reg Enablement Min point - maximum of bid and telemetered value
RAISE6SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 6sec availability
RAISE60SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 60sec availability
RAISE5MINACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 5min availability

RAISEREGACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise reg availability
LOWER6SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 6sec availability
LOWER60SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 60sec availability
LOWER5MINACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 5min availability
LOWERREGACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower reg availability
SEMIDISPATCHCAP	NUMBER(3,0)		Boolean representation flagging if the Target is Capped
DISPATCHMODETIME	NUMBER(4,0)		Minutes for which the unit has been in the current DISPATCHMODE. From NEMDE TRADERSOLUTION element FSTARGETMODETIME attribute.

## 7.4 Table: DISPATCHREGIONSUM

<i>Name</i>	DISPATCHREGIONSUM
<i>Comment</i>	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.

### 7.4.1 Description

DISPATCHREGIONSUM is public data, and is available to all participants.

#### Source

DISPATCHREGIONSUM updates every 5 minutes.

#### Note

For details of calculations about load calculations, refer to Chapter 3 of the "Statement of Opportunities"

\*\*\* "Actual FCAS availability" is determined in a post-processing step based on the energy target (TotalCleared) and bid FCAS trapezium for that interval. However, if the unit is outside the bid FCAS trapezium at the start of the interval (InitialMW), the "Actual FCAS availability" is set to zero. For regulation services, the trapezium is the most restrictive of the bid/SCADA trapezium values.

From 16 February 2006, the old reserve values are no longer populated (i.e. are null), being LORSurplus and LRCSurplus. For more details on the changes to Reporting of Reserve Condition Data, refer to AEMO Communication 2042. For the best available indicator of reserve condition in each of the regions of the NEM for each trading interval, refer to the latest run of the Pre-Dispatch PASA (see table PDPASA\_REGIONSOLUTION).

### 7.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 7.4.3 Primary Key Columns

Name  
DISPATCHINTERVAL  
INTERVENTION  
REGIONID  
RUNNO  
SETTLEMENTDATE

## 7.4.4 Index Columns

Name

LASTCHANGED

## 7.4.5 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Market date and time starting at 04:05
RUNNO	NUMBER(3,0)	X	Dispatch run no; always 1
REGIONID	VARCHAR2(10)	X	Region Identifier
DISPATCHINTERVAL	NUMBER(22,0)	X	Dispatch period identifier, from 001 to 288 in format YYYYMMDDPPP.
INTERVENTION	NUMBER(2,0)	X	Manual Intervention flag
TOTALDEMAND	NUMBER(15,5)		Demand (less loads)
AVAILABLEGENERATION	NUMBER(15,5)		Aggregate generation bid available in region
AVAILABLELOAD	NUMBER(15,5)		Aggregate load bid available in region
DEMANDFORECAST	NUMBER(15,5)		5 minute forecast adjust
DISPATCHABLEGENERATION	NUMBER(15,5)		Dispatched Generation
DISPATCHABLELOAD	NUMBER(15,5)		Dispatched Load (add to total demand to get inherent region demand).
NETINTERCHANGE	NUMBER(15,5)		Net interconnector flow from the regional reference node
EXCESSGENERATION	NUMBER(15,5)		MW quantity of excess
LOWER5MINDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min MW dispatch
LOWER5MINIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min MW imported
LOWER5MINLOCALDISPATCH	NUMBER(15,5)		Lower 5 min local dispatch
LOWER5MINLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of lower 5 min

LOWER5MINLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min local requirement
LOWER5MINPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of lower 5 min
LOWER5MINREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min total requirement
LOWER5MINSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of lower 5 min
LOWER60SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec MW dispatch
LOWER60SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec MW imported
LOWER60SECLOCALDISPATCH	NUMBER(15,5)		Lower 60 sec local dispatch
LOWER60SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of lower 60 sec
LOWER60SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec local requirement
LOWER60SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of lower 60 sec
LOWER60SECREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec total requirement
LOWER60SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of lower 60 sec
LOWER6SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec MW dispatch
LOWER6SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec MW imported
LOWER6SECLOCALDISPATCH	NUMBER(15,5)		Lower 6 sec local dispatch
LOWER6SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of lower 6 sec
LOWER6SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec local requirement
LOWER6SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of lower 6 sec

LOWER6SECREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec total requirement
LOWER6SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of lower 6 sec
RAISE5MINDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min MW dispatch
RAISE5MINIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min MW imported
RAISE5MINLOCALDISPATCH	NUMBER(15,5)		Raise 5 min local dispatch
RAISE5MINLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Raise price of lower 5 min
RAISE5MINLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min local requirement
RAISE5MINPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of raise 5 min
RAISE5MINREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min total requirement
RAISE5MINSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of raise 5 min
RAISE60SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec MW dispatch
RAISE60SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec MW imported
RAISE60SECLOCALDISPATCH	NUMBER(15,5)		Raise 60 sec local dispatch
RAISE60SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of raise 60 sec
RAISE60SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec local requirement
RAISE60SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of raise 60 sec
RAISE60SECREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec total requirement
RAISE60SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of raise 60 sec



RAISE6SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec MW dispatch
RAISE6SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec MW imported
RAISE6SECLOCALDISPATCH	NUMBER(15,5)		Raise 6 sec local dispatch
RAISE6SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of raise 6 sec
RAISE6SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec local requirement
RAISE6SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of raise 6 sec
RAISE6SECREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec total requirement
RAISE6SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of raise 6 sec
AGGEGATEDISPATCHERROR	NUMBER(15,5)		Calculated dispatch error
AGGREGATEDISPATCHERRO R	NUMBER(15,5)		Calculated dispatch error
LASTCHANGED	DATE		Last date and time record changed
INITIALSUPPLY	NUMBER(15,5)		Sum of initial generation and import for region
CLEAREDSUPPLY	NUMBER(15,5)		Sum of cleared generation and import for region
LOWERREGIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation MW imported
LOWERREGLOCALDISPATCH	NUMBER(15,5)		Lower Regulation local dispatch
LOWERREGLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation local requirement
LOWERREGREQ	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation total requirement
RAISEREGIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation MW imported
RAISEREGLOCALDISPATCH	NUMBER(15,5)		Raise Regulation local dispatch
RAISEREGLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise

			Regulation local requirement
RAISEREGREQ	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation total requirement
RAISE5MINLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min local requirement
RAISEREGLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg local requirement
RAISE60SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 sec local requirement
RAISE6SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 sec local requirement
LOWER5MINLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min local requirement
LOWERREGLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg local requirement
LOWER60SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 sec local requirement
LOWER6SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 sec local requirement
RAISE5MINVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min requirement
RAISEREGVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg requirement
RAISE60SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 seconds requirement
RAISE6SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 seconds requirement
LOWER5MINVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min requirement
LOWERREGVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg requirement
LOWER60SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 seconds requirement
LOWER6SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 seconds requirement
RAISE6SECACTUALAVAILABI	NUMBER(16,6)		trapezium adjusted raise 6sec availability

LITY			
RAISE60SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 60sec availability
RAISE5MINACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 5min availability
RAISEREGACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise reg availability
LOWER6SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 6sec availability
LOWER60SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 60sec availability
LOWER5MINACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 5min availability
LOWERREGACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower reg availability
LORSURPLUS	NUMBER(16,6)		Not in use after 17 Feb 2006. Total short term generation capacity reserve used in assessing lack of reserve condition
LRCSURPLUS	NUMBER(16,6)		Not in use after 17 Feb 2006. Total short term generation capacity reserve above the stated low reserve condition requirement
TOTALINTERMITTENTGENERATION	NUMBER(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	NUMBER(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-scheduled generation (MW).
UIGF	NUMBER(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SEMISCHEDULE_CLEARED MW	NUMBER(15,5)		Regional aggregated Semi-Schedule generator Cleared MW
SEMISCHEDULE_COMPLIANCE MW	NUMBER(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced
SS_SOLAR_UIGF	Number(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the

			primary fuel source is solar
SS_WIND_UIGF	Number (15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is wind
SS_SOLAR_CLEAREDMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where the primary fuel source is solar
SS_WIND_CLEAREDMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where the primary fuel source is wind
SS_SOLAR_COMPLIANCEMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced and the primary fuel source is solar
SS_WIND_COMPLIANCEMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced and the primary fuel source is wind
WDR_INITIALMW	NUMBER(15,5)		Regional aggregated MW value at start of interval for Wholesale Demand Response (WDR) units
WDR_AVAILABLE	NUMBER(15,5)		Regional aggregated available MW for Wholesale Demand Response (WDR) units
WDR_DISPATCHED	NUMBER(15,5)		Regional aggregated dispatched MW for Wholesale Demand Response (WDR) units

## 8 Package: METER\_DATA

*Name* METER\_DATA  
*Comment* Wholesale market aggregated Meter data

### 8.1 List of tables

Name	Comment
METERDATA_WDR_READS	Metering Data WDR Readings

## 8.2 Diagram: Entities: Meter Data

Note: Include MDA =  
MeteringDataAgent in any  
join

### **METERDATA\_INDIVIDUAL\_READS**

CASE\_ID  
SETTLEMENTDATE  
METER\_ID  
METER\_ID\_SUFFIX  
PERIODID

### **METERDATA\_AGGREGATE\_READS**

CASE\_ID  
SETTLEMENTDATE  
CONNECTIONPOINTID  
METER\_TYPE  
FRMP  
LR  
PERIODID

### **METERDATA\_WDR\_READS**

MARKET\_ID  
CASE\_ID  
SETTLEMENTDATE  
METER\_ID  
PERIODID

### **METERDATA\_INTERCONNECTOR**

CASE\_ID  
SETTLEMENTDATE  
INTERCONNECTORID  
PERIODID

## 8.3 Table: METERDATA\_WDR\_READS

<i>Name</i>	METERDATA_WDR_READS
<i>Comment</i>	Metering Data WDR Readings

### 8.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 8.3.2 Primary Key Columns

Name

CASE\_ID

MARKET\_ID

METER\_ID

PERIODID

SETTLEMENTDATE

### 8.3.3 Content

Name	Data Type	Mandatory	Comment
MARKET_ID	VARCHAR2(20)	X	Unique identifier for the market to which this metering record applies. Always equal to NEM in the current system.
CASE_ID	NUMBER(15,0)	X	Unique identifier for the metering case.
SETTLEMENTDATE	DATE	X	The settlement date for the metering record
METER_ID	VARCHAR2(20)	X	Unique identifier for the meter to which the metering record applies
TNI	VARCHAR2(20)		Unique identifier for the transmission node to which this meter belongs on the settlement date

FRMP	VARCHAR2(20)		Unique identifier for the participant acting as the FRMP for this NMI on the settlement date
DRSP	VARCHAR2(20)		Unique identifier for the participant acting as the DRSP for this NMI on the settlement date
PERIODID	NUMBER(3,0)	X	Trading interval identifier, with Period 1 being the first TI for the calendar day, i.e interval ending 00:05.
METEREDQUANTITYIMPORT	NUMBER(18,8)		Metered quantity Import in MWh for the NMI in the trading interval. A negative value indicates net consumption, while a positive value indicates net generation
METEREDQUANTITYEXPORT	NUMBER(18,8)		Metered quantity Export in MWh for the NMI in the trading interval. A negative value indicates net consumption, while a positive value indicates net generation
BASELINEQUANTITY	NUMBER(18,8)		Baseline quantity in MWh for the NMI in the trading interval. A negative value indicates net consumption, while a positive value indicates the net generation
QUALITYFLAG	VARCHAR2(20)		Quality flag for the meter read. Where multiple datastreams exist against the NMI with different quality flags for each read, the lowest quality flag will be published against the NMI for the interval.
ISNONCOMPLIANT	NUMBER(1,0)		A value of TRUE (indicated by 1) for this column indicates that financial settlement of WDR transactions for this NMI should not proceed for the settlement date and trading interval. Possible values are 1 and 0.
BASELINECALCULATIONID	VARCHAR2(100)		A reference to the baseline run that produced the baseline quantity for this NMI and interval



## 9 Package: MTPASA

<i>Name</i>	MTPASA
<i>Comment</i>	Results from a published Medium Term PASA Run and region-aggregate offered PASA Availability of scheduled generators

### 9.1 List of tables

Name	Comment
MTPASA_DUIDAVAILABILITY	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
MTPASA_REGIONAVAILABILITY	Stores the Region-aggregate offered PASA Availability of scheduled generators for each day over the Medium Term PASA period. The data in this table is an aggregate of input data to the MT PASA process it is not part of the MTPASA solution. The aggregate availability does not reflect any energy limitations in the MT PASA offers.

## 9.2 Diagram: Entities: MT PASA



## 9.3 Table: MTPASA\_DUIDAVAILABILITY

*Name* 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

### 9.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 9.3.2 Primary Key Columns

Name

DAY

DUID

PUBLISH\_DATETIME

REGIONID

### 9.3.3 Content

Name	Data Type	Mandatory	Comment
PUBLISH_DATETIME	DATE	X	Date Time the report was published.
DAY	DATE	X	Date on which the PASA availability of DUID applies.
REGIONID	VARCHAR2(20)	X	NEM Region.
DUID	VARCHAR2(20)	X	NEM DUID.
PASAAVAILABILITY	NUMBER(12,0)		Offered PASA Availability of Scheduled generator DUID for the day.
LATEST_OFFER_DATETIME	DATE		Date Time of the latest offer used for DUID for this date.

