# MMS DATA MODEL UPGRADE REPORT

| | |
|---|---|
| | MMS Data Model v4.27 Oracle |
| PREPARED BY: | IMT |
| DATE: | Released on: 14/11/2017 |

# Table of Contents

# 1 Description of model MMS Data Model v4.27 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 Current product supplied by AEMO for data transfer is Participant Data Replication (PDR), with some support for the superseded Parser.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.

# 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: BILLING_CONFIG

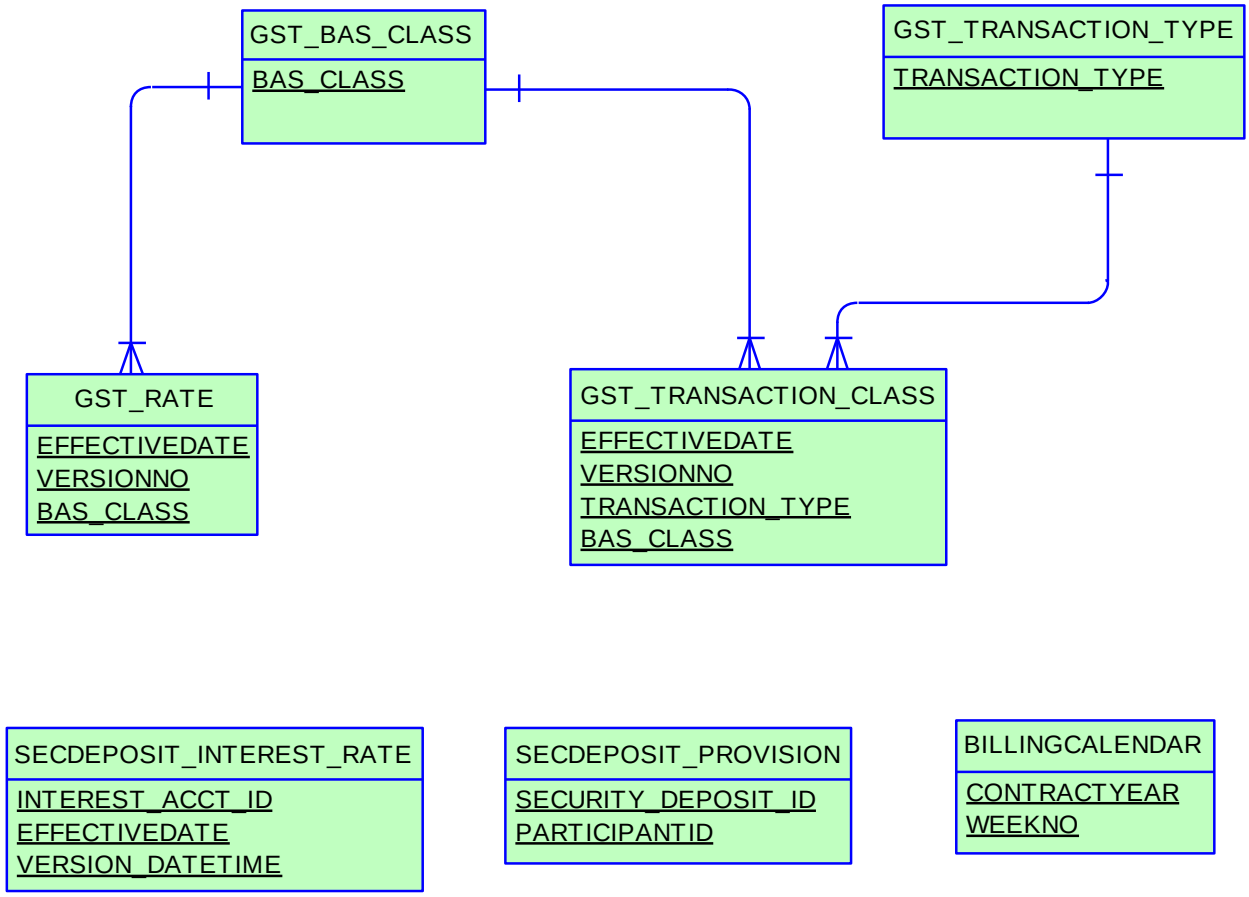
*Name* BILLING_CONFIG

*Comment* Configuration data for the Billing Process

## 3.1 List of tables

| Name | Comment |
|---|---|
| SECDEPOSIT_INTEREST_RATE | The security deposit interest rate on a daily basis. This is the public table published when the business enter and authorise a new daily interest rate |
| SECDEPOSIT_PROVISION | The security deposit provision entry details |

## 3.2 Diagram: Entities: Billing Config



## 3.3 Table: SECDEPOSIT_INTEREST_RATE

*Name* SECDEPOSIT_INTEREST_RATE

*Comment* The security deposit interest rate on a daily basis. This is the public table published when the business enter and authorise a new daily interest rate

### 3.3.1 Description

SECDEPOSIT_INTEREST_RATE data is public to all participants.

