MMS DATA MODEL UPGRADE REPORT

	MMS Data Model v4.28 MSSQLServer
PREPARED BY:	IMT
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1 Description of model MMS Data Model v4.28 MSSQLServer

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 Current product supplied by AEMO for data transfer is Participant Data Replication (PDR), with some support for the superseded Parser.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.

2 Notes

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

2.1 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).

3 Package: DEMAND_FORECASTS

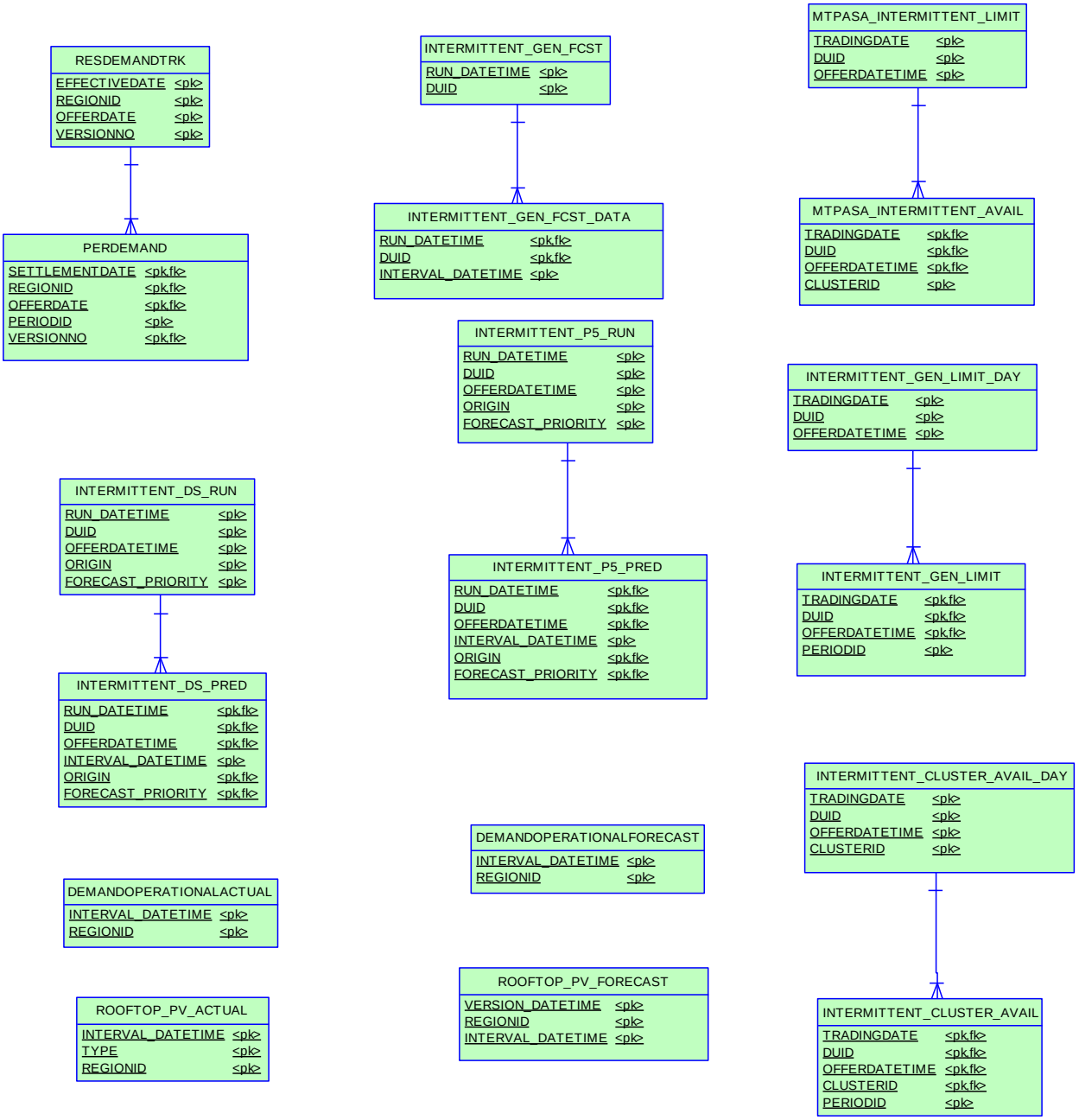
Name DEMAND_FORECASTS

Comment Regional Demand Forecasts and Intermittent Generation forecasts.

3.1 List of tables

Name	Comment
INTERMITTENT_CLUSTER_AVAIL	A submission of Elements Unavailable for an intermittent generating unit cluster, by Trading Day and Trading Interval
INTERMITTENT_CLUSTER_AVAIL_DAY	Summary record for an Elements Unavailable submission for an intermittent generating unit cluster for a Trading Day
INTERMITTENT_DS_PRED	Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch
INTERMITTENT_DS_RUN	Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch.
INTERMITTENT_GEN_LIMIT	A submission of Upper MW Limit for an intermittent generating unit, by Trading Day and Trading Interval
INTERMITTENT_GEN_LIMIT_DAY	Summary record for an Upper MW Limit submission for an intermittent generating unit for a Trading Day
INTERMITTENT_P5_PRED	Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Pre-dispatch
INTERMITTENT_P5_RUN	Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Pre-dispatch
MTPASA_INTERMITTENT_AVAIL	A submission of expected plant availability for intermittent generators for use in MTPASA intermittent generation forecasts
MTPASA_INTERMITTENT_LIMIT	A submission of expected maximum availability for intermittent generators for use in MTPASA intermittent generation forecasts

3.2 Diagram: Entities: Demand Forecasts



3.3 Table: INTERMITTENT_CLUSTER_AVAIL

Name INTERMITTENT_CLUSTER_AVAIL

Comment A submission of Elements Unavailable for an intermittent generating unit cluster, by Trading Day and Trading Interval

3.3.1 Primary Key Columns

Name
CLUSTERID
DUID
OFFERDATETIME
PERIODID
TRADINGDATE

3.3.2 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	datetime	X	The trading day to which the availability submission applies
DUID	varchar(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	datetime	X	Date and Time when this cluster availability submission was loaded
CLUSTERID	varchar(20)	X	Unique Cluster Identifier for this cluster within the DUID
PERIODID	numeric(3,0)	X	Trading interval number (1…48) within this TRADINGDATE for which ELEMENTS_UNAVAILABLE applies
ELEMENTS_UNAVAILABLE	numeric(3,0)		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 ANEMOS). Value between 0 and the registered Number of Cluster Elements.Value = 0 means no elements unavailable

3.4 Table: INTERMITTENT_CLUSTER_AVAIL_DAY

Name INTERMITTENT_CLUSTER_AVAIL_DAY

Comment Summary record for an Elements Unavailable submission for an intermittent generating unit cluster for a Trading Day

3.4.1 Primary Key Columns

Name
CLUSTERID
DUID
OFFERDATETIME
TRADINGDATE

3.4.2 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	datetime	X	Trading Day for which this cluster availability submission applies
DUID	varchar(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	datetime	X	Date and Time when this cluster availability submission was loaded
CLUSTERID	varchar(20)	X	Unique Cluster Identifier for this cluster within the DUID

3.5 Table: INTERMITTENT_DS_PRED

Name INTERMITTENT_DS_PRED

Comment Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch

3.5.1 Notes

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

3.5.2 Primary Key Columns

Name
DUID
FORECAST_PRIORITY
INTERVAL_DATETIME
OFFERDATETIME
ORIGIN
RUN_DATETIME

3.5.3 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Date and Time when the forecast applies (dispatch interval ending)
DUID	varchar(20)	X	DUID (or Area for non-scheduled) where this forecast applies
OFFERDATETIME	datetime	X	Date and Time when this forecast submission was loaded
INTERVAL_DATETIME	datetime	X	Date and Time when the forecast applies (dispatch interval ending)
ORIGIN	varchar(20)	X	Origin of this forecast (PARTICIPANTID, AWEFS/ASEFS, or another vendor)
FORECAST_PRIORITY	numeric(10,0)	X	Unsuppressed forecasts with higher priority values are used in Dispatch in preference to unsuppressed forecasts with lower priority values
FORECAST_MEAN	numeric(18,8)		Forecast MW value for this interval_DateTime
FORECAST_POE10	numeric(18,8)		Forecast 10% POE MW value for this interval_DateTime
FORECAST_POE50	numeric(18,8)		Forecast 50% POE MW value for this interval_DateTime. Used in Dispatch.
FORECAST_POE90	numeric(18,8)		Forecast 90% POE MW value for this interval_DateTime

3.6 Table: INTERMITTENT_DS_RUN

Name INTERMITTENT_DS_RUN

Comment Unconstrained Intermittent Generation Forecasts (UIGF) for Dispatch.