LASTCHANGED	DATE		Last date and time record changed
CARRYOVERSTATUS	NUMBER(1,0)		Status of a reported capacity value (e.g. 1 for Yes, 0 for No)

## 9.4 Table: MTPASA\_REGIONAVAILABILITY

<i>Name</i>	MTPASA_REGIONAVAILABILITY
<i>Comment</i>	Stores the Region-aggregate offered PASA Availability of scheduled generators for each day over the Medium Term PASA period. The data in this table is an aggregate of input data to the MT PASA process it is not part of the MTPASA solution. The aggregate availability does not reflect any energy limitations in the MT PASA offers.

### 9.4.1 Description

MTPASA\_REGIONAVAILABILITY is public data.

### 9.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 9.4.3 Primary Key Columns

Name  
DAY  
PUBLISH\_DATETIME  
REGIONID

### 9.4.4 Content

Name	Data Type	Mandatory	Comment
PUBLISH_DATETIME	DATE	X	Date Time the report was published.
DAY	DATE	X	Date on which the aggregation applies.
REGIONID	VARCHAR2(20)	X	NEM Region.
PASAAVAILABILITY_SCHEDULED	NUMBER(12,0)		Aggregate of the offered PASA Availability for all Scheduled generators in this region.
LATEST_OFFER_DATETIME	DATE		Date Time of the latest offer used in the

			aggregation for this region and date.
ENERGYUNCONSTRAINEDCAPACITY	NUMBER(12,0)		Region energy unconstrained MW capacity
ENERGYCONSTRAINEDCAPACITY	NUMBER(12,0)		Region energy constrained MW capacity
NONSCHEDULEDGENERATION	NUMBER(12,2)		Allowance made for non-scheduled generation in the demand forecast (MW)
DEMAND10	NUMBER(12,2)		10% probability demand (ex non-scheduled demand)
DEMAND50	NUMBER(12,2)		50% probability demand (ex non-scheduled demand)
ENERGYREQDEMAND10	NUMBER(12,2)		Total weekly operational as generated consumption (POE 10)
ENERGYREQDEMAND50	NUMBER(12,2)		Total weekly operational as generated consumption (POE 50)
LASTCHANGED	DATE		Last date and time record changed
DEMAND10MIN	NUMBER(12,2)		Minimum of the Operational Load as Generated (OPGEN) peaks that occur in all ref years for the P10 traces (MW).
DEMAND10MAX	NUMBER(12,2)		Maximum of the Operational Load as Generated (OPGEN) peaks that occur in all ref years for the P10 traces (MW).
DEMAND50MIN	NUMBER(12,2)		Minimum of the Operational Load as Generated (OPGEN) peaks that occur in all ref years for the P50 traces (MW).
DEMAND50MAX	NUMBER(12,2)		Maximum of the Operational Load as Generated (OPGEN) peaks that occur in all ref years for the P50 traces (MW).
CARRYOVERCAPACITY	NUMBER(12,0)		Split of the CARRYOVER component of aggregate capacity vs the currently reported capacity.

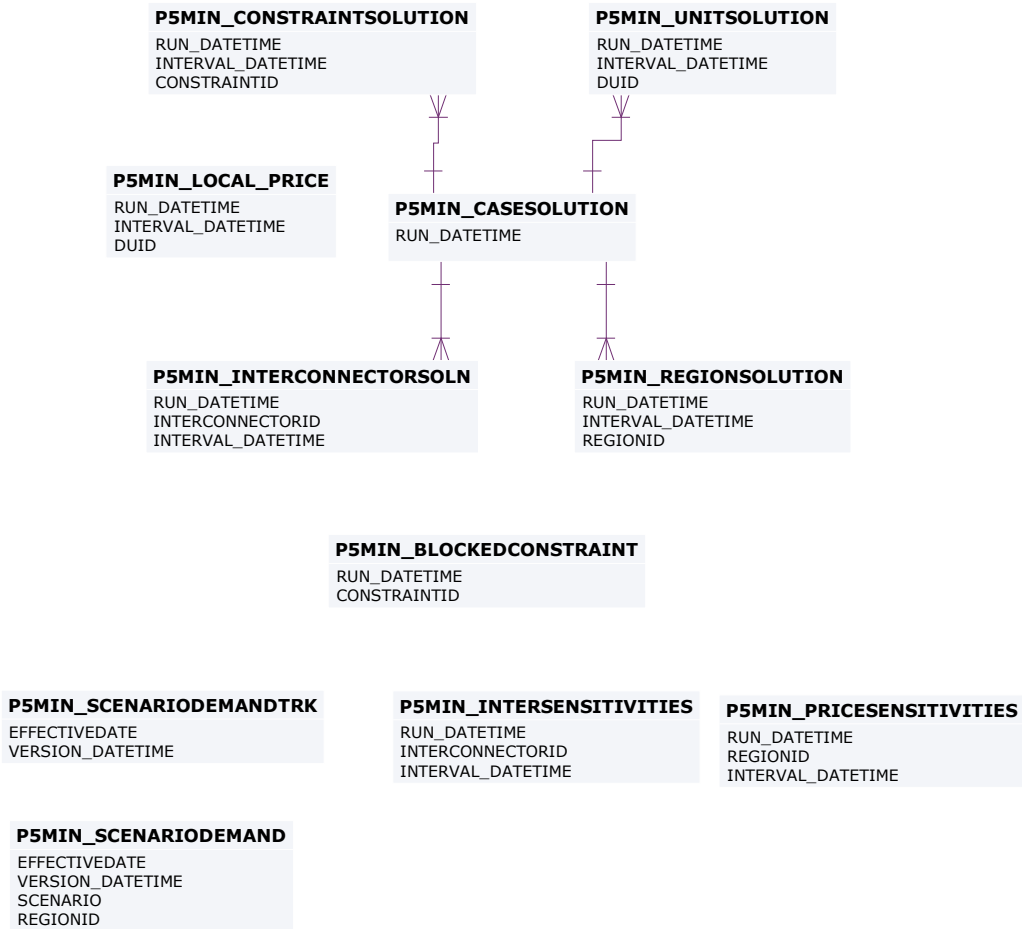
## 10 Package: P5MIN

<i>Name</i>	P5MIN
<i>Comment</i>	Results from a published Five-Minute Predispach Run

### 10.1 List of tables

Name	Comment
P5MIN_REGIONSOLUTION	<p>The five-minute predispach (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispach 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.</p> <p>P5MIN_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.</p>
P5MIN_UNITSOLUTION	<p>The five-minute predispach (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispach 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.</p> <p>P5MIN_UNITSOLUTION shows the Unit results from the capacity evaluations for each period of the study.</p>

## 10.2 Diagram: Entities: P5MIN





## 10.3 Table: P5MIN\_REGIONSOLUTION

<i>Name</i>	P5MIN_REGIONSOLUTION
<i>Comment</i>	<p>The five-minute predispach (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispach 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.</p> <p>P5MIN_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.</p>

### 10.3.1 Description

P5MIN\_REGIONSOLUTION is public data, so is available to all participants.

#### Source

P5MIN\_REGIONSOLUTION updates every 5 minutes.

#### Volume

Rows per day: 1440

### 10.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 10.3.3 Primary Key Columns

Name

INTERVAL\_DATETIME

REGIONID

RUN\_DATETIME

### 10.3.4 Index Columns

Name

LASTCHANGED

### 10.3.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	DATE	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	DATE	X	The unique identifier for the interval within this study
REGIONID	VARCHAR2(10)	X	Region Identifier
RRP	NUMBER(15,5)		Region Reference Price (Energy)
ROP	NUMBER(15,5)		Region Override Price (Energy)
EXCESSGENERATION	NUMBER(15,5)		Total Energy Imbalance (MW)
RAISE6SECRRP	NUMBER(15,5)		Region Reference Price (Raise6Sec)
RAISE6SECROP	NUMBER(15,5)		Original regional price (Raise6Sec)
RAISE60SECRRP	NUMBER(15,5)		Region Reference Price (Raise60Sec)
RAISE60SECROP	NUMBER(15,5)		Original regional price (Raise60Sec)
RAISE5MINRRP	NUMBER(15,5)		Region Reference Price (Raise5Min)
RAISE5MINROP	NUMBER(15,5)		Original regional price (Raise5Min)
RAISEREGRRP	NUMBER(15,5)		Region Reference Price (RaiseReg)
RAISEREGROP	NUMBER(15,5)		Original regional price (RaiseReg)
LOWER6SECRRP	NUMBER(15,5)		Region Reference Price (Lower6Sec)
LOWER6SECROP	NUMBER(15,5)		Original regional price (Lower6Sec)
LOWER60SECRRP	NUMBER(15,5)		Region Reference Price (Lower60Sec)
LOWER60SECROP	NUMBER(15,5)		Original regional price (Lower60Sec)
LOWER5MINRRP	NUMBER(15,5)		Region Reference Price (Lower5Min)
LOWER5MINROP	NUMBER(15,5)		Original regional price (Lower5Min)

LOWERREGRRP	NUMBER(15,5)		Region Reference Price (LowerReg)
LOWERREGROP	NUMBER(15,5)		Original regional price (LowerReg)
TOTALDEMAND	NUMBER(15,5)		Regional Demand - NB NOT net of Interconnector flows or Loads
AVAILABLEGENERATION	NUMBER(15,5)		Regional Available generation
AVAILABLELOAD	NUMBER(15,5)		Regional Available Load
DEMANDFORECAST	NUMBER(15,5)		Predicted change in regional demand for this interval
DISPATCHABLEGENERATION	NUMBER(15,5)		Regional Generation Dispatched
DISPATCHABLELOAD	NUMBER(15,5)		Regional Load Dispatched
NETINTERCHANGE	NUMBER(15,5)		Net interconnector Flows
LOWER5MINDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min MW dispatch
LOWER5MINIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min MW imported
LOWER5MINLOCALDISPATCH	NUMBER(15,5)		Lower 5 min local dispatch
LOWER5MINLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min local requirement
LOWER5MINREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min total requirement
LOWER60SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec MW dispatch
LOWER60SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec MW imported
LOWER60SECLOCALDISPATCH	NUMBER(15,5)		Lower 60 sec local dispatch
LOWER60SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec local requirement
LOWER60SECREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec total requirement
LOWER6SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec MW dispatch
LOWER6SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec

			MW imported
LOWER6SECLOCALDISPATCH	NUMBER(15,5)		Lower 6 sec local dispatch
LOWER6SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec local requirement
LOWER6SECREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec total requirement
RAISE5MINDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Total Raise 5 min MW dispatch
RAISE5MINIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min MW imported
RAISE5MINLOCALDISPATCH	NUMBER(15,5)		Raise 5 min local dispatch
RAISE5MINLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min local requirement
RAISE5MINREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min total requirement
RAISE60SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec MW dispatch
RAISE60SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec MW imported
RAISE60SECLOCALDISPATCH	NUMBER(15,5)		Raise 50 sec local dispatch
RAISE60SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec local requirement
RAISE60SECREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec total requirement
RAISE6SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec MW dispatch
RAISE6SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec MW imported
RAISE6SECLOCALDISPATCH	NUMBER(15,5)		Raise 6 sec local dispatch
RAISE6SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec local requirement
RAISE6SECREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec total requirement

AGGREGATEDISPATCHERROR	NUMBER(15,5)		Aggregate dispatch error applied
INITIALSUPPLY	NUMBER(15,5)		Sum of initial generation and import for region
CLEAREDSUPPLY	NUMBER(15,5)		Sum of cleared generation and import for region
LOWERREGIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation MW imported
LOWERREGDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Total Lower Regulation dispatch
LOWERREGLOCALDISPATCH	NUMBER(15,5)		Lower Regulation local dispatch
LOWERREGLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation local requirement
LOWERREGREQ	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation total requirement
RAISEREGIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation MW imported
RAISEREGDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Total Raise Regulation dispatch
RAISEREGLOCALDISPATCH	NUMBER(15,5)		Raise Regulation local dispatch
RAISEREGLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation local requirement
RAISEREGREQ	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation total requirement
RAISE5MINLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min local requirement
RAISEREGLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg local requirement
RAISE60SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 sec local requirement
RAISE6SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 sec local requirement
LOWER5MINLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min local requirement
LOWERREGLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW)

			of Lower Reg local requirement
LOWER60SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 sec local requirement
LOWER6SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 sec local requirement
RAISE5MINVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min requirement
RAISEREGVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg requirement
RAISE60SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 seconds requirement
RAISE6SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 seconds requirement
LOWER5MINVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min requirement
LOWERREGVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg requirement
LOWER60SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 seconds requirement
LOWER6SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 seconds requirement
LASTCHANGED	DATE		Last date and time record changed
TOTALINTERMITTENTGENERATION	NUMBER(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	NUMBER(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-scheduled generation (MW).
UIGF	NUMBER(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SEMISCHEDULE_CLEARED MW	NUMBER(15,5)		Regional aggregated Semi-Schedule generator Cleared MW
SEMISCHEDULE_COMPLIANCE MW	NUMBER(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced
INTERVENTION	Number(2,0)		Flag to indicate if this result set was

			sourced from the pricing run (INTERVENTION=0) or the physical run (INTERVENTION=1). In the event there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0
SS_SOLAR_UIGF	Number(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is solar
SS_WIND_UIGF	Number (15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is wind
SS_SOLAR_CLEAREDMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where the primary fuel source is solar
SS_WIND_CLEAREDMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where the primary fuel source is wind
SS_SOLAR_COMPLIANCEMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced and the primary fuel source is solar
SS_WIND_COMPLIANCEMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced and the primary fuel source is wind
WDR_INITIALMW	NUMBER(15,5)		Regional aggregated MW value at start of interval for Wholesale Demand Response (WDR) units
WDR_AVAILABLE	NUMBER(15,5)		Regional aggregated available MW for Wholesale Demand Response (WDR) units
WDR_DISPATCHED	NUMBER(15,5)		Regional aggregated dispatched MW for Wholesale Demand Response (WDR) units

## 10.4 Table: P5MIN\_UNITSOLUTION

<i>Name</i>	P5MIN_UNITSOLUTION
<i>Comment</i>	<p>The five-minute predispach (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispach 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.</p> <p>P5MIN_UNITSOLUTION shows the Unit results from the capacity evaluations for each period of the study.</p>

### 10.4.1 Description

P5MIN\_UNITSOLUTION data is confidential, so shows own details for participant.