### 3.3.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 3.3.3 Primary Key Columns

Name
EFFECTIVEDATE
INTEREST_ACCT_ID
VERSION_DATETIME

### 3.3.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| INTEREST_ACCT_ID | VARCHAR2(20) | X | The interest account ID for calculating the interest payment |
| EFFECTIVEDATE | DATE | X | The effective date of the interest rate change |
| VERSION_DATETIME | DATE | X | Date Time this record was added |
| INTEREST_RATE | NUMBER(18,8) | | The interest rate for the interest account ID as on the effective date. |

## 3.4 Table: SECDEPOSIT_PROVISION

*Name* SECDEPOSIT_PROVISION

*Comment* The security deposit provision entry details

### 3.4.1 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Private |

### 3.4.2 Primary Key Columns

Name
PARTICIPANTID
SECURITY_DEPOSIT_ID

### 3.4.3 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| SECURITY_DEPOSIT_ID | VARCHAR2(20) | X | The security deposit ID |
| PARTICIPANTID | VARCHAR2(20) | X | The Participant ID linked to the security deposit ID |
| TRANSACTION_DATE | DATE | | The date the security deposit ID is entered and authorised by settlements |
| MATURITY_CONTRACTYEAR | NUMBER(4,0) | | The contract year of the billing week when the security deposit is maturing |
| MATURITY_WEEKNO | NUMBER(3,0) | | The week no of the billing week when the security deposit is maturing |
| AMOUNT | NUMBER(18,8) | | The security deposit amount |
| INTEREST_RATE | NUMBER(18,8) | | The interest rate assigned to the security deposit ID. Null if INTEREST_CALC_TYPE <> FIXED |
| INTEREST_CALC_TYPE | VARCHAR2(20) | | FIXED OR DAILY |
| INTEREST_ACCT_ID | VARCHAR2(20) | | The Interest Account ID for calculating the Interest Payment. This is NULL if the INTEREST_CALC_TYPE = FIXED |

# 4 Package: BILLING_RUN

*Name* BILLING_RUN

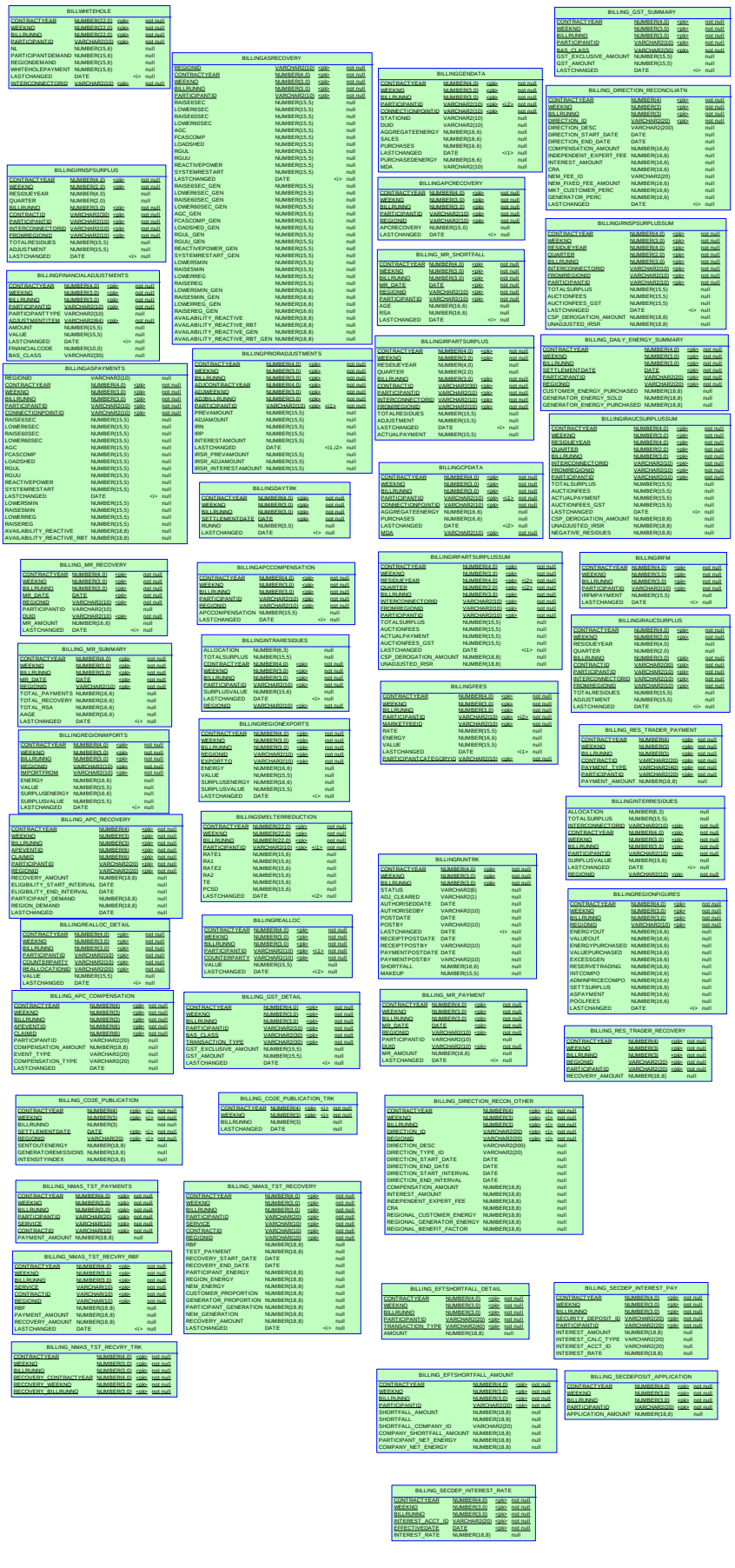
*Comment* Results from a published Billing Run. The settlement data and billing run data are updated daily between 6am and 8am for AEMO's prudential processes. In a normal week, AEMO publishes one PRELIM, one FINAL and two REVISION runs in addition to the daily runs.