3.6.1 Notes

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

3.6.2 Primary Key Columns

Name
DUID
FORECAST_PRIORITY
OFFERDATETIME
ORIGIN
RUN_DATETIME

3.6.3 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Date and Time where the forecast applies (dispatch interval ending)
DUID	varchar(20)	X	DUID (or Area for non-scheduled) where this forecast applies
OFFERDATETIME	datetime	X	Date and Time when this forecast submission was loaded.
ORIGIN	varchar(20)	X	Origin of this forecast (PARTICIPANTID, AWEFS/ASEFS, or another vendor)
FORECAST_PRIORITY	numeric(10,0)	X	Unsuppressed forecasts with higher priority values are used in Dispatch in preference to unsuppressed forecasts with lower priority values.
AUTHORISEDBY	varchar(20)		Authorising officer of this forecast (applicable for participant forecasts only). This column is not made available to the public.
COMMENTS	varchar(200)		Comments relating to the forecast. This column is not made available to the public.
LASTCHANGED	datetime		Last date and time the record changed.
MODEL	varchar(30)		Metadata relating to the forecast. This column is not made available to the public.
PARTICIPANT_TIMESTAMP	datetime		Participant can document when the forecast was created
SUPPRESSED_AEMO	numeric(1,0)		Was this forecast suppressed by AEMO? Suppressed = 1,Not suppressed =0
SUPPRESSED_PARTICIPANT	numeric(1,0)		Was this forecast suppressed by the participant? Suppressed submissions may not be used, Suppressed = 1, Not suppressed =0
TRANSACTION_ID	varchar(100)		Uniquely identifies this interaction

3.7 Table: INTERMITTENT_GEN_LIMIT

Name INTERMITTENT_GEN_LIMIT

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

3.7.1 Primary Key Columns

Name
DUID
OFFERDATETIME
PERIODID
TRADINGDATE

3.7.2 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	datetime	X	Trading Day for which this unit availability submission applies
DUID	varchar(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	datetime	X	Date and Time when this unit availability submission was loaded
PERIODID	numeric(3,0)	X	Trading interval number (1...48) within this TRADINGDATE for which UPPERMWLIMIT applies
UPPERMWLIMIT	numeric(6)		Maximum imposed MW limit (down regulation in ANEMOS). Value between 0 and the registered DUID Maximum Capacity. Value = -1 means no limit applies

3.8 Table: INTERMITTENT_GEN_LIMIT_DAY

Name INTERMITTENT_GEN_LIMIT_DAY

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

3.8.1 Primary Key Columns

Name
DUID
OFFERDATETIME
TRADINGDATE

3.8.2 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	datetime	X	Trading Day for which this unit availability submission applies
DUID	varchar(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	datetime	X	Date and Time when this unit availability submission was loaded
PARTICIPANTID	varchar(20)		Unique participant identifier
LASTCHANGED	datetime		Last date and time record changed
AUTHORISEDBYUSER	varchar(20)		User entering the unit availability submission
AUTHORISEDBYPARTICIPANTID	varchar(20)		Participant entering the unit availability submission

3.9 Table: INTERMITTENT_P5_PRED

Name INTERMITTENT_P5_PRED

Comment Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Pre-dispatch

3.9.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

3.9.2 Primary Key Columns

Name
DUID
FORECAST_PRIORITY
INTERVAL_DATETIME
OFFERDATETIME
ORIGIN
RUN_DATETIME

3.9.3 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Date and Time of the first interval of 5-Minute Predispatch where the forecast applies (dispatch interval ending)
DUID	varchar(20)	X	DUID (or Area for non-scheduled) where this forecast applies
OFFERDATETIME	datetime	X	Date and Time when this forecast submission was loaded
INTERVAL_DATETIME	datetime	X	Interval within the current RUN_DATETIME where this forecast applies (dispatch interval ending)
ORIGIN	varchar(20)	X	Origin of this forecast (PARTICIPANTID, AWEFS/ASEFS, or another vendor)
FORECAST_PRIORITY	numeric(10,0)	X	Unsuppressed forecasts with higher priority values are used in 5-Minute Predispatch in preference to unsuppressed forecasts with lower priority values
FORECAST_MEAN	numeric(18,8)		Forecast MW value for this interval_DateTime
FORECAST_POE10	numeric(18,8)		Forecast 10% POE MW value for this interval_DateTime
FORECAST_POE50	numeric(18,8)		Forecast 50% POE MW value for this interval_DateTime.
FORECAST_POE90	numeric(18,8)		Forecast 90% POE MW value for this interval_DateTime

3.10 Table: INTERMITTENT_P5_RUN

Name INTERMITTENT_P5_RUN

Comment Unconstrained Intermittent Generation Forecasts (UIGF) for 5-Minute Pre-dispatch

3.10.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

3.10.2 Primary Key Columns

Name
DUID
FORECAST_PRIORITY
OFFERDATETIME
ORIGIN
RUN_DATETIME

3.10.3 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Date and Time of the first interval of 5-minute pre-dispatch where the forecast applies.
DUID	varchar(20)	X	DUID (or Area for non-scheduled) where this forecast applies
OFFERDATETIME	datetime	X	Date and Time when this forecast submission was loaded
ORIGIN	varchar(20)	X	Origin of this forecast (PARTICIPANTID, AWEFS/ASEFS, or another vendor)
FORECAST_PRIORITY	numeric(10,0)	X	Unsuppressed forecasts with higher priority values are used in 5-Minute Predispatch in preference to unsuppressed forecasts with lower priority values
AUTHORISEDBY	varchar(20)		Authorising officer of this forecast
COMMENTS	varchar(200)		Comments relating to the forecast
LASTCHANGED	datetime		Last date and time the record changed.
MODEL	varchar(30)		Metadata relating to the forecast.
PARTICIPANT_TIMESTAMP	datetime		Participant can document when the forecast was created
SUPPRESSED_AEMO	numeric(1,0)		Was this forecast suppressed by AEMO? Suppressed = 1,Not suppressed =0
SUPPRESSED_PARTICIPANT	numeric(1,0)		Was this forecast suppressed by the participant? Suppressed submissions may not be used, Suppressed = 1, Not suppressed =0
TRANSACTION_ID	varchar(100)		Uniquely identifies this interaction

3.11 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

3.11.1 Primary Key Columns

Name
CLUSTERID
DUID
OFFERDATETIME
TRADINGDATE

3.11.2 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	datetime	X	Trading Day for which this cluster availability submission applies
DUID	varchar(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	datetime	X	Date and Time when this cluster availability submission was loaded
CLUSTERID	varchar(20)	X	Unique Cluster Identifier for this cluster within the DUID
LASTCHANGED	datetime		Last date and time record changed
ELEMENTS_UNAVAILABLE	numeric(3,0)		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.

3.12 Table: MTPASA_INTERMITTENT_LIMIT

Name MTPASA_INTERMITTENT_LIMIT

Comment A submission of expected maximum availability for intermittent generators for use in MTPASA intermittent generation

forecasts

3.12.1 Primary Key Columns

Name
DUID
OFFERDATETIME
TRADINGDATE

3.12.2 Content

Name	Data Type	Mandatory	Comment
TRADINGDATE	datetime	X	Trading Day for which this unit availability submission applies
DUID	varchar(20)	X	Unique Identifier of Dispatchable Unit
OFFERDATETIME	datetime	X	Date time file processed
LASTCHANGED	datetime		Last date and time record changed
UPPERMWLIMIT	numeric(6)		Maximum imposed MW limit. Value between 0 and the registered DUID Maximum Capacity.Value = -1 means no limit applies.
AUTHORISEDBYUSER	varchar(20)		User entering the unit availability submission
AUTHORISEDBYPARTICIPANTID	varchar(20)		Participant entering the unit availability submission

4 Package: DISPATCH

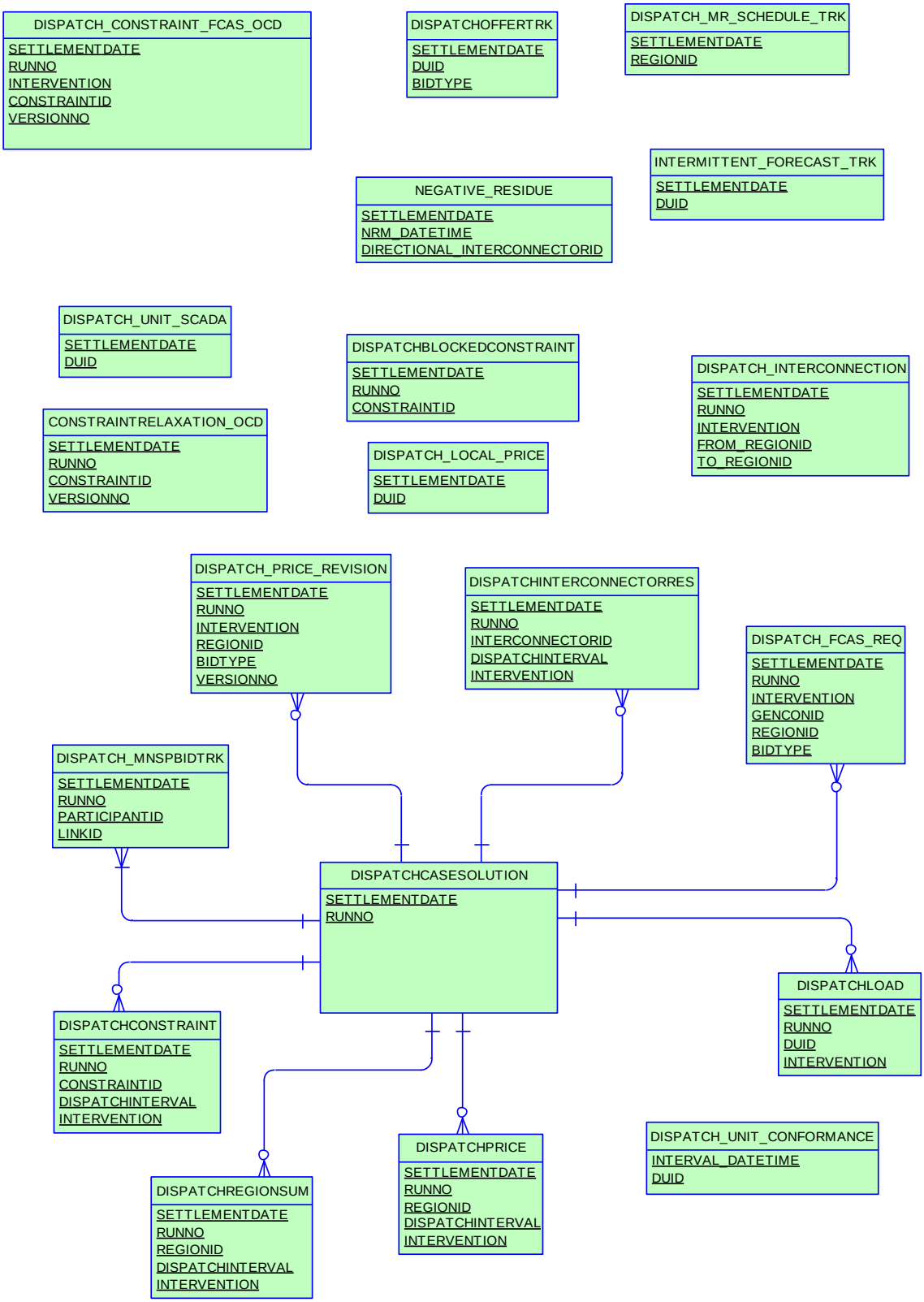
Name DISPATCH

Comment Results from a published Dispatch Run

4.1 List of tables

Name	Comment
INTERMITTENT_FORECAST_TRK	Uniquely tracks which Intermittent Generation forecast was used for the DUID in which Dispatch run