#### Source

P5MIN\_UNITSOLUTION updates every 5 minutes for all units, even zero targets.

#### Volume

Rows per day: 57600

Based on 200 units per Interval

#### Note

A bitwise flag exists for each ancillary service type such that a unit trapped or stranded in one or more service type can be immediately identified. The SPD Formulation document details the logic determining whether a unit is "trapped" or "stranded". The flag is defined as follows:

Flagged Condition	Bit	Description	Field value
FCAS profile active	0	The bid profile for this service has been activated such that the unit is available to be cleared to provide this ancillary service type.	1 or 3
Trapped	1	The unit is enabled to provide this ancillary service type, however the profile for this service type is causing the unit to be trapped in the energy market.	3
Stranded	2	The unit is bid available to provide this ancillary service type, however, the unit is operating in the energy market outside of the profile for this service type and is stranded from providing this service.	4

### 10.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 10.4.3 Primary Key Columns

Name



DUID

INTERVAL\_DATETIME

RUN\_DATETIME

## 10.4.4 Index Columns

Name

LASTCHANGED

## 10.4.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	DATE	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	DATE	X	The unique identifier for the interval within this study
DUID	VARCHAR2(10)	X	Dispatchable unit identifier
CONNECTIONPOINTID	VARCHAR2(12)		Connection point identifier for DUID
TRADETYPE	NUMBER(2,0)		Generator or Load
AGCSTATUS	NUMBER(2,0)		AGC Status from EMS: 1 = on, 0 = off
INITIALMW	NUMBER(15,5)		Initial MW at start of period. For periods subsequent to the first period of a P5MIN run, this value represents the cleared target for the previous period of that P5MIN run.
TOTALCLEARED	NUMBER(15,5)		Target MW for end of period
RAMPDOWNRATE	NUMBER(15,5)		Ramp down rate (lessor of bid or telemetered rate).
RAMPUPRATE	NUMBER(15,5)		Ramp up rate (lessor of bid or telemetered rate).
LOWER5MIN	NUMBER(15,5)		Lower 5 min reserve target
LOWER60SEC	NUMBER(15,5)		Lower 60 sec reserve target
LOWER6SEC	NUMBER(15,5)		Lower 6 sec reserve target

RAISE5MIN	NUMBER(15,5)		Raise 5 min reserve target
RAISE60SEC	NUMBER(15,5)		Raise 60 sec reserve target
RAISE6SEC	NUMBER(15,5)		Raise 6 sec reserve target
LOWERREG	NUMBER(15,5)		Lower Regulation reserve target
RAISEREG	NUMBER(15,5)		Raise Regulation reserve target
AVAILABILITY	NUMBER(15,5)		Energy Availability (MW)
RAISE6SECFLAGS	NUMBER(3,0)		Raise 6sec status flag
RAISE60SECFLAGS	NUMBER(3,0)		Raise 60sec status flag
RAISE5MINFLAGS	NUMBER(3,0)		Raise 5min status flag
RAISEREGFLAGS	NUMBER(3,0)		Raise Reg status flag
LOWER6SECFLAGS	NUMBER(3,0)		Lower 6sec status flag
LOWER60SECFLAGS	NUMBER(3,0)		Lower 60sec status flag
LOWER5MINFLAGS	NUMBER(3,0)		Lower 5min status flag
LOWERREGFLAGS	NUMBER(3,0)		Lower Reg status flag
LASTCHANGED	DATE		Last date and time record changed
SEMIDISPATCHCAP	NUMBER(3,0)		Boolean representation flagging if the Target is Capped
INTERVENTION	Number(2,0)		Flag to indicate if this result set was sourced from the pricing run (INTERVENTION=0) or the physical run(INTERVENTION=1). In the event there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0
DISPATCHMODETIME	NUMBER(4,0)		Minutes for which the unit has been in the current DISPATCHMODE. From NEMDE TRADERSOLUTION element FSTARGETMODETIME attribute.

# 11 Package: PARTICIPANT\_REGISTRATION

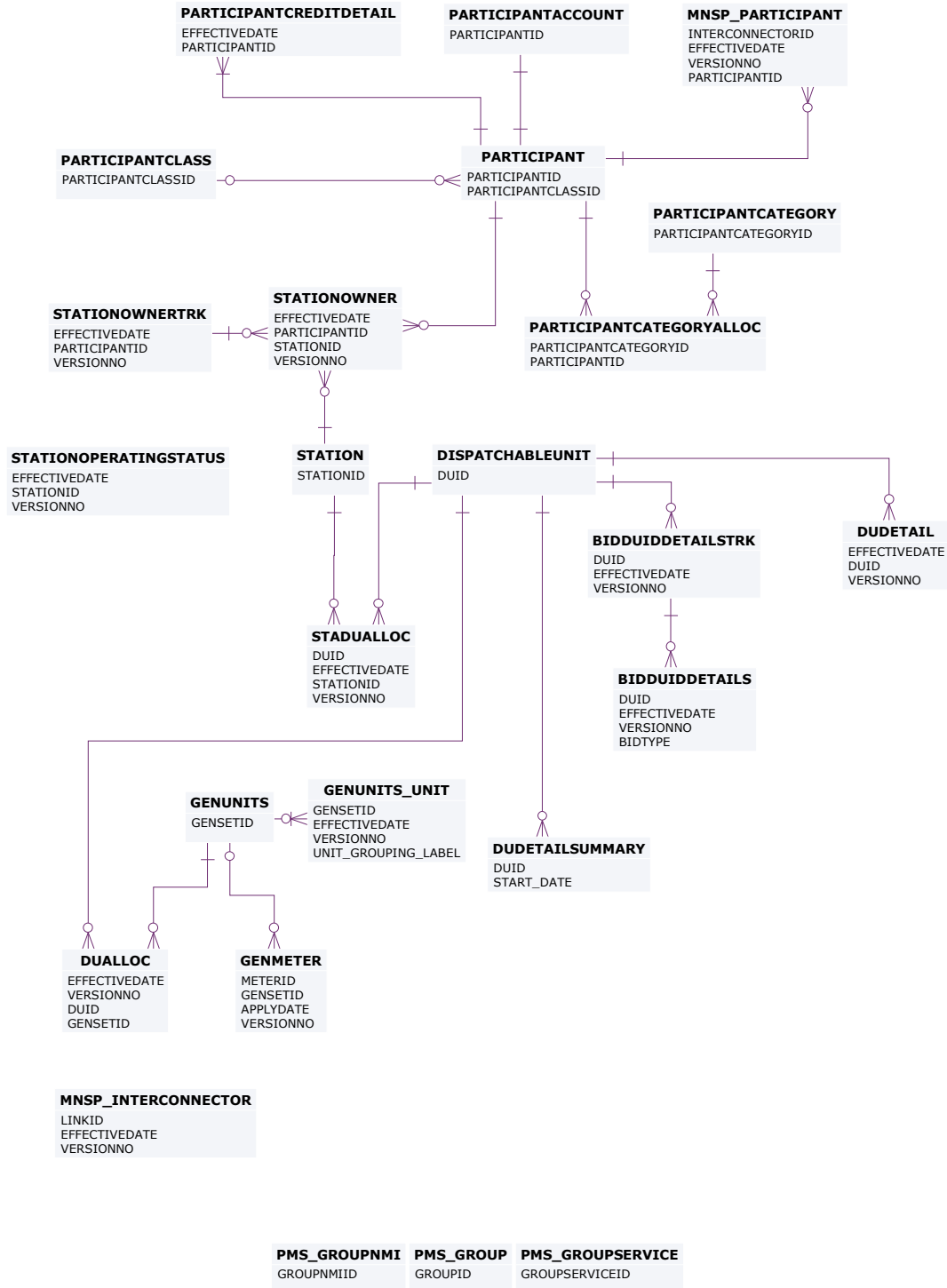
*Name* PARTICIPANT\_REGISTRATION

*Comment* Participant registration data

## 11.1 List of tables

Name	Comment
DUDETAIL	DUDETAIL sets out a records specific details for each unit including start type and whether normally on or off load. Much of this data is information only and is not used in dispatch or settlements.
DUDETAILSUMMARY	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.
GENUNITS	GENUNITS shows Genset details for each physical unit with the relevant station.
GENUNITS_UNIT	Physical units within a Gen Unit Set
PMS_GROUP	Entity table for group
PMS_GROUPNMI	Describe the NMIs that a group uses to provide its service
PMS_GROUPSERVICE	Describe the services a group provides and its relation to a market

## 11.2 Diagram: Entities: Participant Registration



## 11.3 Table: DUDETAIL

<i>Name</i>	DUDETAIL
<i>Comment</i>	DUDETAIL sets out a records specific details for each unit including start type and whether normally on or off load. Much of this data is information only and is not used in dispatch or settlements.

### 11.3.1 Description

DUDETAIL is public data, and is available to all participants.

#### Source

DUDETAIL updates only when registration details change.

#### Note

To find the current set of details for selected dispatchable units, query the participant's local database as follows.

```
Select du.* from dudetail du
where (du.EFFECTIVEDATE, du.VERSIONNO) =
(
select effectivedate, max(versionno)
from dudetail
where EFFECTIVEDATE = (select max(effectivedate)
from dudetail
where EFFECTIVEDATE <= sysdate
and duid = du.duid
and authoriseddate is not null)
and duid = du.duid
and authoriseddate is not null
group by effectivedate
)
and du.duid in ('UNIT1', 'UNIT2')
;
```

The following notes apply to this SQL code:

- This table is specific to dispatch units only.
- If you wish to query details for a different date, substitute a date expression for "sysdate" in the "where EFFECTIVEDATE <= sysdate" clause.
- If you wish to list all the units, remove the line "and du.duid in ('UNIT1', 'UNIT2')"
- The DUDETAIL table does not indicate if a unit is active; this is done through ownership (STADUALLOC) by an active station owned by an active participant (STATIONOWNER)
- If you wish to query Station details refer to STATION, STATIONOWNER and STADUALLOC.
- If you wish to look at connection point loss factors, refer to TRANSMISSIONLOSSFACTOR.

### 11.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 11.3.3 Primary Key Columns

Name  
 DUID  
 EFFECTIVEDATE  
 VERSIONNO

### 11.3.4 Index Columns

Name  
 LASTCHANGED

### 11.3.5 Content

Name	Data Type	Mandatory	Comment
EFFECTIVEDATE	DATE	X	Effective calendar date of record
DUID	VARCHAR2(10)	X	Dispatchable Unit Identifier
VERSIONNO	NUMBER(3,0)	X	version of Dispatchable Unit details for this effective date
CONNECTIONPOINTID	VARCHAR2(10)		Country wide - Unique id of a connection point
VOLTLEVEL	VARCHAR2(10)		Voltage Level
REGISTEREDCAPACITY	NUMBER(6,0)		Registered capacity for normal operations
AGCCAPABILITY	VARCHAR2(1)		AGC Capability flag
DISPATCHTYPE	VARCHAR2(20)		Identifies LOAD or GENERATOR. This will likely expand to more generic models as new technology types are integrated into the NEM

MAXCAPACITY	NUMBER(6,0)		Maximum Capacity as used for bid validation
STARTTYPE	VARCHAR2(20)		Identify unit as Fast or Slow
NORMALLYONFLAG	VARCHAR2(1)		For a dispatchable load indicates that the load is normally on or off.
PHYSICALDETAILSFLAG	VARCHAR2(1)		Indicates that the physical details for this unit are to be recorded
SPINNINGRESERVEFLAG	VARCHAR2(1)		Indicates spinning reserve capability
AUTHORISED BY	VARCHAR2(15)		User authorising record
AUTHORISED DATE	DATE		Date record authorised
LASTCHANGED	DATE		Last date and time record changed
INTERMITTENTFLAG	VARCHAR(1)		Indicate whether a unit is intermittent (e.g. a wind farm)
SemiSchedule_Flag	VARCHAR2(1)		Indicates if the DUID is a Semi-Scheduled Unit
MAXRATEOFCHANGEUP	Number(6,0)		Maximum ramp up rate for Unit (Mw/min)
MAXRATEOFCHANGEDOWN	Number(6,0)		Maximum ramp down rate for Unit (Mw/min)
DISPATCHSUBTYPE	VARCHAR2(20)		Additional information for DISPATCHTYPE. For DISPATCHTYPE = LOAD, subtype value is WDR for wholesale demand response units. For DISPATCHTYPE = LOAD, subtype value is NULL for Scheduled Loads. For DISPATCHTYPE = GENERATOR type, the subtype value is NULL.

## 11.4 Table: DUDETAILSUMMARY

*Name* DUDETAILSUMMARY

*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.

### 11.4.1 Description

DUDETAILSUMMARY is a public table, and is available to all participants.

#### Source

DUDETAILSUMMARY updates only when registration details change.

### 11.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 11.4.3 Primary Key Columns

Name  
 DUID  
 START\_DATE

### 11.4.4 Index Columns

Name  
 LASTCHANGED

### 11.4.5 Content

Name	Data Type	Mandat ory	Comment
DUID	VARCHAR2(10)	X	Dispatchable Unit Identifier



START_DATE	DATE	X	Start date for effective record
END_DATE	DATE	X	End date for effective record
DISPATCHTYPE	VARCHAR2(20)		Identifies LOAD or GENERATOR. This will likely expand to more generic models as new technology types are integrated into the NEM
CONNECTIONPOINTID	VARCHAR2(10)		Country wide - Unique id of a connection point
REGIONID	VARCHAR2(10)		Region identifier that unit is in
STATIONID	VARCHAR2(10)		Station that unit is in
PARTICIPANTID	VARCHAR2(10)		Participant that owns unit during effective record period
LASTCHANGED	DATE		Last date and time record changed
TRANSMISSIONLOSSFACTOR	NUMBER(15,5)		The transmission level loss factor for currently assigned connection point
STARTTYPE	VARCHAR2(20)		Unit start type. At this time restricted to Fast, Slow or Non Dispatched
DISTRIBUTIONLOSSFACTOR	NUMBER(15,5)		The distribution loss factor to the currently assigned connection point
MINIMUM_ENERGY_PRICE	NUMBER(9,2)		Floored Offer/Bid Energy Price adjusted for TLF, DLF and MPF
MAXIMUM_ENERGY_PRICE	NUMBER(9,2)		Capped Offer/Bid Energy Price adjusted for TLF, DLF and VoLL
SCHEDULE_TYPE	VARCHAR2(20)		Scheduled status of the unit: 'SCHEDULED' 'NON-SCHEDULED' 'SEMI-SCHEDULED'
MIN_RAMP_RATE_UP	number(6,0)		MW/Min. Calculated Minimum Ramp Rate Up value accepted for Energy Offers or Bids with explanation
MIN_RAMP_RATE_DOWN	number(6,0)		MW/Min. Calculated Minimum Ramp Rate Down value accepted for Energy Offers or Bids with explanation
MAX_RAMP_RATE_UP	number(6,0)		Maximum ramp up rate for Unit (Mw/min) - from DUdetail table

MAX_RAMP_RATE_DOWN	number(6,0)		Maximum ramp down rate for Unit (Mw/min) - from DUdetail table
IS_AGGREGATED	NUMBER(1,0)		Whether the DUID is classified as an "Aggregated Unit" under the rules. This impacts the Minimum Ramp Rate calculation
DISPATCHSUBTYPE	VARCHAR2(20)		Additional information for DISPATCHTYPE. For DISPATCHTYPE = LOAD, subtype value is WDR for wholesale demand response units For DISPATCHTYPE = LOAD, subtype value is NULL for Scheduled Loads. For DISPATCHTYPE = GENERATOR type, subtype value is NULL.

## 11.5 Table: GENUNITS

<i>Name</i>	GENUNITS
<i>Comment</i>	GENUNITS shows Genset details for each physical unit with the relevant station.

### 11.5.1 Description

GENUNITS is a public table, and is available to all participants.

#### Source

GENUNITS updates whenever plant details change.

### 11.5.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 11.5.3 Primary Key Columns

Name
GENSETID

### 11.5.4 Index Columns

Name
LASTCHANGED

### 11.5.5 Content

Name	Data Type	Mandatory	Comment
GENSETID	VARCHAR2(20)	X	Physical Unit identifier
STATIONID	VARCHAR2(10)		Station Identifier
SETLOSSFACTOR	NUMBER(16,6)		Not used

CDINDICATOR	VARCHAR2(10)		Centrally dispatched Indicator
AGCFLAG	VARCHAR2(2)		AGC Available flag
SPINNINGFLAG	VARCHAR2(2)		Not used
VOLTLEVEL	NUMBER(6,0)		Voltage level
REGISTEREDCAPACITY	NUMBER(6,0)		Registered capacity
DISPATCHTYPE	VARCHAR2(20)		Identifies LOAD or GENERATOR. This will likely expand to more generic models as new technology types are integrated into the NEM.
STARTTYPE	VARCHAR2(20)		Fast / Slow / Not Dispatched
MKTGENERATORIND	VARCHAR2(10)		Market Generator Indicator Flag
NORMALSTATUS	VARCHAR2(10)		On / Off for load
MAXCAPACITY	NUMBER(6,0)		Maximum capacity
GENSETTYPE	VARCHAR2(15)		Genset type
GENSETNAME	VARCHAR2(40)		Genset name
LASTCHANGED	DATE		Last date and time record changed
CO2E_EMISSIONS_FACTOR	NUMBER(18,8)		The emissions factor for the generating unit, as calculated by Settlements staff members
CO2E_ENERGY_SOURCE	VARCHAR2(100)		The energy source for the generating unit, as used in the calculation of the CO2-e emissions factor. Distinct from the Energy Source for a generating unit published as part of the Registration Master List
CO2E_DATA_SOURCE	VARCHAR2(20)		An indicator as to the source of the emission factor used in the calculation of the index. The applicable values for this field would be NTNDP which indicates the emission factor is quoted from the National Transmission Network Development Plan or Estimated to indicate the emission factor has been calculated using an internal AEMO procedure based upon the Department of Climate Change and Energy Efficiency NGA factors

## 11.6 Table: GENUNITS\_UNIT

<i>Name</i>	GENUNITS_UNIT
<i>Comment</i>	Physical units within a Gen Unit Set

### 11.6.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 11.6.2 Primary Key Columns

Name  
EFFECTIVEDATE  
GENSETID  
UNIT\_GROUPING\_LABEL  
VERSIONNO

### 11.6.3 Index Columns

Name  
GENSETID  
EFFECTIVEDATE  
VERSIONNO  
UNIT\_GROUPING\_LABEL

### 11.6.4 Content

Name	Data Type	Mandatory	Comment
GENSETID	VARCHAR2(20)	X	System wide unique Generating Set ID
EFFECTIVEDATE	DATE	X	Effective Date of this detail record

VERSIONNO	NUMBER(6,0)	X	Version with respect to the effective date
UNIT_GROUPING_LABEL	VARCHAR2(20)	X	Label of Physical Units within the station
UNIT_COUNT	NUMBER(10,0)		Number of units in this Gen Unit grouping
UNIT_SIZE	NUMBER(8,3)		Nameplate Capacity for each unit in this grouping
UNIT_MAX_SIZE	NUMBER(8,3)		Maximum Capacity for each unit in this grouping
AGGREGATION_FLAG	NUMBER(1,0)		Indicator that Unit is part of an Aggregated Unit (at the DUID level)
LASTCHANGED	DATE		Date/Time when record was changed

## 11.7 Table: PMS\_GROUP

<i>Name</i>	PMS_GROUP
<i>Comment</i>	Entity table for group

### 11.7.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 11.7.2 Primary Key Columns

Name
GROUPID

### 11.7.3 Content

Name	Data Type	Mandatory	Comment
GROUPID	NUMBER(20,0)	X	Abstract identifier for the group
CREATEDDATE	TIMESTAMP(3)		Date record was created
LASTCHANGED	TIMESTAMP(3)		Date record was last changed

## 11.8 Table: PMS\_GROUPNMI

Name PMS\_GROUPNMI

Comment Describe the NMIs that a group uses to provide its service

### 11.8.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 11.8.2 Primary Key Columns

Name  
GROUPNMIID

### 11.8.3 Index Columns

Name  
GROUPID  
NMI

### 11.8.4 Content

Name	Data Type	Mandatory	Comment
GROUPNMIID	NUMBER(20,0)	X	Record Identifier of the NMI within a Group. When data is updated, existing record identifier is terminated, and new record identifier(s) are allocated.
GROUPID	NUMBER(20,0)		Group id of the Group which the NMI belongs in.
VERSIONFROM	TIMESTAMP(3)		Date for which this version is effective from
VERSIONTO	TIMESTAMP(3)		Date for which this version is effective to. Will be set to max date 9999/12/31 23:59:59.999 until this version ends or a



			change to the version is required
STARTDATE	TIMESTAMP(3)		Effective date of when this service started operation
ENDDATE	TIMESTAMP(3)		Effective date of when this service ended operation. Will be set to max date 9999/12/31 23:59:59.999 until its service ends or a change to the service is required.
NMI	VARCHAR2(20)		National Meter Identifier linked to the group.
SITENAME	VARCHAR2(50)		Site name
NERRGROUPPREMISES	NUMBER(1,0)		Specifies whether NMI is in a NERR aggregated premises (TRUE = 1/FALSE = 0)
BASELINEMETHODOLOGYID	VARCHAR2(50)		Baseline methodology to be used for the PoL and Baseline assessment of the NMI
MRC	NUMBER(10,3)		Maximum responsive component for the NMI
MRCREASON	VARCHAR2(500)		Reason for the MRC
RETAILCUSTOMER	VARCHAR2(50)		Retail customer of the NMI
SUSPENDED	NUMBER(1,0)		Indicates whether the NMI has been suspended from use. (TRUE = 1/FALSE = 0)
UNAVAILABLE	NUMBER(1,0)		Indicates whether the NMI is unavailable for use. (TRUE = 1/FALSE = 0)
APPROVEDDATE	TIMESTAMP(3)		Date which this record was approved
LASTCHANGED	TIMESTAMP(3)		Date time which record was last changed

## 11.9 Table: PMS\_GROUPSERVICE

*Name* PMS\_GROUPSERVICE

*Comment* Describe the services a group provides and its relation to a market

### 11.9.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 11.9.2 Primary Key Columns

Name

GROUPSERVICEID

### 11.9.3 Index Columns

Name

ENTITYID

GROUPID

### 11.9.4 Content

Name	Data Type	Mandatory	Comment
GROUPSERVICEID	NUMBER(20,0)	X	Record identifier of the Service allocated to the Group. When data is updated, existing record identifier is terminated, and new record identifier(s) are allocated.
GROUPID	NUMBER(20,0)		Group id of the Group where the Service is attached to.
VERSIONFROM	TIMESTAMP(3)		Date for which this version is effective from.
VERSIONTO	TIMESTAMP(3)		Date for which this version is effective to. Will be set to max date 9999/12/31 23:59:59.999 until this version ends or a

			change to the version is required.
STARTDATE	TIMESTAMP(3)		Effective date of when this service started operation
ENDDATE	TIMESTAMP(3)		Effective date of when this service ended operation. Will be set to max date 9999/12/31 23:59:59.999 until its service ends or a change to the service is required.
MARKET	VARCHAR2(50)		Market that this group is operating its service in. Will only be NEM initially.
SERVICETYPE	VARCHAR2(50)		Service that this group is operating. Will be only be ENERGY initially
ENTITYTYPE	VARCHAR2(50)		Describes the entity that is operating. Will only be WDRU initially.
ENTITYID	VARCHAR2(50)		Describe the entity ID in the market that it will be operating in. Will only contain the DUID of the group initially.
MRC	NUMBER(10,3)		Maximum responsive component for the service offering
MRCREASON	VARCHAR2(500)		Reason for the MRC.
MAXIMUMRAMPRATEPERMIN	NUMBER(10,0)		Maximum ramp rate MW per minute of the service.
REGION	VARCHAR2(20)		Region the group is operating this service in One of NSW1, QLD1, VIC1, SA1 or TAS1
APPROVEDDATE	TIMESTAMP(3)		Date which this record was approved
LASTCHANGED	TIMESTAMP(3)		Date time which record was last changed

## 12 Package: PRE\_DISPATCH

<i>Name</i>	PRE_DISPATCH
<i>Comment</i>	Results from a published Predispatch Run

### Storage options

There are 2 ways to define the Pre-dispatch table primary keys (PKs) to define which data is loaded to the database and which data is retained:

#### Option 1 (default)

Overwrite older records when they are succeeded by later versions for the same entity and period. This is the Data Model default and results in the consumption of far less storage. Data Model updates issued by AEMO target this configuration so participants implementing option 2a or 2b must maintain their changes when AEMO releases a new Data Model version.

PredispatchLoad: DateTime, DUID

PredispatchInterconnectorRes: DateTime, InterconnectorID,

PredispatchPrice: DateTime, RegionID

PredispatchPriceSensitivities: DateTime, RegionID

PredispatchInterSensitivities: InterconnectorID, DateTime

PredispatchRegionsum: DateTime, RegionID

#### Option 2a

Retain only the Pricing records for tables relating to Price data and Physical records for tables relating to Physical data (e.g. targets). Approximately 50 times more storage volumes than option 1.

PredispatchLoad: PredispatchSeqNo, DateTime, DUID

PredispatchInterconnectorRes: PredispatchSeqNo, DateTime, InterconnectorID,

PredispatchPrice: PredispatchSeqNo, DateTime, RegionID

PredispatchPriceSensitivities: PredispatchSeqNo, DateTime, RegionID

PredispatchInterSensitivities: PredispatchSeqNo, DateTime, InterconnectorID

PredispatchRegionsum: PredispatchSeqNo, DateTime, RegionID

#### Option 2b

Retain both Physical and Pricing data for Intervention runs. If Intervention

cases are stored in entirety, you must select the data carefully. The logic is the same as for Dispatch, i.e. Intervention Pricing is always where Intervention = 0 and Physical data is where Intervention = PredispatchCaseSolution.Intervention for the same PredispatchSeqNo.