4.2 Diagram: Entities: Dispatch



4.3 Table: INTERMITTENT_FORECAST_TRK

Name INTERMITTENT_FORECAST_TRK

Comment Uniquely tracks which Intermittent Generation forecast was used for the DUID in which Dispatch run

4.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

4.3.2 Primary Key Columns

Name
DUID
SETTLEMENTDATE

4.3.3 Content

Name	Data Type	Mandatory	Comment
SETTLEMENTDATE	datetime	X	DateTime of the Dispatch run (dispatch interval ending)
DUID	varchar(20)	X	Tracks to INTERMITTENT_DS_RUN.DUID
ORIGIN	varchar(20)		Tracks to INTERMITTENT_DS_RUN.ORIGIN, SCADA is written to ORIGIN if no forecast is discovered.
FORECAST_PRIORITY	numeric(10,0)		Tracks to INTERMITTENT_DS_RUN.FORECAST_PRIORITY - except for -1 and 0, which denote "Last Target" and "SCADA" respectively
OFFERDATETIME	datetime		Tracks to INTERMITTENT_DS_RUN.OFFERDATETIME

5 Package: GENERIC_CONSTRAINT

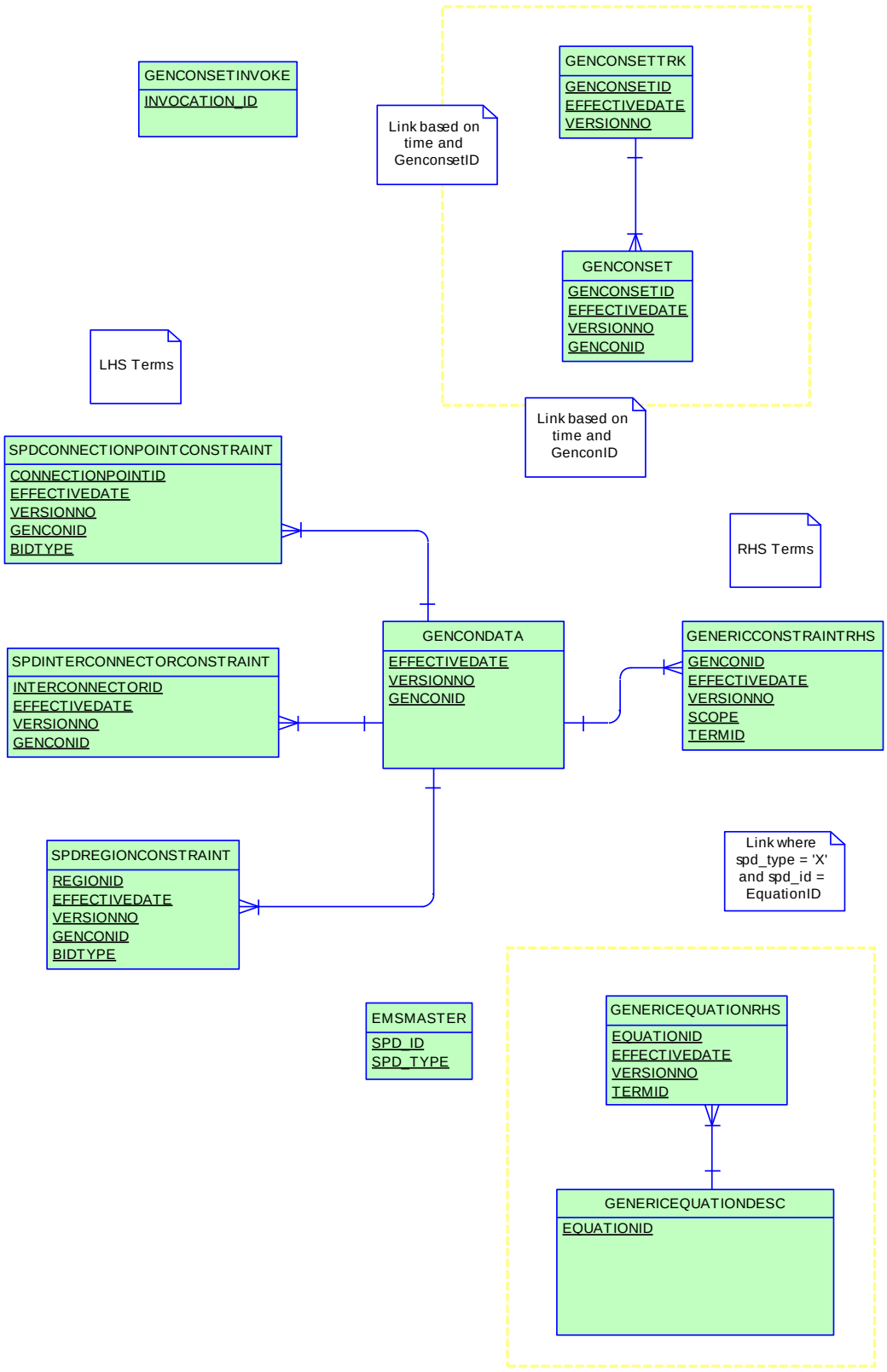
Name GENERIC_CONSTRAINT

Comment Generic Constraint Standing Data and Invocations

5.1 List of tables

Name	Comment
GENCONDATA	GENCONDATA sets out the generic constraints contained within a generic constraint set invoked in PASA, predispatch and dispatch. Fields enable selective application of invoked constraints in the Dispatch, Predispatch, ST PASA or MT PASA processes.

5.2 Diagram: Entities: Generic Constraints



5.3 Table: GENCONDATA

Name	GENCONDATA
Comment	GENCONDATA sets out the generic constraints contained within a generic constraint set invoked in PASA, predispatch and dispatch. Fields enable selective application of invoked constraints in the Dispatch, Predispatch, ST PASA or MT PASA processes.

5.3.1 Description

GENCONDATA is a public data, and is available to all participants.

Source

GENCONDATA updates as constraint details are updated by AEMO.

Note

The following fields enable selective application of invoked constraints in the Dispatch, Predispatch, ST PASA or MT PASA processes:

- DISPATCH
- PREDISPATCH
- STPASA
- MTPASA

The flag P5MIN_SCOPE_OVERRIDE indicates for each constraint whether 5MPD makes use of the default Dispatch (P5MIN_SCOPE_OVERRIDE = NULL) or Pre-dispatch (P5MIN_SCOPE_OVERRIDE = 'PD') style RHS definition. GENERICCONSTRAINTRHS stores generic constraint RHS definitions. Constraints without records in GENERICCONSTRAINTRHS only make use of the static RHS defined in the CONSTRAINTVALUE column in GENCONDATA .

The default value for the P5MIN_SCOPE_OVERRIDE column is NULL, so constraints existing before implementing the column use the DISPATCH RHS definition by default, as was the case before the implementation of the change.

5.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

5.3.3 Primary Key Columns

Name
EFFECTIVEDATE
GENCONID
VERSIONNO

5.3.4 Index Columns

Name
LASTCHANGED

5.3.5 Content

Name	Data Type	Mandatory	Comment
EFFECTIVEDATE	datetime	X	Effective date of this constraint
VERSIONNO	numeric(3,0)	X	Version with respect to the effective date
GENCONID	varchar(20)	X	Unique ID for the constraint
CONSTRAINTTYPE	varchar(2)		The logical operator (=, >=, <=)
CONSTRAINTVALUE	numeric(16,6)		the RHS value used if there is no dynamic RHS defined in GenericConstraintRHS
DESCRIPTION	varchar(256)		Detail of the plant that is not in service
STATUS	varchar(8)		Not used
GENERICCONSTRAINTWEIGHT	numeric(16,6)		The constraint violation penalty factor
AUTHORISEDDATE	datetime		Date record authorised
AUTHORISEDBY	varchar(15)		User authorising record
DYNAMICRHS	numeric(15,5)		Not used
LASTCHANGED	datetime		Last date and time record changed
DISPATCH	varchar(1)		Flag: constraint RHS used for Dispatch? 1-used, 0-not used
PREDISPATCH	varchar(1)		Flag to indicate if the constraint RHS is to be used for PreDispatch, 1-used, 0-not used
STPASA	varchar(1)		Flag to indicate if the constraint RHS is to be used for ST PASA, 1-used, 0-not used
MTPASA	varchar(1)		Flag to indicate if the constraint RHS is to be used for MT PASA, 1-used, 0-not used
IMPACT	varchar(64)		The device(s) that is affected by the constraint e.g. Interconnector, Generator(s) or Cutset
SOURCE	varchar(128)		The source of the constraint formulation
LIMITTYPE	varchar(64)		The limit type of the constraint e.g. Transient Stability, Voltage Stability
REASON	varchar(256)		The contingency or reason for the constraint
MODIFICATIONS	varchar(256)		Details of the changes made to this version of the constraint
ADDITIONALNOTES	varchar(256)		Extra notes on the constraint
P5MIN_SCOPE_OVERRIDE	varchar(2)		Extra notes on the constraint: NULL = Dispatch RHS applied in 5MPD, PD = PreDispatch RHS applied in 5MPD
LRC	varchar(1)		Flag to indicate if PASA LRC run uses the constraint; 1-used, 0-not used
LOR	varchar(1)		Flag to indicate if PASA LOR run uses the constraint; 1-used, 0-not used
FORCE_SCADA	numeric(1,0)		Flags Constraints for which NEMDE must use "InitialMW" values instead of "WhatOfInitialMW" for Intervention Pricing runs

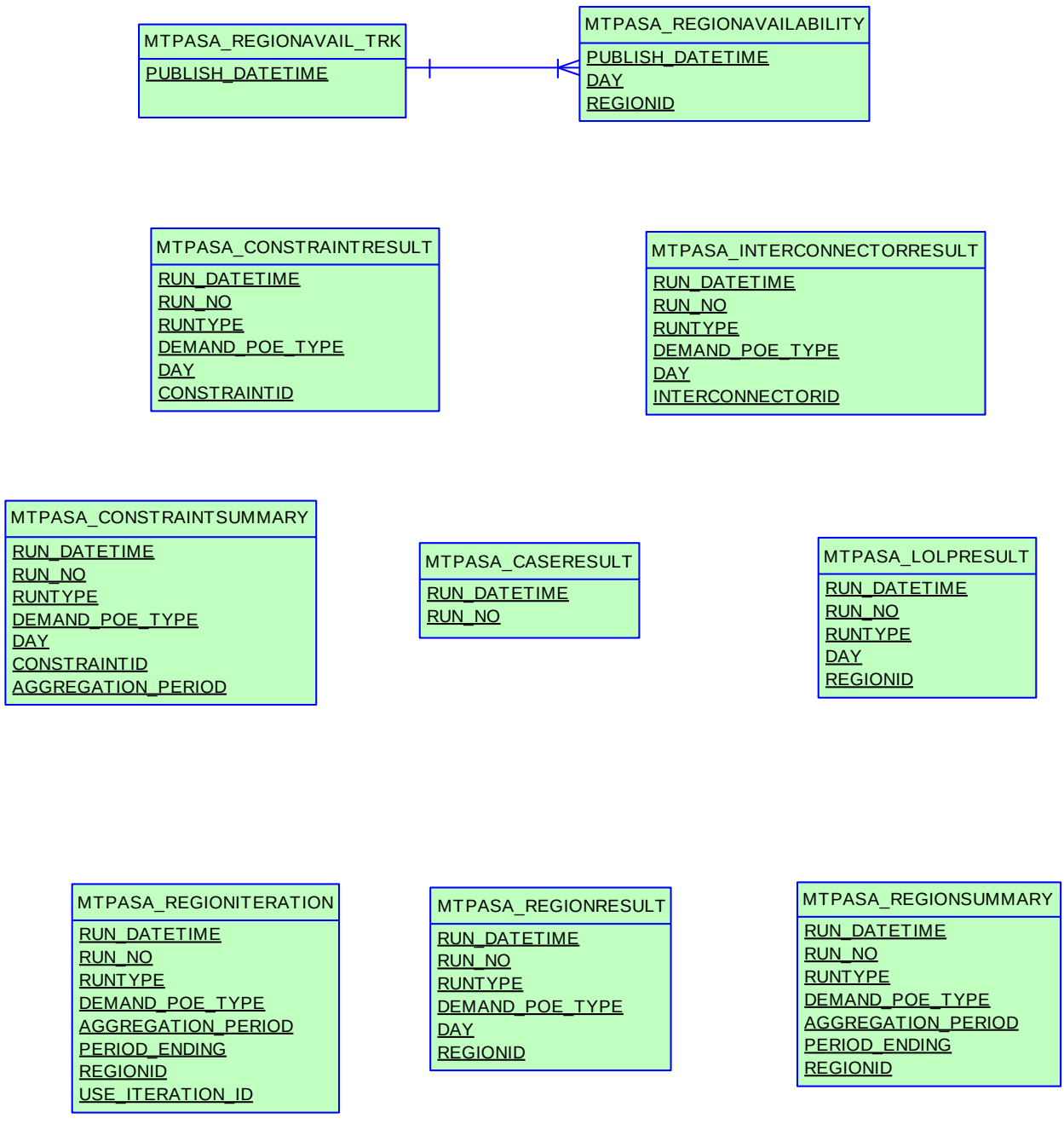
6 Package: MTPASA

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

6.1 List of tables

Name	Comment
MTPASA_REGIONRESULT	Region results for interval of max demand per day.
MTPASA_REGIONSUMMARY	Region Results summary over aggregation periods.

6.2 Diagram: Entities: MT PASA



6.3 Table: MTPASA_REGIONRESULT

Name MTPASA_REGIONRESULT

Comment Region results for interval of max demand per day.

6.3.1 Description

MTPASA_REGIONRESULT is public data.

6.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

6.3.3 Primary Key Columns

Name
DAY
DEMAND_POE_TYPE
REGIONID
RUN_DATETIME
RUN_NO
RUNTYPE

6.3.4 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Date processing of the run begins.
RUN_NO	numeric(4)	X	Unique run id.
RUNTYPE	varchar(20)	X	Type of run. Always RELIABILITY
DEMAND_POE_TYPE	varchar(20)	X	Demand POE type used. Value is POE10
DAY	datetime	X	Day this result is for
REGIONID	varchar(20)	X	The unique region identifier
PERIODID	numeric(3,0)		Half hourly period reported, selected as period of maximum NEM scheduled demand (calculated as maximum of scheduled demands, averaged across iterations and reference years)
DEMAND	numeric(12,2)		Demand value from selected half hourly interval (MW)
AGGREGATEINSTALLEDCAPACITY	numeric(12,2)		The total installed capacity of all generation (MW)
NUMBEROFITERATIONS	numeric(12,2)		Total number of iterations and reference years performed
USE_NUMBEROFITERATIONS	numeric(12,2)		Number of iterations and reference years with unserved energy>0
USE_MAX	numeric(12,2)		Maximum unserved energy, across iterations and reference years (MW)
USE_UPPERQUARTILE	numeric(12,2)		Upper quartile unserved energy, across iterations and reference years (MW)
USE_MEDIAN	numeric(12,2)		Median unserved energy, across iterations and reference years (MW)
USE_LOWERQUARTILE	numeric(12,2)		Lower quartile unserved energy, across

			iterations and reference years (MW)
USE_MIN	numeric(12,2)		Minimum unserved energy, across iterations and reference years (MW)
USE_AVERAGE	numeric(12,2)		Average unserved energy, across iterations and reference years (MW)
USE_EVENT_AVERAGE	numeric(12,2)		Average unserved energy event size, across iterations and reference years (MW)
TOTALSCHEDULEDGEN90	numeric(12,2)		The 90th percentile for scheduled generation across iterations and reference years (MW)
TOTALSCHEDULEDGEN50	numeric(12,2)		The 50th percentile for scheduled generation across iterations and reference years (MW)
TOTALSCHEDULEDGEN10	numeric(12,2)		The 10th percentile for scheduled generation across iterations and reference years (MW)
TOTALINTERMITTENTGEN90	numeric(12,2)		The 90th percentile for intermittent generation, across iterations and reference years (MW)
TOTALINTERMITTENTGEN50	numeric(12,2)		The 50th percentile for intermittent generation, across iterations and reference years (MW)
TOTALINTERMITTENTGEN10	numeric(12,2)		The 10th percentile for intermittent generation, across iterations and reference years (MW)
DEMANDSIDEPARTICIPATION90	numeric(12,2)		The 90th percentile for demand side participation, across iterations and reference years (MW)
DEMANDSIDEPARTICIPATION50	numeric(12,2)		The 50th percentile for demand side participation, across iterations and reference years (MW)
DEMANDSIDEPARTICIPATION10	numeric(12,2)		The 10th percentile for demand side participation, across iterations and reference years (MW)
LASTCHANGED	datetime		Last date and time record changed
TOTALSEMISCHEDULEGEN90	numeric(12,2)		The 90% percentile for semi-scheduled generation across iterations and reference years (MW)
TOTALSEMISCHEDULEGEN50	numeric(12,2)		The 50% percentile for semi-scheduled generation across iterations and reference years (MW)
TOTALSEMISCHEDULEGEN10	numeric(12,2)		The 10% percentile for semi-scheduled generation across iterations and reference years (MW)

6.4 Table: MTPASA_REGIONSUMMARY

Name	MTPASA_REGIONSUMMARY
Comment	Region Results summary over aggregation periods.

6.4.1 Description

MTPASA_REGIONSUMMARY is public data.