Doubles the storage of option 2a but ONLY for Intervened cases.

PredispatchLoad: PredispatchSeqNo, Intervention, DateTime, DUID

PredispatchInterconnectorRes: PredispatchSeqNo, Intervention, DateTime, InterconnectorID,

PredispatchPrice: PredispatchSeqNo, Intervention, DateTime, RegionID

PredispatchPriceSensitivities: PredispatchSeqNo, Intervention, DateTime, RegionID

PredispatchInterSensitivities: PredispatchSeqNo, Intervention, DateTime, InterconnectorID

PredispatchRegionsum: PredispatchSeqNo, Intervention, DateTime, RegionID

#### Notes:

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

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

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

The TRANSACTION\_TYPE default in the PDR\_REPORT\_RECORDS management tables for PREDISPATCH\* tables is UPDATE-INSERT. You can modify this to INSERT for Option 2b, as the attempt to first perform an update becomes redundant. This can improve load performance.

## 12.1 List of tables

Name	Comment
PREDISPATCHREGIONSUM	PREDISPATCHREGIONSUM sets out the overall regional Pre-Dispatch results for base case details (excluding price).



## 12.2 Diagram: Entities: Predispatch

### **PREDISPATCHCASESOLUTION**

PREDISPATCHSEQNO  
RUNNO

### **PREDISPATCHINTERCONNECTORRES**

INTERCONNECTORID  
DATETIME

### **PREDISPATCHLOAD**

DUID  
DATETIME

### **PREDISPATCHCONSTRAINT**

CONSTRAINTID  
DATETIME

### **PREDISPATCHPRICESENSITIVITIES**

REGIONID  
DATETIME

### **PREDISPATCHREGIONSUM**

REGIONID  
DATETIME

### **PREDISPATCHOFFERTRK**

PREDISPATCHSEQNO  
DUID  
BIDTYPE  
PERIODID

### **PREDISPATCHPRICE**

REGIONID  
DATETIME

### **PREDISPATCH\_MNSPBIDTRK**

PREDISPATCHSEQNO  
LINKID  
PERIODID

### **PREDISPATCHSCENARIODEMAND**

EFFECTIVEDATE  
VERSIONNO  
SCENARIO  
REGIONID

### **PREDISPATCH\_FCAS\_REQ**

GENCONID  
REGIONID  
BIDTYPE  
DATETIME

### **PREDISPATCHINTERSENSITIVITIES**

INTERCONNECTORID  
DATETIME

### **PREDISPATCHSCENARIODEMANDTRK**

EFFECTIVEDATE  
VERSIONNO

### **PREDISPATCHBLOCKEDCONSTRAINT**

PREDISPATCHSEQNO  
CONSTRAINTID

### **PREDISPATCH\_LOCAL\_PRICE**

DATETIME  
DUID

## 12.3 Table: PREDISPATCHREGIONSUM

<i>Name</i>	PREDISPATCHREGIONSUM
<i>Comment</i>	PREDISPATCHREGIONSUM sets out the overall regional Pre-Dispatch results for base case details (excluding price).

### 12.3.1 Description

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)

#### Source

PREDISPATCHREGIONSUM updates every thirty minutes.

#### Note

\*\*\* "Actual FCAS availability" is determined in a post-processing step based on the energy target (TotalCleared) and bid FCAS trapezium for that interval. However, if the unit is outside the bid FCAS trapezium at the start of the interval (InitialMW), the "Actual FCAS availability" is set to zero. For regulation services, the trapezium is the most restrictive of the bid/SCADA trapezium values.

From 16 February 2006, the old reserve values are no longer populated (i.e. are null), being LORSurplus and LRCSurplus. For more details on the changes to Reporting of Reserve Condition Data, refer to AEMO Communication 2042. For the best available indicator of reserve condition in each of the regions of the NEM for each trading interval, refer to the latest run of the Pre-Dispatch PASA (see table PDPASA\_REGIONSOLUTION).

### 12.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 12.3.3 Primary Key Columns

Name  
DATETIME  
REGIONID



### 12.3.4 Index Columns

Name

LASTCHANGED

### 12.3.5 Index Columns

Name

PREDISPATCHSEQNO

### 12.3.6 Content

Name	Data Type	Mandatory	Comment
PREDISPATCHSEQNO	VARCHAR2(20)		Unique identifier of predispach run in the form YYYYMMDDPP with 01 at 04:30
RUNNO	NUMBER(3,0)		LP Solver Pre-Dispatch run no, typically 1. It increments if the case is re-run.
REGIONID	VARCHAR2(10)	X	Unique region identifier
PERIODID	VARCHAR2(20)		PERIODID is just a period count, starting from 1 for each Pre-Dispatch run. Use DATETIME to determine half hour period.
INTERVENTION	NUMBER(2,0)		Flag to indicate if this result set was sourced from the pricing run (INTERVENTION=0) or the physical run (INTERVENTION=1). In the event that there is not intervention in the market, both pricing and physical runs correspond to INTERVENTION=0
TOTALDEMAND	NUMBER(15,5)		Total demand in MW for period (less normally on loads)
AVAILABLEGENERATION	NUMBER(15,5)		Aggregate generation bid available in region
AVAILABLELOAD	NUMBER(15,5)		Aggregate load bid available in region
DEMANDFORECAST	NUMBER(15,5)		Delta MW value only
DISPATCHABLEGENERATION	NUMBER(15,5)		Generation dispatched in period

DISPATCHABLELOAD	NUMBER(15,5)		Load dispatched in period
NETINTERCHANGE	NUMBER(15,5)		Net interconnector flow from the regional reference node
EXCESSGENERATION	NUMBER(15,5)		Excess generation in period / Deficit generation if VOLL
LOWER5MINDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min MW dispatch
LOWER5MINIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min MW imported
LOWER5MINLOCALDISPATCH	NUMBER(15,5)		Lower 5 min local dispatch
LOWER5MINLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of lower 5 min
LOWER5MINLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min local requirement
LOWER5MINPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of lower 5 min
LOWER5MINREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 5 min total requirement
LOWER5MINSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of lower 5 min
LOWER60SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec MW dispatch
LOWER60SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec MW imported
LOWER60SECLOCALDISPATCH	NUMBER(15,5)		Lower 60 sec local dispatch
LOWER60SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of lower 60 sec
LOWER60SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec local requirement
LOWER60SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of lower 60 sec
LOWER60SECREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 60 sec total requirement
LOWER60SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of

			lower 60 sec
LOWER6SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec MW dispatch
LOWER6SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec MW imported
LOWER6SECLOCALDISPATCH	NUMBER(15,5)		Lower 6 sec local dispatch
LOWER6SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of lower 6 sec
LOWER6SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec local requirement
LOWER6SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of lower 6 sec
LOWER6SECREQ	NUMBER(15,5)		Not used since Dec 2003. Lower 6 sec total requirement
LOWER6SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of lower 6 sec
RAISE5MINDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min MW dispatch
RAISE5MINIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min MW imported
RAISE5MINLOCALDISPATCH	NUMBER(15,5)		Raise 5 min local dispatch
RAISE5MINLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of raise 5 min
RAISE5MINLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min local requirement
RAISE5MINPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of raise 5 min
RAISE5MINREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 5 min total requirement
RAISE5MINSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of raise 5 min
RAISE60SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec MW dispatch
RAISE60SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec MW imported

RAISE60SECLOCALDISPATCH	NUMBER(15,5)		Raise 60 sec local dispatch
RAISE60SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of raise 60 sec
RAISE60SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec local requirement
RAISE60SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of raise 60 sec
RAISE60SECREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 60 sec total requirement
RAISE60SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of raise 60 sec
RAISE6SECDISPATCH	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec MW dispatch
RAISE6SECIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec MW imported
RAISE6SECLOCALDISPATCH	NUMBER(15,5)		Raise 6 sec local dispatch
RAISE6SECLOCALPRICE	NUMBER(15,5)		Not used since Dec 2003. Local price of raise 6 sec
RAISE6SECLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec local requirement
RAISE6SECPRICE	NUMBER(15,5)		Not used since Dec 2003. Regional price of raise 6 sec
RAISE6SECREQ	NUMBER(15,5)		Not used since Dec 2003. Raise 6 sec total requirement
RAISE6SECSUPPLYPRICE	NUMBER(15,5)		Not used since Dec 2003. Supply price of raise 6 sec
LASTCHANGED	DATE		Period date and time
DATETIME	DATE	X	Period expressed as Date/Time
INITIALSUPPLY	NUMBER(15,5)		Sum of initial generation and import for region
CLEAREDSUPPLY	NUMBER(15,5)		Sum of cleared generation and import for region
LOWERREGIMPORT	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation MW imported

LOWERREGLOCALDISPATCH	NUMBER(15,5)		Lower Regulation local dispatch
LOWERREGLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation local requirement
LOWERREGREQ	NUMBER(15,5)		Not used since Dec 2003. Lower Regulation total requirement
RAISEREGIMPORT	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation MW imported
RAISEREGLOCALDISPATCH	NUMBER(15,5)		Raise Regulation local dispatch
RAISEREGLOCALREQ	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation local requirement
RAISEREGREQ	NUMBER(15,5)		Not used since Dec 2003. Raise Regulation total requirement
RAISE5MINLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min local requirement
RAISEREGLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg local requirement
RAISE60SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 sec local requirement
RAISE6SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 sec local requirement
LOWER5MINLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min local requirement
LOWERREGLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg local requirement
LOWER60SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 sec local requirement
LOWER6SECLOCALVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 sec local requirement
RAISE5MINVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min requirement
RAISEREGVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg requirement
RAISE60SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 seconds requirement
RAISE6SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW)

			of Raise 6 seconds requirement
LOWER5MINVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min requirement
LOWERREGVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg requirement
LOWER60SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 seconds requirement
LOWER6SECVIOLATION	NUMBER(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 seconds requirement
RAISE6SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 6sec availability
RAISE60SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 60sec availability
RAISE5MINACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise 5min availability
RAISEREGACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted raise reg availability
LOWER6SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 6sec availability
LOWER60SECACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 60sec availability
LOWER5MINACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower 5min availability
LOWERREGACTUALAVAILABILITY	NUMBER(16,6)		trapezium adjusted lower reg availability
DECAVAILABILITY	NUMBER(16,6)		generation availability taking into account daily energy constraints
LORSURPLUS	NUMBER(16,6)		Not used after Feb 2006. Total short term generation capacity reserve used in assessing lack of reserve condition
LRCSURPLUS	NUMBER(16,6)		Not used after Feb 2006. Total short term generation capacity reserve above the stated low reserve condition requirement
TOTALINTERMITTENTGENERATION	NUMBER(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	NUMBER(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region

			boundary) and allowances made for non-scheduled generation (MW).
UIGF	NUMBER(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SEMISCHEDULE_CLEARED MW	NUMBER(15,5)		Regional aggregated Semi-Schedule generator Cleared MW
SEMISCHEDULE_COMPLIANCE MW	NUMBER(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced
SS_SOLAR_UIGF	Number(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is solar
SS_WIND_UIGF	Number (15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is wind
SS_SOLAR_CLEAREDMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where the primary fuel source is solar
SS_WIND_CLEAREDMW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where the primary fuel source is wind
SS_SOLAR_COMPLIANCE MW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced and the primary fuel source is solar
SS_WIND_COMPLIANCE MW	Number(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced and the primary fuel source is wind
WDR_INITIAL MW	NUMBER(15,5)		Regional aggregated MW value at start of interval for Wholesale Demand Response (WDR) units
WDR_AVAILABLE	NUMBER(15,5)		Regional aggregated available MW for Wholesale Demand Response (WDR) units
WDR_DISPATCHED	NUMBER(15,5)		Regional aggregated dispatched MW for Wholesale Demand Response (WDR) units