6.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

6.4.3 Primary Key Columns

Name
AGGREGATION_PERIOD
DEMAND_POE_TYPE
PERIOD_ENDING
REGIONID
RUN_DATETIME
RUN_NO
RUNTYPE

6.4.4 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Date processing of the run begins.
RUN_NO	numeric(4)	X	Unique run id.
RUNTYPE	varchar(20)	X	Type of run. Always RELIABILITY
DEMAND_POE_TYPE	varchar(20)	X	Demand POE type used. Value are POE10, POE50
AGGREGATION_PERIOD	varchar(20)	X	Period data is aggregated over. Values are YEAR, MONTH
PERIOD_ENDING	datetime	X	Datetime of day at end of period (i.e. last day of month or year reported)
REGIONID	varchar(20)	X	The unique region identifier
NATIVEDEMAND	numeric(12,2)		Native demand calculated from Operational As Generated trace supplied by Energy Forecasting
USE_PERCENTILE10	numeric(12,2)		Unserved energy period amount at the 10th percentile of iterations and reference years (MWh)
USE_PERCENTILE20	numeric(12,2)		Unserved energy period amount at the 20th percentile of iterations and reference years (MWh)
USE_PERCENTILE30	numeric(12,2)		Unserved energy period amount at the 30th percentile of iterations and reference years (MWh)
USE_PERCENTILE40	numeric(12,2)		Unserved energy period amount at the 40th percentile of iterations and reference years (MWh)

USE_PERCENTILE50	numeric(12,2)		Unserved energy period amount at the 50th percentile of iterations and reference years (MWh)
USE_PERCENTILE60	numeric(12,2)		Unserved energy period amount at the 60th percentile of iterations and reference years (MWh)
USE_PERCENTILE70	numeric(12,2)		Unserved energy period amount at the 70th percentile of iterations and reference years (MWh)
USE_PERCENTILE80	numeric(12,2)		Unserved energy period amount at the 80th percentile of iterations and reference years (MWh)
USE_PERCENTILE90	numeric(12,2)		Unserved energy period amount at the 90th percentile of iterations and reference years (MWh)
USE_PERCENTILE100	numeric(12,2)		Unserved energy period amount at the 100th percentile of iterations and reference years (MWh)
USE_AVERAGE	numeric(12,2)		Average period unserved energy across iterations and reference years (MWh)
NUMBEROFITERATIONS	numeric(12,2)		Total number of iterations and reference years performed
USE_NUMBEROFITERATIONS	numeric(12,2)		Number of iterations and reference years showing unserved energy
USE_EVENT_MAX	numeric(12,2)		Maximum unserved energy event size across all half hourly intervals and iterations and reference years that have unserved energy>0 (MW)
USE_EVENT_UPPERQUARTILE	numeric(12,2)		Upper quartile unserved energy event size across all half hourly intervals and iterations and reference years that have unserved energy>0 (MW)
USE_EVENT_MEDIAN	numeric(12,2)		Median unserved energy event size across all half hourly intervals and iterations and reference years that have unserved energy>0 (MW)
USE_EVENT_LOWERQUARTILE	numeric(12,2)		Lower quartile unserved energy event size across all half hourly intervals and iterations and reference years that have unserved energy>0 (MW)
USE_EVENT_MIN	numeric(12,2)		Minimum unserved energy event size across all half hourly intervals and iterations and reference years that have unserved energy>0 (MW)
WEIGHT	numeric(16,6)		Fixed Values of 0.696 for 50 POE and 0.304 for 10 POE.
USE_WEIGHTED_AVG	numeric(16,6)		Weighted average USE per region = (USE_AVERAGE_POE10/NATIVE_DEMAND_POE_10*WEIGHT_POE_10 + USE_AVERAGE_POE50/NATIVE_DEMAND_POE_50*WEIGHT_POE_50)*100
LRC	numeric(12,2)		LRC Condition reported (Value=1) if USE_WEIGHTED_AVG >= 0.002% otherwise (Value=0)
LASTCHANGED	datetime		Last date and time record changed

7 Package: P5MIN

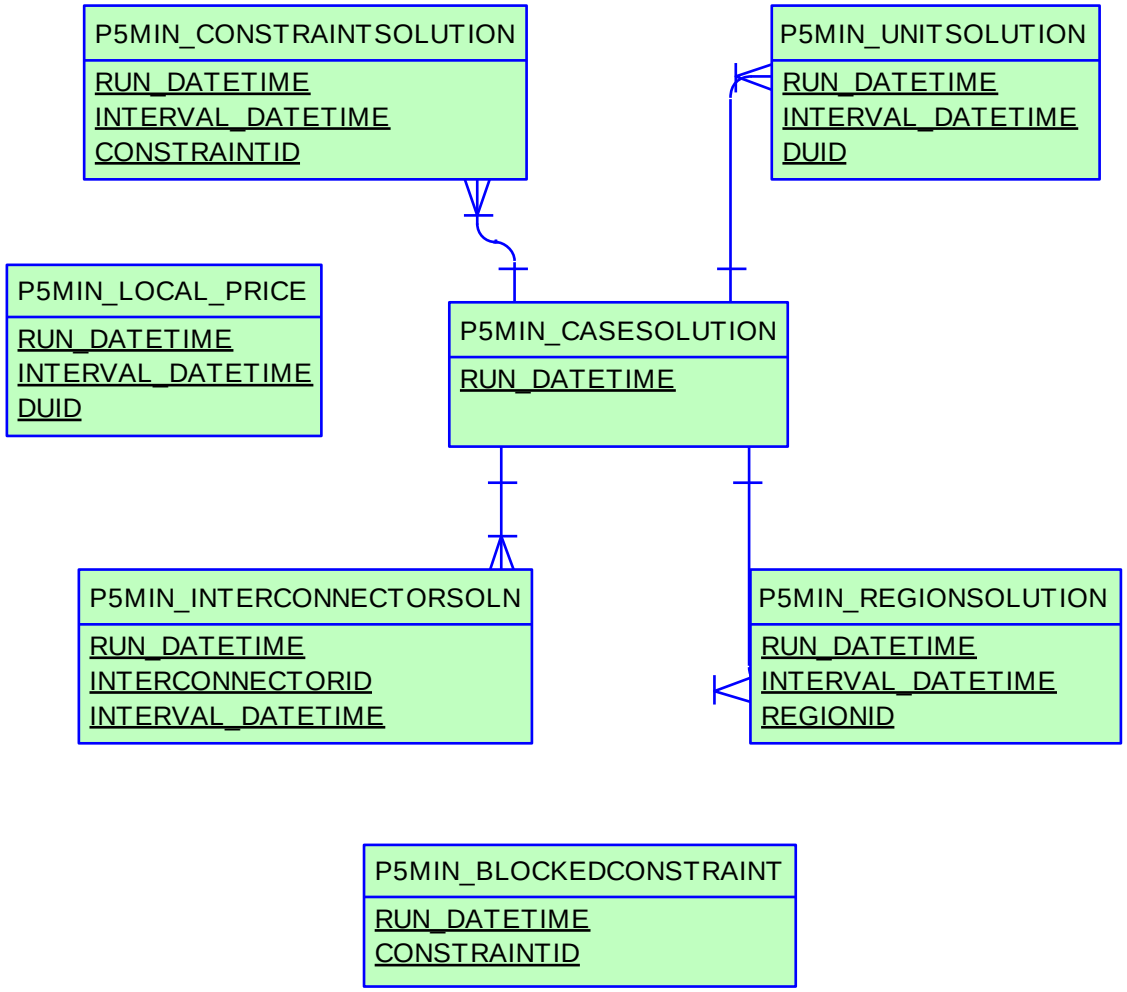
Name P5MIN

Comment Results from a published Five-Minute Predispatch Run

7.1 List of tables

Name	Comment
P5MIN_CASESOLUTION	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_CASESOLUTION shows one record containing results pertaining to the entire solution.
P5MIN_CONSTRAINTSOLUTION	The Five-Minute Pre-Dispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The Five-Minute Pre-dispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_CONSTRAINTSOLUTION shows binding and violated constraint results from the capacity evaluation, including the RHS value.
P5MIN_INTERCONNECTORSOLN	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_INTERCONNECTORSOLN sets out the results of the capacity evaluation for Interconnectors, including the calculated limits for the interval.
P5MIN_REGIONSOLUTION	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.
P5MIN_UNITSOLUTION	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_UNITSOLUTION shows the Unit results from the capacity evaluations for each period of the study.

7.2 Diagram: Entities: P5MIN



7.3 Table: P5MIN_CASESOLUTION

Name	P5MIN_CASESOLUTION
Comment	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_CASESOLUTION shows one record containing results pertaining to the entire solution.

7.3.1 Description

P5MIN_CASESOLUTION data is public, so is available to all participants.

Source

P5MIN_CASESOLUTION updates every 5 minutes.

Volume

Rows per day: 288

7.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

7.3.3 Primary Key Columns

Name
RUN_DATETIME

7.3.4 Index Columns

Name
LASTCHANGED

7.3.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Unique Timestamp Identifier for this study
STARTINTERVAL_DATETIME	varchar(20)		Date and Time of first interval in study
TOTALOBJECTIVE	numeric(27,10)		The Objective function from the LP
NONPHYSICALLOSSES	numeric(1,0)		Flag to indicate non-physical losses occurred in this study
TOTALAREAGENVIOLATION	numeric(15,5)		Sum of Regional Energy balance violations
TOTALINTERCONNECTORVIOLATION	numeric(15,5)		Sum of Interconnector violations of standing data limits
TOTALGENERICVIOLATION	numeric(15,5)		Sum of Generic Constraint violations
TOTALRAMPRATEVIOL	numeric(15,5)		Sum of Unit Ramp Rate violations

ATION			
TOTALUNITMWCAPACITYVIOLATION	numeric(15,5)		Sum of unit capacity violations
TOTAL5MINVIOLATION	numeric(15,5)		Sum of regional 5 min FCAS violations
TOTALREGVIOLATION	numeric(15,5)		Sum of regional regulation FCAS violations
TOTAL6SECVIOLATION	numeric(15,5)		Sum of regional 6 sec FCAS violations
TOTAL60SECVIOLATION	numeric(15,5)		Sum of regional 60 sec FCAS violations
TOTALENERGYCONSTRVIOLATION	numeric(15,5)		Sum of unit energy constrained violations
TOTALENERGYOFFERVIOLATION	numeric(15,5)		Sum of unit offer violations
TOTALASPROFILEVIOLATION	numeric(15,5)		Sum of unit FCAS profile offer violations
TOTALFASTSTARTVIOLATION	numeric(15,5)		Sum of unit Fast start profile violations
LASTCHANGED	datetime		Last changed date and time of this record
INTERVENTION	numeric(2,0)		Flag to indicate if this Predispatch case includes an intervention pricing run: 0 = case does not include an intervention pricing run, 1 = case does include an intervention pricing run. This field has a default value of 0 and is not nullable

7.4 Table: P5MIN_CONSTRAINTSOLUTION

Name	P5MIN_CONSTRAINTSOLUTION
Comment	The Five-Minute Pre-Dispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The Five-Minute Pre-dispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_CONSTRAINTSOLUTION shows binding and violated constraint results from the capacity evaluation, including the RHS value.