## 13 Package: SETTLEMENT\_CONFIG

*Name* SETTLEMENT\_CONFIG

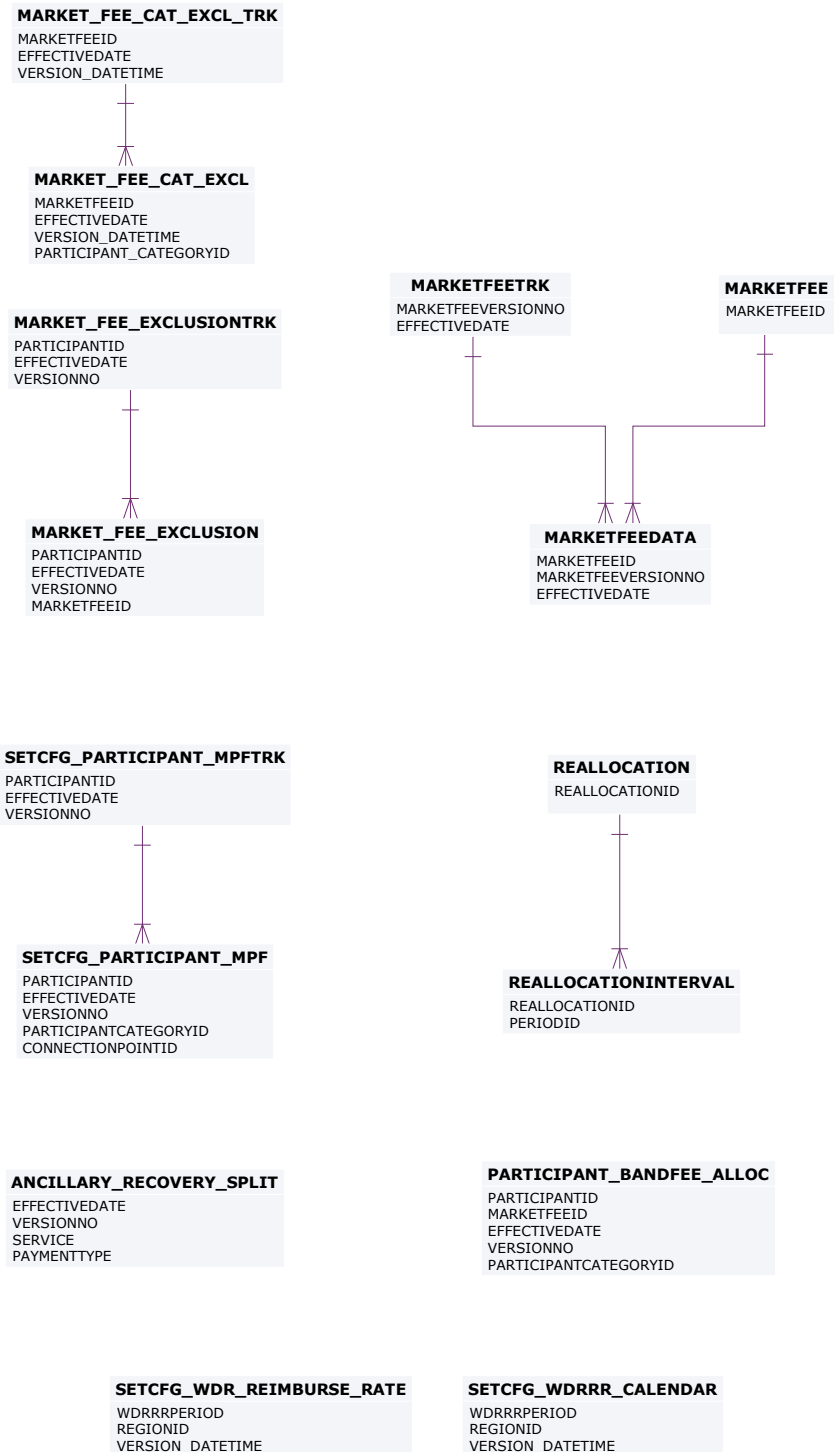
*Comment* Configuration and input data for the Settlements Process

### 13.1 List of tables

Name	Comment
SETCFG_WDR_REIMBURSE_RATE	Settlements WDR transactions
SETCFG_WDRRR_CALENDAR	Wholesale Demand Response Reimbursement Rate Calendar



## 13.2 Diagram: Entities: Settlement Config



### 13.3 Table: SETCFG\_WDR\_REIMBURSE\_RATE

Name SETCFG\_WDR\_REIMBURSE\_RATE  
 Comment Settlements WDR transactions

#### 13.3.1 Notes

Name Comment Value  
 Visibility Data in this table is: Public

#### 13.3.2 Primary Key Columns

Name  
 REGIONID  
 VERSION\_DATETIME  
 WDRRRPERIOD

#### 13.3.3 Content

Name	Data Type	Mandatory	Comment
WDRRRPERIOD	VARCHAR2(20)	X	Unique identifier for the period to which the WDRRR applies. For quarter-based periods, this will be equal to YYYY[Q]NN, e.g. 2020Q3 for 2020 Quarter 3.
REGIONID	VARCHAR2(20)	X	Unique identifier for the region
VERSION_DATETIME	TIMESTAMP(3)	X	The Version Date time of the latest changes.
WDRRR	NUMBER(18,8)		WDRRR value for the period and region (\$/MWh)
ISFIRM	NUMBER(3,0)		A flag to indicate that the WDRRR value is FIRM for the period and region, i.e. it is based on a complete set of firm prices from dispatch. Possible Values are 1 and 0

LASTCHANGED	TIMESTAMP(3)		Last changed date for the record
-------------	--------------	--	----------------------------------

## 13.4 Table: SETCFG\_WDRRR\_CALENDAR

Name SETCFG\_WDRRR\_CALENDAR

Comment Wholesale Demand Response Reimbursement Rate Calendar

### 13.4.1 Notes

Name Comment Value

Visibility Data in this table is: Public

### 13.4.2 Primary Key Columns

Name

REGIONID

VERSION\_DATETIME

WDRRRPERIOD

### 13.4.3 Content

Name	Data Type	Mandatory	Comment
WDRRRPERIOD	VARCHAR2(20)	X	Unique identifier for the period to which the WDRRR applies. For quarter-based periods, this will be equal to YYYY[Q]NN, for example,2020Q3 for 2020 Quarter 3.
REGIONID	VARCHAR2(20)	X	Unique Identifier for the region id
VERSION_DATETIME	TIMESTAMP(3)	X	The Version Date time of the latest changes.
STARTDATE	DATE		Start Date of Period (Inclusive).
ENDDATE	DATE		End Date of Period (Inclusive).
LASTCHANGED	TIMESTAMP(3)		Last changed date for the record.

## 14 Package: SETTLEMENT\_DATA

*Name* SETTLEMENT\_DATA

*Comment* Results from a published Settlements Run. The settlement data and billing run data are updated daily between 6am and 8am 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.

### 14.1 List of tables

Name	Comment
SET_FCAS_REGULATION_TRK	SET_FCAS_REGULATION_TRK shows FCAS Regulation Service Constraint tracking for Regional FCAS Regulation recovery
SET_RECOVERY_ENERGY	Settlements substitution recovery energy used
SET_SUBST_RUN_VERSION	Settlements substitution demand run version numbers
SET_SUBSTITUTE_DEMAND	Settlements substitution demand for Zero Demand figures
SET_WDR_RECON_DETAIL	Settlements WDR reconciliation details
SET_WDR_TRANSACT	Settlements WDR transactions summary

# 14.2 Diagram: Entities: Settlement Data



The daily settlement runs can be linked to the billing runs using BILLINGDAYTRK

Generally DAYTRACK should be regarded as the parent table, having one row per settlement run. The linking key is Settlement Date and versionno or runno or expostrunno

## 14.3 Table: SET\_FCAS\_REGULATION\_TRK

<i>Name</i>	SET_FCAS_REGULATION_TRK
<i>Comment</i>	SET_FCAS_REGULATION_TRK shows FCAS Regulation Service Constraint tracking for Regional FCAS Regulation recovery

### 14.3.1 Description

SET\_FCAS\_REGULATION\_TRK contains public data and is available to all participants.

#### **Volume**

Approximately 350,000 per week.

### 14.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 14.3.3 Primary Key Columns

Name  
 CONSTRAINTID  
 INTERVAL\_DATETIME  
 SETTLEMENTDATE  
 VERSIONNO

### 14.3.4 Index Columns

Name  
 LASTCHANGED

### 14.3.5 Content

Name	Data Type	Mandatory	Comment

SETTLEMENTDATE	DATE	X	Settlement Date
VERSIONNO	NUMBER(3,0)	X	Settlement Run No
INTERVAL_DATETIME	DATE	X	Dispatch Interval Date Time
CONSTRAINTID	VARCHAR2(20)	X	Generic Constraint ID
CMPF	NUMBER(18,8)		Constraint Market Participant Factor
CRMPF	NUMBER(18,8)		Constraint Residual Market Participant Factor
RECOVERY_FACTOR_CMPF	NUMBER(18,8)		Recovery factor for CMPF based recovery
RECOVERY_FACTOR_CRMPF	NUMBER(18,8)		Recovery factor for CRMPF based recovery
LASTCHANGED	DATE		Last date and time record changed
USESUBSTITUTEDEMAND	NUMBER(1,0)		Flag to indication that substitute demand was used to recover this requirement
REQUIREMENTDEMAND	NUMBER(18,8)		the aggregate customer demand value used to recover the cost of this requirement



## 14.4 Table: SET\_RECOVERY\_ENERGY

*Name* SET\_RECOVERY\_ENERGY  
*Comment* Settlements substitution recovery energy used

### 14.4.1 Notes

*Name*                      *Comment*                      *Value*  
 Visibility                  Data in this table is:                  Private

### 14.4.2 Primary Key Columns

*Name*  
 PARTICIPANTID  
 PERIODID  
 REGIONID  
 SETTLEMENTDATE  
 SETTLEMENTRUNNO

### 14.4.3 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Settlement date
SETTLEMENTRUNNO	NUMBER(3,0)	X	Settlement run number
PARTICIPANTID	VARCHAR2(20)	X	Unique identifier for the participant
REGIONID	VARCHAR2(20)	X	Unique Identifier for the Region to which the TNI belongs on this settlement date
PERIODID	NUMBER(3,0)	X	Trading interval identifier, with Period 1 being the first TI for the calendar day, i.e interval ending 00:05 for 5MS or 00:30 for 30MS.
CUSTOMERENERGYACTUAL	NUMBER(18,8)		Actual Customer Demand

CUSTOMERENERGYMPFEXACTUAL	NUMBER(18,8)		Actual Customer Demand excluding TNIs that have a causer pays MPF
CUSTOMERENERGYSUBSTITUTE	NUMBER(18,8)		Substitute Customer Demand
CUSTOMERENERGYMPFEXSUBSTITUTE	NUMBER(18,8)		Substitute Customer Demand excluding TNIs that have a causer pays MPF
GENERATORENERGYACTUAL	NUMBER(18,8)		Actual Generator Output
REGIONCUSTENERGYACTUAL	NUMBER(18,8)		Region Total of Actual Customer Demand
REGIONCUSTENERGYMPFEXACTUAL	NUMBER(18,8)		Region Total of Actual Customer Demand excluding TNIs that have a causer pays MPF.
REGIONCUSTENERGYSUBST	NUMBER(18,8)		Region Total of Substitute Customer Demand
REGIONCUSTENERGYMPFEXSUBST	NUMBER(18,8)		Region total of Substitute Customer Demand excluding TNIs that have a causer pays MPF.
REGIONGENENERGYACTUAL	NUMBER(18,8)		Region Total of Actual Generator Output

## 14.5 Table: SET\_SUBST\_RUN\_VERSION

Name SET\_SUBST\_RUN\_VERSION

Comment Settlements substitution demand run version numbers

### 14.5.1 Notes

Name Comment Value

Visibility Data in this table is: Public

### 14.5.2 Primary Key Columns

Name

REFERENCESETTLEMENTDATE

REFERENCESETTLEMENTRUNNO

SETTLEMENTDATE

SETTLEMENTRUNNO

### 14.5.3 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Settlement date
SETTLEMENTRUNNO	NUMBER(3,0)	X	Settlement run number
REFERENCESETTLEMENTDATE	DATE	X	The settlement date of a settlement run included in the reference period
REFERENCESETTLEMENTRUNNO	NUMBER(3,0)	X	The settlement run number matching the settlement date for a settlement run included in the reference period

## 14.6 Table: SET\_SUBSTITUTE\_DEMAND

Name SET\_SUBSTITUTE\_DEMAND

Comment Settlements substitution demand for Zero Demand figures

### 14.6.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 14.6.2 Primary Key Columns

Name

PARTICIPANTID

SETTLEMENTDATE

SETTLEMENTRUNNO

TNI

### 14.6.3 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Settlement date
SETTLEMENTRUNNO	NUMBER(3,0)	X	Settlement run number
TNI	VARCHAR2(20)	X	Unique identifier for the connection point
PARTICIPANTID	VARCHAR2(20)	X	Unique identifier for the participant
REGIONID	VARCHAR2(20)		Unique identifier for the region to which the TNI belongs to on this settlement date
SUBSTITUTEDEMAND	NUMBER(18,8)		Substitute metered quantity for non-energy recovery in MWh for the TNI and participant in the trading interval. A negative value indicates net consumption and a positive value indicates net generation



## 14.7 Table: SET\_WDR\_RECON\_DETAIL

*Name* SET\_WDR\_RECON\_DETAIL  
*Comment* Settlements WDR reconciliation details

### 14.7.1 Notes

*Name*                      *Comment*                      *Value*  
 Visibility                  Data in this table is:                  Private

### 14.7.2 Primary Key Columns

*Name*  
 NMI  
 PERIODID  
 SETTLEMENTDATE  
 SETTLEMENTRUNNO

### 14.7.3 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Settlement date
SETTLEMENTRUNNO	NUMBER(3,0)	X	Settlement run number
NMI	VARCHAR2(20)	X	Unique identifier for the meter to which the metering records applies
TNI	VARCHAR2(20)		Unique identifier for the transmission node to which this meter belongs on the settlement date
REGIONID	VARCHAR2(20)		Unique identifier for the region to which the TNI belongs on the settlement date
FRMP	VARCHAR2(20)		Unique identifier for the participant acting as the FRMP for this NMI on the settlement date