7.4.1 Description

P5MIN_CONSTRAINTSOLUTION is public data, so is available to all participants.

Source

P5MIN_CONSTRAINTSOLUTION updates every five minutes.

Volume

Rows per day: 57600

7.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private & Public

7.4.3 Primary Key Columns

Name
CONSTRAINTID
INTERVAL_DATETIME
RUN_DATETIME

7.4.4 Index Columns

Name
LASTCHANGED

7.4.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	datetime	X	The unique identifier for the interval within this study
CONSTRAINTID	varchar(20)	X	Constraint identifier (synonymous with GenConID)
RHS	numeric(15,5)		Right Hand Side value in the capacity evaluation
MARGINALVALUE	numeric(15,5)		Marginal cost of constraint (>0 if binding)
VIOLATIONDEGREE	numeric(15,5)		Amount of Violation (>0 if violating)
LASTCHANGED	datetime		Last date and time record changed

DUID	varchar(20)		DUID to which the Constraint is confidential. Null denotes non-confidential
GENCONID_EFFECTIVEDATE	datetime		Effective date of the Generic Constraint (ConstraintID). This field is used to track the version of this generic constraint applied in this dispatch interval
GENCONID_VERSIONNO	numeric(22,0)		Version number of the Generic Constraint (ConstraintID). This field is used to track the version of this generic constraint applied in this dispatch interval
LHS	numeric(15,5)		Aggregation of the constraints LHS term solution values
INTERVENTION	numeric(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)

7.5 Table: P5MIN_INTERCONNECTORSOLN

Name	P5MIN_INTERCONNECTORSOLN
Comment	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_INTERCONNECTORSOLN sets out the results of the capacity evaluation for Interconnectors, including the calculated limits for the interval.

7.5.1 Description

P5MIN_INTERCONNECTORSOLN is public data, so is available to all participants.

Source

P5MIN_INTERCONNECTORSOLN updates every 5 minutes.

Volume

Rows per day: 1440

Based on 200 interconnector/binding constraints per interval

7.5.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

7.5.3 Primary Key Columns

Name
INTERCONNECTORID
INTERVAL_DATETIME
RUN_DATETIME

7.5.4 Index Columns

Name
LASTCHANGED

7.5.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Unique Timestamp Identifier for this study
INTERCONNECTORID	varchar(10)	X	Interconnector identifier
INTERVAL_DATETIME	datetime	X	The unique identifier for the interval within this study
METEREDMWFLOW	numeric(15,5)		SCADA MW Flow measured at Run start. 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.

MWFLOW	numeric(15,5)		Cleared Interconnector loading level (MW)
MWLOSSES	numeric(15,5)		Interconnector Losses at cleared flow
MARGINALVALUE	numeric(15,5)		Marginal cost of Interconnector standing data limits (if binding)
VIOLATIONDEGREE	numeric(15,5)		Violation of Interconnector standing data limits
MNSP	numeric(1,0)		Flag indicating MNSP registration
EXPORTLIMIT	numeric(15,5)		Calculated Interconnector limit of exporting energy on the basis of invoked constraints and static interconnector export limit
IMPORTLIMIT	numeric(15,5)		Calculated Interconnector limit of importing energy on the basis of invoked constraints and static interconnector import limit. Note unlike the input interconnector import limit this is a directional quantity and should be defined with respect to the interconnector flow.
MARGINALLOSS	numeric(15,5)		Marginal loss factor at the cleared flow
EXPORTGENCONID	varchar(20)		Generic Constraint setting the export limit
IMPORTGENCONID	varchar(20)		Generic Constraint setting the import limit
FCASEXPORTLIMIT	numeric(15,5)		Calculated export limit applying to energy + Frequency Controlled Ancillary Services.
FCASIMPORTLIMIT	numeric(15,5)		Calculated import limit applying to energy + Frequency Controlled Ancillary Services.
LASTCHANGED	datetime		Last changed date of this record
LOCAL_PRICE_ADJUSTMENT_EXPORT	numeric(10,2)		Aggregate Constraint contribution cost of this Interconnector: Sum(MarginalValue x Factor) for all relevant Constraints, for Export (Factor >= 0)
LOCALLY_CONSTRAINED_EXPORT	numeric(1,0)		Key for Local_Price_Adjustment_Export: 2 = at least one Outage Constraint; 1 = at least 1 System Normal Constraint (and no Outage Constraint); 0 = No System Normal or Outage Constraints
LOCAL_PRICE_ADJUSTMENT_IMPORT	numeric(10,2)		Aggregate Constraint contribution cost of this Interconnector: Sum(MarginalValue x Factor) for all relevant Constraints, for Import (Factor >= 0)
LOCALLY_CONSTRAINED_IMPORT	numeric(1,0)		Key for Local_Price_Adjustment_Import: 2 = at least one Outage Constraint; 1 = at least 1 System Normal Constraint (and no Outage Constraint); 0 = No System Normal or Outage Constraints
INTERVENTION	numeric(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)

7.6 Table: P5MIN_REGIONSOLUTION

Name	P5MIN_REGIONSOLUTION
Comment	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_REGIONSOLUTION shows the results of the regional capacity, maximum surplus reserve and maximum spare capacity evaluations for each period of the study.

7.6.1 Description

P5MIN_REGIONSOLUTION is public data, so is available to all participants.

Source

P5MIN_REGIONSOLUTION updates every 5 minutes.

Volume

Rows per day: 1440

7.6.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

7.6.3 Primary Key Columns

Name
INTERVAL_DATETIME
REGIONID
RUN_DATETIME

7.6.4 Index Columns

Name
LASTCHANGED

7.6.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	datetime	X	The unique identifier for the interval within this study
REGIONID	varchar(10)	X	Region Identifier

RRP	numeric(15,5)		Region Reference Price (Energy)
ROP	numeric(15,5)		Region Override Price (Energy)
EXCESSGENERATION	numeric(15,5)		Total Energy Imbalance (MW)
RAISE6SECRRP	numeric(15,5)		Region Reference Price (Raise6Sec)
RAISE6SECROP	numeric(15,5)		Original regional price (Raise6Sec)
RAISE60SECRRP	numeric(15,5)		Region Reference Price (Raise60Sec)
RAISE60SECROP	numeric(15,5)		Original regional price (Raise60Sec)
RAISE5MINRRP	numeric(15,5)		Region Reference Price (Raise5Min)
RAISE5MINROP	numeric(15,5)		Original regional price (Raise5Min)
RAISEREGRRP	numeric(15,5)		Region Reference Price (RaiseReg)
RAISEREGROP	numeric(15,5)		Original regional price (RaiseReg)
LOWER6SECRRP	numeric(15,5)		Region Reference Price (Lower6Sec)
LOWER6SECROP	numeric(15,5)		Original regional price (Lower6Sec)
LOWER60SECRRP	numeric(15,5)		Region Reference Price (Lower60Sec)
LOWER60SECROP	numeric(15,5)		Original regional price (Lower60Sec)
LOWER5MINRRP	numeric(15,5)		Region Reference Price (Lower5Min)
LOWER5MINROP	numeric(15,5)		Original regional price (Lower5Min)
LOWERREGRRP	numeric(15,5)		Region Reference Price (LowerReg)
LOWERREGROP	numeric(15,5)		Original regional price (LowerReg)
TOTALDEMAND	numeric(15,5)		Regional Demand - NB NOT net of Interconnector flows or Loads
AVAILABLEGENERATION	numeric(15,5)		Regional Available generation
AVAILABLELOAD	numeric(15,5)		Regional Available Load
DEMANDFORECAST	numeric(15,5)		Predicted change in regional demand for this interval
DISPATCHABLEGENERATION	numeric(15,5)		Regional Generation Dispatched
DISPATCHABLELOAD	numeric(15,5)		Regional Load Dispatched
NETINTERCHANGE	numeric(15,5)		Net interconnector Flows
LOWER5MINDISPATCH	numeric(15,5)		Not used since Dec 2003. Lower 5 min MW dispatch
LOWER5MINIMPORT	numeric(15,5)		Not used since Dec 2003. Lower 5 min MW imported
LOWER5MINLOCALDISPATCH	numeric(15,5)		Lower 5 min local dispatch
LOWER5MINLOCALREQ	numeric(15,5)		Not used since Dec 2003. Lower 5 min local requirement
LOWER5MINREQ	numeric(15,5)		Not used since Dec 2003. Lower 5 min total requirement
LOWER60SECDISPATCH	numeric(15,5)		Not used since Dec 2003. Lower 60 sec MW dispatch
LOWER60SECIMPORT	numeric(15,5)		Not used since Dec 2003. Lower 60 sec MW imported
LOWER60SECLOCALDISPATCH	numeric(15,5)		Lower 60 sec local dispatch
LOWER60SECLOCALREQ	numeric(15,5)		Not used since Dec 2003. Lower 60 sec local requirement
LOWER60SECREQ	numeric(15,5)		Not used since Dec 2003. Lower 60 sec total requirement
LOWER6SECDISPATCH	numeric(15,5)		Not used since Dec 2003. Lower 6 sec MW dispatch
LOWER6SECIMPORT	numeric(15,5)		Not used since Dec 2003. Lower 6 sec MW imported
LOWER6SECLOCALDISPATCH	numeric(15,5)		Lower 6 sec local dispatch
LOWER6SECLOCALREQ	numeric(15,5)		Not used since Dec 2003. Lower 6 sec local requirement
LOWER6SECREQ	numeric(15,5)		Not used since Dec 2003. Lower 6 sec

			total requirement
RAISE5MINDISPATCH	numeric(15,5)		Not used since Dec 2003. Total Raise 5 min MW dispatch
RAISE5MINIMPORT	numeric(15,5)		Not used since Dec 2003. Raise 5 min MW imported
RAISE5MINLOCALDISPATCH	numeric(15,5)		Raise 5 min local dispatch
RAISE5MINLOCALREQ	numeric(15,5)		Not used since Dec 2003. Raise 5 min local requirement
RAISE5MINREQ	numeric(15,5)		Not used since Dec 2003. Raise 5 min total requirement
RAISE60SECDISPATCH	numeric(15,5)		Not used since Dec 2003. Raise 60 sec MW dispatch
RAISE60SECIMPORT	numeric(15,5)		Not used since Dec 2003. Raise 60 sec MW imported
RAISE60SECLOCALDISPATCH	numeric(15,5)		Raise 50 sec local dispatch
RAISE60SECLOCALREQ	numeric(15,5)		Not used since Dec 2003. Raise 60 sec local requirement
RAISE60SECREQ	numeric(15,5)		Not used since Dec 2003. Raise 60 sec total requirement
RAISE6SECDISPATCH	numeric(15,5)		Not used since Dec 2003. Raise 6 sec MW dispatch
RAISE6SECIMPORT	numeric(15,5)		Not used since Dec 2003. Raise 6 sec MW imported
RAISE6SECLOCALDISPATCH	numeric(15,5)		Raise 6 sec local dispatch
RAISE6SECLOCALREQ	numeric(15,5)		Not used since Dec 2003. Raise 6 sec local requirement
RAISE6SECREQ	numeric(15,5)		Not used since Dec 2003. Raise 6 sec total requirement
AGGREGATEDISPATCHERROR	numeric(15,5)		Aggregate dispatch error applied
INITIALSUPPLY	numeric(15,5)		Sum of initial generation and import for region
CLEAREDSUPPLY	numeric(15,5)		Sum of cleared generation and import for region
LOWERREGIMPORT	numeric(15,5)		Not used since Dec 2003. Lower Regulation MW imported
LOWERREGDISPATCH	numeric(15,5)		Not used since Dec 2003. Total Lower Regulation dispatch
LOWERREGLOCALDISPATCH	numeric(15,5)		Lower Regulation local dispatch
LOWERREGLOCALREQ	numeric(15,5)		Not used since Dec 2003. Lower Regulation local requirement
LOWERREGREQ	numeric(15,5)		Not used since Dec 2003. Lower Regulation total requirement
RAISEREGIMPORT	numeric(15,5)		Not used since Dec 2003. Raise Regulation MW imported
RAISEREGDISPATCH	numeric(15,5)		Not used since Dec 2003. Total Raise Regulation dispatch
RAISEREGLOCALDISPATCH	numeric(15,5)		Raise Regulation local dispatch
RAISEREGLOCALREQ	numeric(15,5)		Not used since Dec 2003. Raise Regulation local requirement
RAISEREGREQ	numeric(15,5)		Not used since Dec 2003. Raise Regulation total requirement
RAISE5MINLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min local requirement
RAISEREGLOCALVIOL	numeric(15,5)		Not used since Dec 2003. Violation (MW)

ATION			of Raise Reg local requirement
RAISE60SECLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 sec local requirement
RAISE6SECLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 sec local requirement
LOWER5MINLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min local requirement
LOWERREGLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg local requirement
LOWER60SECLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 sec local requirement
LOWER6SECLOCALVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 sec local requirement
RAISE5MINVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise 5 min requirement
RAISEREGVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise Reg requirement
RAISE60SECVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise 60 seconds requirement
RAISE6SECVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Raise 6 seconds requirement
LOWER5MINVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower 5 min requirement
LOWERREGVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower Reg requirement
LOWER60SECVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower 60 seconds requirement
LOWER6SECVIOLATION	numeric(15,5)		Not used since Dec 2003. Violation (MW) of Lower 6 seconds requirement
LASTCHANGED	datetime		Last date and time record changed
TOTALINTERMITTENTGENERATION	numeric(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	numeric(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-scheduled generation (MW).
UIGF	numeric(15,5)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SEMISCHEDULE_CLEAREDMW	numeric(15,5)		Regional aggregated Semi-Schedule generator Cleared MW
SEMISCHEDULE_COMPLIANCEMW	numeric(15,5)		Regional aggregated Semi-Schedule generator Cleared MW where Semi-Dispatch cap is enforced
INTERVENTION	numeric(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

7.7 Table: P5MIN_UNITSOLUTION

Name	P5MIN_UNITSOLUTION
Comment	The five-minute predispatch (P5Min) is a MMS system providing projected dispatch for 12 Dispatch cycles (one hour). The 5-minute Predispatch cycle runs every 5-minutes to produce a dispatch and pricing schedule to a 5-minute resolution covering the next hour, a total of twelve periods. P5MIN_UNITSOLUTION shows the Unit results from the capacity evaluations for each period of the study.

7.7.1 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

7.7.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

7.7.3 Primary Key Columns

Name
DUID
INTERVAL_DATETIME
RUN_DATETIME

7.7.4 Index Columns

Name
LASTCHANGED

7.7.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	datetime	X	The unique identifier for the interval within this study
DUID	varchar(10)	X	Dispatchable unit identifier
CONNECTIONPOINTID	varchar(12)		Connection point identifier for DUID
TRADETYPE	numeric(2,0)		Generator or Load
AGCSTATUS	numeric(2,0)		AGC Status from EMS: 1 = on, 0 = off
INITIALMW	numeric(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	numeric(15,5)		Target MW for end of period
RAMPDOWNRATE	numeric(15,5)		Ramp down rate (lessor of bid or telemetered rate).
RAMPUPRATE	numeric(15,5)		Ramp up rate (lessor of bid or telemetered rate).
LOWER5MIN	numeric(15,5)		Lower 5 min reserve target
LOWER60SEC	numeric(15,5)		Lower 60 sec reserve target
LOWER6SEC	numeric(15,5)		Lower 6 sec reserve target
RAISE5MIN	numeric(15,5)		Raise 5 min reserve target
RAISE60SEC	numeric(15,5)		Raise 60 sec reserve target
RAISE6SEC	numeric(15,5)		Raise 6 sec reserve target
LOWERREG	numeric(15,5)		Lower Regulation reserve target
RAISEREG	numeric(15,5)		Raise Regulation reserve target
AVAILABILITY	numeric(15,5)		Energy Availability (MW)
RAISE6SECFLAGS	numeric(3,0)		Raise 6sec status flag
RAISE60SECFLAGS	numeric(3,0)		Raise 60sec status flag
RAISE5MINFLAGS	numeric(3,0)		Raise 5min status flag
RAISEREGFLAGS	numeric(3,0)		Raise Reg status flag
LOWER6SECFLAGS	numeric(3,0)		Lower 6sec status flag
LOWER60SECFLAGS	numeric(3,0)		Lower 60sec status flag
LOWER5MINFLAGS	numeric(3,0)		Lower 5min status flag
LOWERREGFLAGS	numeric(3,0)		Lower Reg status flag
LASTCHANGED	datetime		Last date and time record changed
SEMIDISPATCHCAP	numeric(3,0)		Boolean representation flagging if the Target is Capped
INTERVENTION	numeric(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

8 Package: STPASA_SOLUTION

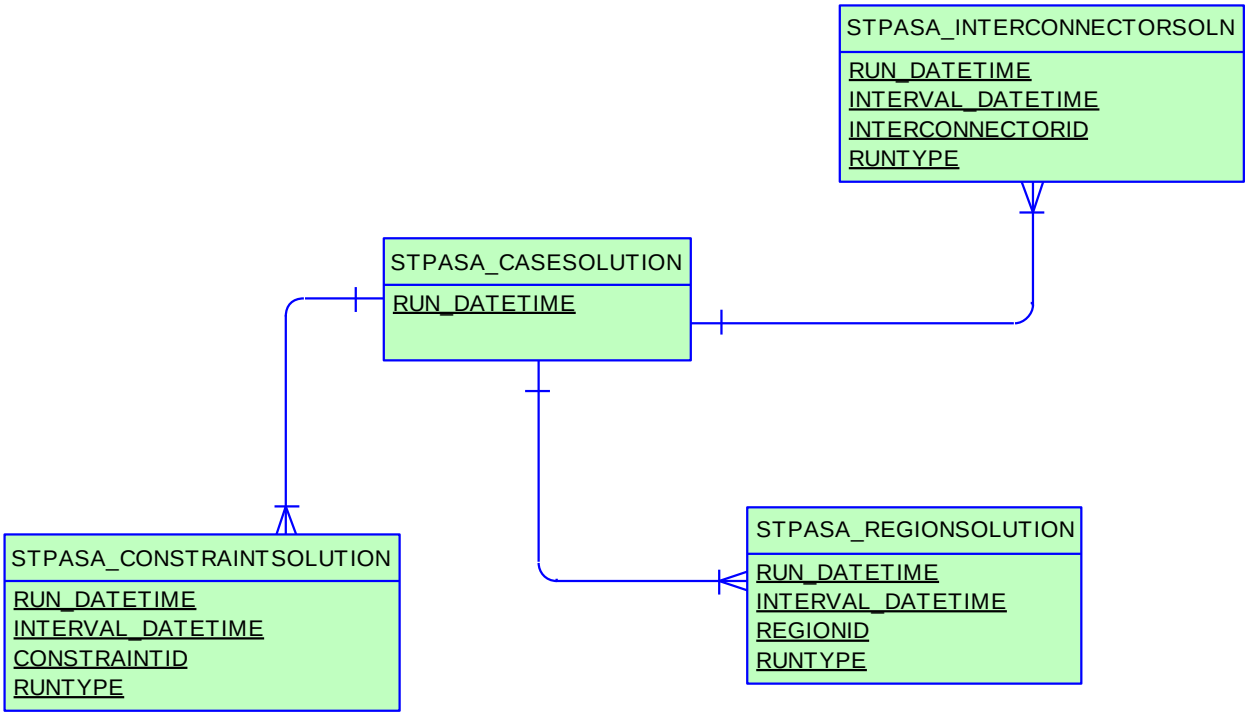
Name STPASA_SOLUTION

Comment Results from a published Short Term PASA Run

8.1 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.