DRSP	VARCHAR2(20)		Unique identifier for the participant acting as the DRSP for this NMI on the settlement date
PERIODID	NUMBER(3,0)	X	Trading interval identifier with Period 1 being the first TI for the calendar day, that is the interval ending 00:05
WDRSQ_UNCAPPED	NUMBER(18,8)		WDR settlement quantity before any capping or flooring (MWh)
WDRSQ_CAPPED	NUMBER(18,8)		WDR settlement quantity after capping or flooring (MWh)
MRC	NUMBER(18,8)		Maximum responsive component for the NMI (MW)
MRCSQ	NUMBER(18,8)		Maximum responsive component settlement quantity for the NMI (MWh)
WDRRR	NUMBER(18,8)		WDR reimbursement rate for the region (\$/MWh)
RRP	NUMBER(18,8)		Regional reference price for the region in the settlement interval (\$/MWh)
TLF	NUMBER(18,8)		Transmission loss factor for the wholesale connection point associated with the NMI
ME_DLFADJUSTED	NUMBER(18,8)		Metered quantity in MWh for the NMI trading interval. A negative value indicates net consumption and a positive value indicates net generation
BQ_DLFADJUSTED	NUMBER(18,8)		Baseline quantity in MWh for the NMI in the trading interval. A negative quantity indicates net consumption, while a positive value indicates net generation
ISNONCOMPLIANT	NUMBER(1,0)		A value of TRUE (indicated by 1) for this column indicates that financial settlement of WDR transactions for this NMI should not proceed for the settlement date and trading interval. Possible values are 1 and 0.
QUALITYFLAG	VARCHAR2(20)		Quality flag for the meter read. Where multiple datastreams exist against the NMI with different quality flags for each read, the lowest quality flag will be published against the NMI for the interval
TRANSACTIONAMOUNT	NUMBER(18,8)		WDR transaction amount for this NMI in the settlement interval (\$)

BASELINECALCULATIONID	VARCHAR2(100)		A reference to the baseline run that produced the baseline quantity for this NMI and interval
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## 14.8 Table: SET\_WDR\_TRANSACT

<i>Name</i>	SET_WDR_TRANSACT
<i>Comment</i>	Settlements WDR transactions summary

### 14.8.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

### 14.8.2 Primary Key Columns

Name

COUNTERPARTYPARTICIPANTID

PARTICIPANTID

PARTICIPANTROLEID

PERIODID

REGIONID

SETTLEMENTDATE

SETTLEMENTRUNNO

### 14.8.3 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	DATE	X	Settlement date
SETTLEMENTRUNNO	NUMBER(3,0)	X	Settlement run number
PERIODID	NUMBER(3,0)	X	Trading interval identifier with Period 1 being the first TI for the calendar day, that is the interval ending 00:05
REGIONID	VARCHAR2(20)	X	Unique identifier for the region to which the TNI belongs on the settlement date

PARTICIPANTID	VARCHAR2(20)	X	Unique identifier for a participant
PARTICIPANTROLEID	VARCHAR2(20)	X	Participant role identifier - FRMP or DRSP
COUNTERPARTYPARTICIPANTID	VARCHAR2(20)	X	Unique identifier for the counter participant id.
TRANSACTIONAMOUNT	NUMBER(18,8)		Aggregate WDR transaction amount for the participant and counterparty in the settlement interval

## 15 Package: STPASA\_SOLUTION

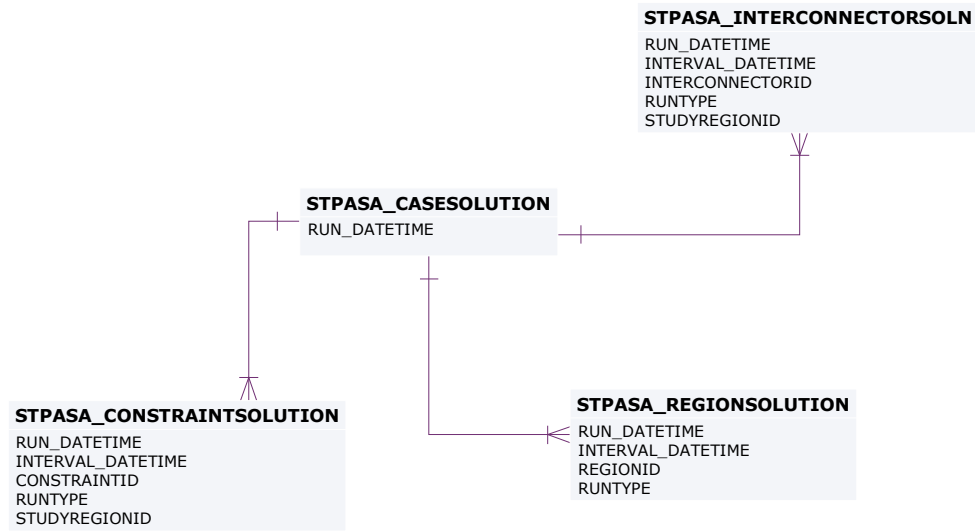
*Name* STPASA\_SOLUTION

*Comment* Results from a published Short Term PASA Run

### 15.1 List of tables

Name	Comment
STPASA_REGIONSOLUTION	STPASA_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.

## 15.2 Diagram: Entities: ST PASA Solution



## 15.3 Table: STPASA\_REGIONSOLUTION

<i>Name</i>	STPASA_REGIONSOLUTION
<i>Comment</i>	STPASA_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.

### 15.3.1 Description

STPASA\_REGIONSOLUTION is public so is available to all participants.

#### Source

STPASA\_REGIONSOLUTION is updated each STPASA run (i.e every 2 hours).

#### Volume

Rows per day: 480

Mb per month: 8

### 15.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 15.3.3 Primary Key Columns

Name  
 INTERVAL\_DATETIME  
 REGIONID  
 RUN\_DATETIME  
 RUNTYPE

### 15.3.4 Index Columns

Name  
 LASTCHANGED

### 15.3.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	DATE	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	DATE	X	The unique identifier for the interval within this study
REGIONID	VARCHAR2(10)	X	Region Identifier
DEMAND10	NUMBER(12,2)		Input value for 10% probability demand
DEMAND50	NUMBER(12,2)		Input value for 50% probability demand
DEMAND90	NUMBER(12,2)		Input value for 90% probability demand
RESERVEREQ	NUMBER(12,2)		Input reserve requirement
CAPACITYREQ	NUMBER(12,2)		Demand + Reserve Requirement
ENERGYREQDEMAND50	NUMBER(12,2)		Sum of: (Region Period Demand - given Demand50)/Period (sum by trading day, entered in first period of trading day, GWh)
UNCONSTRAINEDCAPACITY	NUMBER(12,0)		Region energy unconstrained MW capacity subject to energy and network security constraints
CONSTRAINEDCAPACITY	NUMBER(12,0)		Available capacity (MW) in this region energy constrained MW capacity subject to energy and network security constraints
NETINTERCHANGEUNDERSCAPACITY	NUMBER(12,2)		Net export in MW out of this region in the capacity adequacy evaluation. Export if > 0, Import if < 0.
SURPLUSCAPACITY	NUMBER(12,2)		Regional surplus capacity MW, +/- values indicate surplus/deficit capacity respectively
SURPLUSRESERVE	NUMBER(12,2)		Regional reserve surplus. +/- values indicate surplus/deficit reserve respectively
RESERVECONDITION	NUMBER(1,0)		The regional reserve condition: 0 Adequate, 1 LRC
MAXSURPLUSRESERVE	NUMBER(12,2)		The Maximum Surplus Reserve evaluated for this region in this period. Calculated for each region in turn.

MAXSPARECAPACITY	NUMBER(12,2)		The Maximum Spare Capacity evaluated for this region in this period. Calculated for each region in turn.
LORCONDITION	NUMBER(1,0)		The LOR Condition determined from the Maximum Spare Capacity value: 0 - no condition, 1 - LOR1 condition, 2 - LOR2 condition, 3 - LOR3 condition
AGGREGATECAPACITYAVAILABLE	NUMBER(12,2)		Sum of MAXAVAIL quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
AGGREGATESCHEDULEDLOAD	NUMBER(12,2)		Sum of MAXAVAIL quantities bid by of all Scheduled Loads in a given Region for a given PERIODID.
LASTCHANGED	DATE		Last changed date of this record
AGGREGATEPASAAVAILABLEITY	NUMBER(12,0)		Sum of PASAAVAILABILITY quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
RUNTYPE	VARCHAR2(20)	X	Type of run. Values are RELIABILITY_LRC, OUTAGE_LRC and LOR.
ENERGYREQDEMAND10	NUMBER(12,2)		Energy (GWh) required for this energy block based on the 10% probability of exceedance demand. Listed in the first interval of the energy block
CALCULATEDLOR1LEVEL	NUMBER(16,6)		Region Reserve Level for LOR1 used. Can be static value or calculated value if an interconnector is a credible contingency
CALCULATEDLOR2LEVEL	NUMBER(16,6)		Region Reserve Level for LOR2 used. Can be static value or calculated value if an interconnector is a credible contingency
MSRNETINTERCHANGEUNDE RSCARCITY	NUMBER(12,2)		Net interconnector flow from the region for this interval from the MSR assessment
LORNETINTERCHANGEUNDE RSCARCITY	NUMBER(12,2)		Net interconnector flow from the region for this interval from the LOR assessment
TOTALINTERMITTENTGENERATION	NUMBER(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	NUMBER(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-

			scheduled generation (MW).
UIGF	NUMBER(12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SemiScheduledCapacity	NUMBER(12,2)		Aggregate Regional UIGF availability
LOR_SemiScheduledCapacity	NUMBER(12,2)		Aggregate Regional UIGF availability for LOR
LCR	NUMBER(16,6)		Largest Credible Risk. MW value for highest credible contingency
LCR2	NUMBER(16,6)		Two Largest Creditable Risks. MW value for highest two credible contingencies.
FUM	NUMBER(16,6)		Forecasting Uncertainty Measure. MW value of reserve calculated as defined in the Reserve Level Declaration Guidelines
SS_SOLAR_UIGF	Number(12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is solar
SS_WIND_UIGF	Number (12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is wind
SS_SOLAR_CAPACITY	Number (12,2)		Regional aggregated Semi-scheduled UIGF availability where the primary fuel source is solar
SS_WIND_CAPACITY	Number (12,2)		Regional aggregated Semi-scheduled UIGF availability where the primary fuel source is wind
SS_SOLAR_CLEARED	Number (12,2)		Regional aggregated Semi-scheduled cleared MW where the primary fuel source is solar and StudyRegion = Region
SS_WIND_CLEARED	Number (12,2)		Regional aggregated Semi-scheduled cleared MW where the primary fuel source is wind and StudyRegion = Region
WDR_AVAILABLE	NUMBER(12,2)		Regional aggregated Wholesale Demand Response (WDR) availability in MW.
WDR_PASAAVAILABLE	NUMBER(12,2)		Regional aggregated Wholesale Demand Response (WDR) PASA availability in MW.



WDR_CAPACITY	NUMBER(12,2)		Regional aggregated Wholesale Demand Response (WDR) capacity in MW.
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## 16 Package: PDPASA

*Name* PDPASA

*Comment* 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.

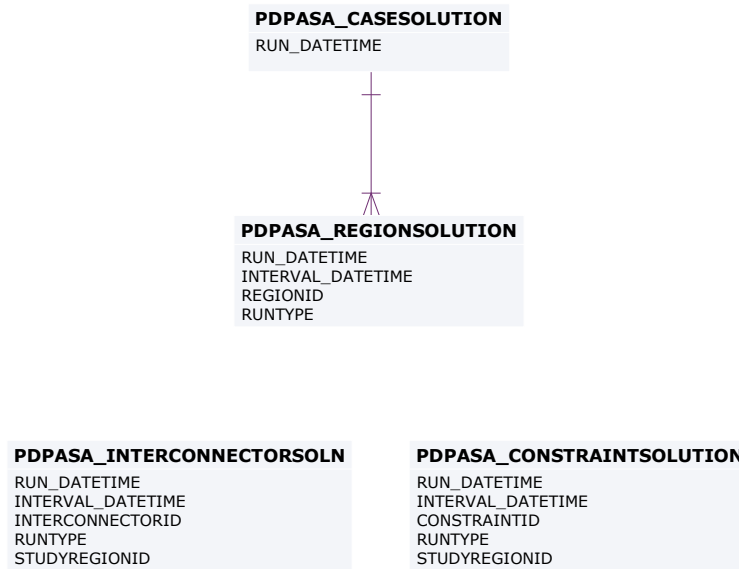
The calculation is a reserve assessment based on the PASA solver similar to existing ST and MT PASA business processes

The process reflects all intra-regional and inter-regional network constraints as an input to the process

### 16.1 List of tables

Name	Comment
PDPASA_REGIONSOLUTION	The PDPASA region solution data

## 16.2 Diagram: Entities: PD PASA



## 16.3 Table: PDPASA\_REGIONSOLUTION

<i>Name</i>	PDPASA_REGIONSOLUTION
<i>Comment</i>	The PDPASA region solution data

### 16.3.1 Description

PDPASA\_REGIONSOLUTION is public so is available to all participants.

#### Source

PDPASA\_REGIONSOLUTION is updated each PDPASA run (i.e. half-hourly).

#### Volume

Rows per day: 32000

#### Notes

##### LRC Determination

SURPLUSRESERVE is the surplus reserve in a region based on meeting the demand plus the reserve requirement in all regions simultaneously. Note that any surplus above the network restrictions and system reserve requirements is reported in the region it is generated, thus a surplus of zero can mean that a region is importing to meet a requirement or that it has exported all surplus to meet an adjacent region's requirement.

The PASA processes also calculate a regionally optimised surplus called the Maximum LRC Surplus (MAXSURPLUSRESERVE) being a figure on how much generation could be brought to this region subject to meeting requirements in other regions.

##### LOR Determination

MAXSPARECAPACITY is a regionally optimised figure representing the surplus generation able to be brought to a region subject to meeting the demand in all other regions.