8.2 Diagram: Entities: ST PASA Solution



8.3 Table: STPASA_REGIONSOLUTION

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

8.3.1 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

8.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

8.3.3 Primary Key Columns

Name
INTERVAL_DATETIME
REGIONID
RUN_DATETIME
RUNTYPE

8.3.4 Index Columns

Name
LASTCHANGED

8.3.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Unique Timestamp Identifier for this study
INTERVAL_DATETIME	datetime	X	The unique identifier for the interval within this study
REGIONID	varchar(10)	X	Region Identifier
DEMAND10	numeric(12,2)		Input value for 10% probability demand
DEMAND50	numeric(12,2)		Input value for 50% probability demand
DEMAND90	numeric(12,2)		Input value for 90% probability demand
RESERVEREQ	numeric(12,2)		Input reserve requirement
CAPACITYREQ	numeric(12,2)		Demand + Reserve Requirement
ENERGYREQDEMAND50	numeric(12,2)		Sum of: (Region Period Demand - given Demand50)/Period (sum by trading day, entered in first period of trading day, GWh)
UNCONSTRAINEDCAP	numeric(12,0)		Region energy unconstrained MW

ACITY			capacity subject to energy and network security constraints
CONSTRAINEDCAPACITY	numeric(12,0)		Available capacity (MW) in this region energy constrained MW capacity subject to energy and network security constraints
NETINTERCHANGEUNDERSCARCITY	numeric(12,2)		Net export in MW out of this region in the capacity adequacy evaluation. Export if > 0, Import if < 0.
SURPLUSCAPACITY	numeric(12,2)		Regional surplus capacity MW, +/- values indicate surplus/deficit capacity respectively
SURPLUSRESERVE	numeric(12,2)		Regional reserve surplus. +/- values indicate surplus/deficit reserve respectively
RESERVECONDITION	numeric(1,0)		The regional reserve condition: 0 Adequate, 1 LRC
MAXSURPLUSRESERVE	numeric(12,2)		The Maximum Surplus Reserve evaluated for this region in this period. Calculated for each region in turn.
MAXSPARECAPACITY	numeric(12,2)		The Maximum Spare Capacity evaluated for this region in this period. Calculated for each region in turn.
LORCONDITION	numeric(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	numeric(12,2)		Sum of MAXAVAIL quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
AGGREGATESCHEDULEDLOAD	numeric(12,2)		Sum of MAXAVAIL quantities bid by of all Scheduled Loads in a given Region for a given PERIODID.
LASTCHANGED	datetime		Last changed date of this record
AGGREGATEPASAAVAILABILITY	numeric(12,0)		Sum of PASAAVAILABILITY quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
RUNTYPE	varchar(20)	X	Type of run. Values are RELIABILITY_LRC and OUTAGE_LRC
ENERGYREQDEMAND10	numeric(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	numeric(16,6)		Region Reserve Level for LOR1 used. Can be static value or calculated value if an interconnector is a credible contingency
CALCULATEDLOR2LEVEL	numeric(16,6)		Region Reserve Level for LOR2 used. Can be static value or calculated value if an interconnector is a credible contingency
MSRNETINTERCHANGEUNDERSCARCITY	numeric(12,2)		Net interconnector flow from the region for this interval from the MSR assessment
LORNETINTERCHANGEUNDERSCARCITY	numeric(12,2)		Net interconnector flow from the region for this interval from the LOR assessment
TOTALINTERMITTENTGENERATION	numeric(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	numeric(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-

			scheduled generation (MW).
UIGF	numeric(12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SemiScheduledCapacity	numeric(12,2)		Aggregate Regional UIGF availability
LOR_SemiScheduledCapacity	numeric(12,2)		Aggregate Regional UIGF availability for LOR
LCR	numeric(16,6)		Largest Credible Risk. MW value for highest credible contingency
LCR2	numeric(16,6)		Two Largest Creditable Risks. MW value for highest two credible contingencies.
FUM	numeric(16,6)		Forecasting Uncertainty Measure. MW value of reserve calculated as defined in the Reserve Level Declaration Guidelines

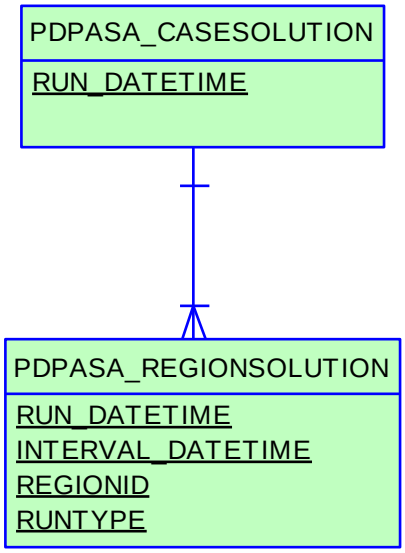
9 Package: PDPASA

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

9.1 List of tables

Name	Comment
PDPASA_REGIONSOLUTION	The PDPASA region solution data

9.2 Diagram: Entities: PD PASA



9.3 Table: PDPASA_REGIONSOLUTION

Name	PDPASA_REGIONSOLUTION
Comment	The PDPASA region solution data

9.3.1 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.

9.3.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

9.3.3 Primary Key Columns

Name
INTERVAL_DATETIME
REGIONID
RUN_DATETIME
RUNTYPE

9.3.4 Index Columns

Name
LASTCHANGED

9.3.5 Content

Name	Data Type	Mandatory	Comment
RUN_DATETIME	datetime	X	Case identifier by the time the case was run
INTERVAL_DATETIME	datetime	X	End date time of the interval
REGIONID	varchar(10)	X	Region identifier
DEMAND10	numeric(12,2)		10% Probability of Exceedance demand forecast
DEMAND50	numeric(12,2)		50% Probability of Exceedance demand forecast
DEMAND90	numeric(12,2)		90% Probability of Exceedance demand forecast
RESERVEREQ	numeric(12,2)		Region reserve requirement (MW)
CAPACITYREQ	numeric(12,2)		Capacity required to meet the demand and reserve levels in the capacity adequacy assessment.
ENERGYREQDEMAND50	numeric(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	numeric(12,0)		Aggregate generator capability from Non Energy Constrained plant including restrictions due to network constraints from the capacity adequacy (LRC) assessment.
CONSTRAINEDCAPACITY	numeric(12,0)		Aggregate generator capability from Energy Constrained plant including restrictions due to network constraints
NETINTERCHANGEUNDERSCARCITY	numeric(12,2)		Net interconnector flow from the region for this interval from the capacity adequacy (LRC) assessment.
SURPLUSCAPACITY	numeric(12,2)		Surplus capacity (MW) above the demand, scheduled load and net interchange in this region from the capacity adequacy (LRC) assessment.
SURPLUSRESERVE	numeric(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	numeric(1,0)		Low Reserve Condition (LRC) flag for this region in this interval (1 - LRC, 0 - No LRC)
MAXSURPLUSRESERVE	numeric(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	numeric(12,2)		Maximum spare capacity (MW) above the demand able to be sourced to this region while meeting demands in other regions.
LORCONDITION	numeric(1,0)		Lack of Reserve Condition (LOR) flag for this region and interval (3 = LOR3, 2 = LOR2, 1 = LOR1, 0 = No LOR)
AGGREGATECAPACITYAVAILABLE	numeric(12,2)		Sum of MAXAVAIL quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
AGGREGATESCHEDUL	numeric(12,2)		Sum of MAXAVAIL quantities bid by of all

EDLOAD			Scheduled Loads in a given Region for a given PERIODID.
LASTCHANGED	datetime		Date time the record was created or modified changed
AGGREGATEPASAAVAILABILITY	numeric(12,0)		Sum of PASAAVAILABILITY quantities offered by all Scheduled Generators in a given Region for a given PERIODID.
RUNTYPE	varchar(20)	X	Type of run. Values are RELIABILITY_LRC and OUTAGE_LRC
ENERGYREQDEMAND10	numeric(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	numeric(16,6)		Region Reserve Level for LOR1 used. Can be static value or calculated value if an interconnector is a credible contingency
CALCULATEDLOR2LEVEL	numeric(16,6)		Region Reserve Level for LOR2 used. Can be static value or calculated value if an interconnector is a credible contingency
MSRNETINTERCHANGEUNDERSCARCITY	numeric(12,2)		Net interconnector flow from the region for this interval from the MSR assessment
LORNETINTERCHANGEUNDERSCARCITY	numeric(12,2)		Net interconnector flow from the region for this interval from the LOR assessment
TOTALINTERMITTENTGENERATION	numeric(15,5)		Allowance made for non-scheduled generation in the demand forecast (MW).
DEMAND_AND_NONSCHEDGEN	numeric(15,5)		Sum of Cleared Scheduled generation, imported generation (at the region boundary) and allowances made for non-scheduled generation (MW).
UIGF	numeric(12,2)		Regional aggregated Unconstrained Intermittent Generation Forecast of Semi-scheduled generation (MW).
SemiScheduledCapacity	numeric(12,2)		Aggregate Regional UIGF availability
LOR_SemiScheduledCapacity	numeric(12,2)		Aggregate Regional UIGF availability for LOR
LCR	numeric(16,6)		Largest Credible Risk. MW value for highest credible contingency
LCR2	numeric(16,6)		Two Largest Creditable Risks. MW value for highest two credible contingencies.
FUM	numeric(16,6)		Forecasting Uncertainty Measure. MW value of reserve calculated as defined in the Reserve Level Declaration Guidelines