Participants are directed to the first half hour of the Predispatch PASA (PDPASA) reports as NEMMCO's latest reserve determination for a given half hour.

### 16.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 16.3.3 Primary Key Columns

Name

INTERVAL\_DATETIME

REGIONID

RUN\_DATETIME

RUNTYPE

### 16.3.4 Index Columns

Name

LASTCHANGED

### 16.3.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	DATE	X	Case identifier by the time the case was run
INTERVAL_DATETIME	DATE	X	End date time of the interval
REGIONID	VARCHAR2(10)	X	Region identifier
DEMAND10	NUMBER(12,2)		10% Probability of Exceedance demand forecast
DEMAND50	NUMBER(12,2)		50% Probability of Exceedance demand forecast
DEMAND90	NUMBER(12,2)		90% Probability of Exceedance demand forecast
RESERVEREQ	NUMBER(12,2)		Region reserve requirement (MW)
CAPACITYREQ	NUMBER(12,2)		Capacity required to meet the demand and reserve levels in the capacity adequacy assessment.
ENERGYREQDEMAND50	NUMBER(12,2)		Energy (GWh) required for this energy block based on the 50% probability of exceedance demand. Listed in the first interval of the energy block.
UNCONSTRAINEDCAPACITY	NUMBER(12,0)		Aggregate generator capability from Non Energy Constrained plant including restrictions due to network constraints

			from the capacity adequacy (LRC) assessment.
CONSTRAINEDCAPACITY	NUMBER(12,0)		Aggregate generator capability from Energy Constrained plant including restrictions due to network constraints
NETINTERCHANGEUNDERSCARCITY	NUMBER(12,2)		Net interconnector flow from the region for this interval from the capacity adequacy (LRC) assessment.
SURPLUSCAPACITY	NUMBER(12,2)		Surplus capacity (MW) above the demand, scheduled load and net interchange in this region from the capacity adequacy (LRC) assessment.
SURPLUSRESERVE	NUMBER(12,2)		Surplus reserve (MW) above the demand, scheduled load, net interchange and reserve requirement in this region from the capacity adequacy (LRC) assessment.
RESERVECONDITION	NUMBER(1,0)		Low Reserve Condition (LRC) flag for this region in this interval (1 - LRC, 0 - No LRC)
MAXSURPLUSRESERVE	NUMBER(12,2)		Maximum surplus reserve (MW) above the demand + reserve requirement able to be sourced to this region while meeting demand + reserve requirements in other regions.
MAXSPARECAPACITY	NUMBER(12,2)		Maximum spare capacity (MW) above the demand able to be sourced to this region while meeting demands in other regions.
LORCONDITION	NUMBER(1,0)		Lack of Reserve Condition (LOR) flag for this region and interval (3 = LOR3, 2 = LOR2, 1 = LOR1, 0 = No LOR)
AGGREGATECAPACITYAVAILABLE	NUMBER(12,2)		Sum of MAXAVAIL quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
AGGREGATESCHEDULEDLOAD	NUMBER(12,2)		Sum of MAXAVAIL quantities bid by of all Scheduled Loads in a given Region for a given PERIODID.
LASTCHANGED	DATE		Date time the record was created or modified changed
AGGREGATEPASAAVAILABLETY	NUMBER(12,0)		Sum of PASAAVAILABLETY quantities offered by all Scheduled Generators in a given Region for a given PERIODID.

RUNTYPE	VARCHAR2(20)	X	Type of run. Values are RELIABILITY_LRC, OUTAGE_LRC and LOR.
ENERGYREQDEMAND10	NUMBER(12,2)		Energy (GWh) required for this energy block based on the 10% probability of exceedance demand. Listed in the first interval of the energy block
CALCULATEDLOR1LEVEL	NUMBER(16,6)		Region Reserve Level for LOR1 used. Can be static value or calculated value if an interconnector is a credible contingency
CALCULATEDLOR2LEVEL	NUMBER(16,6)		Region Reserve Level for LOR2 used. Can be static value or calculated value if an interconnector is a credible contingency
MSRNETINTERCHANGEUNDE RSCARCITY	NUMBER(12,2)		Net interconnector flow from the region for this interval from the MSR assessment
LORNETINTERCHANGEUNDE RSCARCITY	NUMBER(12,2)		Net interconnector flow from the region for this interval from the LOR assessment
TOTALINTERMITTENTGENER ATION	NUMBER(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDG EN	NUMBER(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-scheduled generation (MW).
UIGF	NUMBER(12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SemiScheduledCapacity	NUMBER(12,2)		Aggregate Regional UIGF availability
LOR_SemiScheduledCapacity	NUMBER(12,2)		Aggregate Regional UIGF availability for LOR
LCR	NUMBER(16,6)		Largest Credible Risk. MW value for highest credible contingency
LCR2	NUMBER(16,6)		Two Largest Creditable Risks. MW value for highest two credible contingencies.
FUM	NUMBER(16,6)		Forecasting Uncertainty Measure. MW value of reserve calculated as defined in the Reserve Level Declaration Guidelines
SS_SOLAR_UIGF	Number(12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-

			scheduled generation (MW) where the primary fuel source is solar
SS_WIND_UIGF	Number (12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW) where the primary fuel source is wind
SS_SOLAR_CAPACITY	Number (12,2)		Regional aggregated Semi-scheduled UIGF availability where the primary fuel source is solar
SS_WIND_CAPACITY	Number (12,2)		Regional aggregated Semi-scheduled UIGF availability where the primary fuel source is wind
SS_SOLAR_CLEARED	Number (12,2)		Regional aggregated Semi-scheduled cleared MW where the primary fuel source is solar and StudyRegion = Region
SS_WIND_CLEARED	Number (12,2)		Regional aggregated Semi-scheduled cleared MW where the primary fuel source is wind and StudyRegion = Region
WDR_AVAILABLE	NUMBER(12,2)		Regional aggregated Wholesale Demand Response (WDR) availability in MW.
WDR_PASAAVAILABLE	NUMBER(12,2)		Regional aggregated Wholesale Demand Response (WDR) PASA availability in MW.
WDR_CAPACITY	NUMBER(12,2)		Regional aggregated Wholesale Demand Response (WDR) capacity in MW.



## 17 Package: NETWORK

<i>Name</i>	NETWORK
<i>Comment</i>	Configuration data for the physical network

### 17.1 List of tables

Name	Comment
NETWORK_EQUIPMENTDETAIL	<p>NETWORK_EQUIPMENTDETAIL Provides details on equipment that may have outages or ratings. A single piece of equipment may have multiple records if its details change.</p> <p>A line will typically have at least two valid records at a time, once for each end of the line.</p>
NETWORK_OUTAGEDetail	<p>Lists asset owners planned outages for transmission equipment. This also includes details for transmission equipment that will not have an outage, but associated secondary equipment has an outage and a related constraint set may be invoked. This scenario is indicated by the ISSECONDARY field in the table</p>
NETWORK_SUBSTATIONDETAIL	<p>NETWORK_SUBSTATIONDETAIL sets out the attributes of substations across time</p>

## 17.2 Diagram: Entities: NETWORK

**NETWORK\_SUBSTATIONDETAIL**

SUBSTATIONID  
VALIDFROM

**NETWORK\_EQUIPMENTDETAIL**

SUBSTATIONID  
EQUIPMENTTYPE  
EQUIPMENTID  
VALIDFROM  
ELEMENTID

**NETWORK\_OUTAGEDETAIL**

OUTAGEID  
SUBSTATIONID  
EQUIPMENTTYPE  
EQUIPMENTID  
STARTTIME  
ELEMENTID

**NETWORK\_OUTAGESTATUSCODE**

OUTAGESTATUSCODE

**NETWORK\_OUTAGECONSTRAINTSET**

OUTAGEID  
GENCONSETID

**NETWORK\_RATING**

SPD\_ID  
VALIDFROM

**NETWORK\_STATICRATING**

SUBSTATIONID  
EQUIPMENTTYPE  
EQUIPMENTID  
RATINGLEVEL  
APPLICATIONID  
VALIDFROM

**NETWORK\_REALTIMERATING**

SETTLEMENTDATE  
SPD\_ID

## 17.3 Table: NETWORK\_EQUIPMENTDETAIL

<i>Name</i>	NETWORK_EQUIPMENTDETAIL
<i>Comment</i>	<p>NETWORK_EQUIPMENTDETAIL Provides details on equipment that may have outages or ratings. A single piece of equipment may have multiple records if its details change.</p> <p>A line will typically have at least two valid records at a time, once for each end of the line.</p>

### 17.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 17.3.2 Primary Key Columns

Name

ELEMENTID

EQUIPMENTID

EQUIPMENTTYPE

SUBSTATIONID

VALIDFROM

### 17.3.3 Index Columns

Name

LASTCHANGED

### 17.3.4 Content

Name	Data Type	Mandatory	Comment
SUBSTATIONID	VARCHAR(30)	X	ID uniquely identifying the substation this

			equipment is located at
EQUIPMENTTYPE	VARCHAR(10)	X	The type of equipment. Valid values are: LINE = Line TRANS = Transformer CB = Circuit breaker ISOL = Isolator CAP = Capacitor REAC = Reactor UNIT = Unit
EQUIPMENTID	VARCHAR(30)	X	A unique identifier for this type of equipment at this substation
VALIDFROM	TIMESTAMP(3)	X	The date that this record is applies from (inclusive)
VALIDTO	TIMESTAMP(3)		The date that this record applies until (exclusive)
VOLTAGE	VARCHAR(20)		The voltage in KV for this equipment. Transformers may have multiple voltages defined. E.g. 132_110_33
DESCRIPTION	VARCHAR(100)		A short description for this equipment.
LASTCHANGED	TIMESTAMP(3)		The time that this record was last changed.
ELEMENTID	NUMBER(15,0)	X	Equipment element id

## 17.4 Table: NETWORK\_OUTAGEDDETAIL

*Name* NETWORK\_OUTAGEDDETAIL

*Comment* Lists asset owners planned outages for transmission equipment. This also includes details for transmission equipment that will not have an outage, but associated secondary equipment has an outage and a related constraint set may be invoked. This scenario is indicated by the ISSECONDARY field in the table

### 17.4.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 17.4.2 Primary Key Columns

Name

ELEMENTID

EQUIPMENTID

EQUIPMENTTYPE

OUTAGEID

STARTTIME

SUBSTATIONID

### 17.4.3 Index Columns

Name

LASTCHANGED

### 17.4.4 Content

Name	Data Type	Mandatory	Comment
OUTAGEID	NUMBER(15,0)	X	ID uniquely identifying the outage

SUBSTATIONID	VARCHAR(30)	X	The substation this equipment is located at
EQUIPMENTTYPE	VARCHAR(10)	X	The type of equipment. Valid values are: LINE = Line TRANS = Transformer CB = Circuit breaker ISOL = Isolator CAP = Capacitor REAC = Reactor UNIT = Unit
EQUIPMENTID	VARCHAR(30)	X	A unique identifier for this equipment at this substation, and based on its type
STARTTIME	DATE	X	The planned starting date and time of the outage
ENDTIME	DATE		The planned ending date and time of the outage
SUBMITTEDDATE	DATE		The date and time this outage was first submitted
OUTAGESTATUSCODE	VARCHAR(10)		A code representing the status of the outage.  The OUTAGESTATUSCODE table will store a detailed description of each code.
RESUBMITREASON	VARCHAR(50)		Changes to an outage key details may require the outage to be resubmitted.  A new outage id will then be allocated and the outage will be reassessed.  This field will detail the reason for the change.
RESUBMITOUTAGEID	NUMBER(15,0)		The new outage id created from a resubmit.
RECALLTIMEDAY	NUMBER(10,0)		The recall time in minutes during the day
RECALLTIMENIGHT	NUMBER(10,0)		The recall time in minutes during the night
LASTCHANGED	TIMESTAMP(3)		The time that this record was last

			changed
REASON	VARCHAR2(100)		The reason provided by the asset owner for this outage
ISSECONDARY	NUMBER(1,0)		1 = The outage is for a secondary piece of equipment that has an associated constraint set. The transmission equipment is still in service. 0 = The outage is for the transmission equipment
ACTUAL_STARTTIME	DATE		The actual starting date/time of the outage
ACTUAL_ENDTIME	DATE		The actual ending date/time of the outage
COMPANYREFCODE	VARCHAR2(20)		The asset owners reference code for this outage
ELEMENTID	NUMBER(15,0)	X	Equipment element id

## 17.5 Table: NETWORK\_SUBSTATIONDETAIL

<i>Name</i>	NETWORK_SUBSTATIONDETAIL
<i>Comment</i>	NETWORK_SUBSTATIONDETAIL sets out the attributes of sub-stations across time

### 17.5.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

### 17.5.2 Primary Key Columns

Name
SUBSTATIONID
VALIDFROM

### 17.5.3 Index Columns

Name
LASTCHANGED

### 17.5.4 Content

Name	Data Type	Mandatory	Comment
SUBSTATIONID	VARCHAR(30)	X	ID uniquely identifying this substation
VALIDFROM	TIMESTAMP(3)	X	The record is valid from this date (inclusive)
VALIDTO	TIMESTAMP(3)		The record is valid up until this date (exclusive)
DESCRIPTION	VARCHAR(100)		Description of the substation
REGIONID	VARCHAR(10)		The NEM region the substation is in



OWNERID	VARCHAR(30)		The TNSP who is responsible for this substation
LASTCHANGED	TIMESTAMP(3)		The time that this record was last changed.