Each billing run is uniquely identified by contract year, week no and bill run no.

## 4.1 List of tables

| Name | Comment |
|---|---|
| BILLING_EFTSHORTFALL_AMOUNT | The billing shortfall run amounts |
| BILLING_EFTSHORTFALL_DETAIL | The Billing Shortfall Run Amount details |
| BILLING_SECDEP_INTEREST_PAY | The interest amount for security deposit calculated by billing, based on whether it is a fixed/floating rate |
| BILLING_SECDEP_INTEREST_RATE | The DAILY interest rates used by billing when calculating the interest amount |
| BILLING_SECDEPOSIT_APPLICATION | The security deposit application details |

## 4.2 Diagram: Entities: Billing Run



## 4.3 Table: BILLING_EFTSHORTFALL_AMOUNT

*Name* BILLING_EFTSHORTFALL_AMOUNT

*Comment* The billing shortfall run amounts

### 4.3.1 Description

BILLING_EFTSHORTFALL_AMOUNT data is confidential, and is available only to the relevant participant.

### 4.3.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Private |

### 4.3.3 Primary Key Columns

Name
BILLRUNNO
CONTRACTYEAR
PARTICIPANTID
WEEKNO

### 4.3.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| CONTRACTYEAR | NUMBER(4,0) | X | The shortfall affected billing contract year |
| WEEKNO | NUMBER(3,0) | X | The shortfall affected billing week no |
| BILLRUNNO | NUMBER(3,0) | X | The shortfall affected billing week run no |
| PARTICIPANTID | VARCHAR2(20) | X | The participant affected by the shortfall calculation |
| SHORTFALL_AMOUNT | NUMBER(18,8) | | The Participant shortfall amount |
| SHORTFALL | NUMBER(18,8) | | The market shortfall amount |
| SHORTFALL_COMPANY_ID | VARCHAR2(20) | | The Company ID associated with the Participant ID used in the shortfall calculation |
| COMPANY_SHORTFALL_AMOUNT | NUMBER(18,8) | | The shortfall amount for the Company ID associated with the Participant ID used in the shortfall calculation |
| PARTICIPANT_NET_ENERGY | NUMBER(18,8) | | The participant NET energy used in shortfall calculation |
| COMPANY_NET_ENERGY | NUMBER(18,8) | | The NET energy for the Company ID associated with the Participant ID used in the shortfall calculation |

## 4.4 Table: BILLING_EFTSHORTFALL_DETAIL

*Name* BILLING_EFTSHORTFALL_DETAIL

*Comment* The Billing Shortfall Run Amount details

### 4.4.1 Description

BILLING_EFTSHORTFALL_DETAIL data is confidential, and is available only to the relevant participant.

### 4.4.2 Notes

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

### 4.4.3 Primary Key Columns

Name
BILLRUNNO
CONTRACTYEAR
PARTICIPANTID
TRANSACTION_TYPE
WEEKNO

### 4.4.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| CONTRACTYEAR | NUMBER(4,0) | X | The shortfall affected billing contract year |
| WEEKNO | NUMBER(3,0) | X | The shortfall affected billing week no |
| BILLRUNNO | NUMBER(3,0) | X | The shortfall affected billing week run no |
| PARTICIPANTID | VARCHAR2(20) | X | The participant affected by the shortfall calculation |
| TRANSACTION_TYPE | VARCHAR2(40) | X | The transaction type details associated with the shortfall calculation |
| AMOUNT | NUMBER(18,8) | | The amount for each transaction type |

## 4.5 Table: BILLING_SECDEP_INTEREST_PAY

| | |
|---|---|
| *Name* | BILLING_SECDEP_INTEREST_PAY |
| *Comment* | The interest amount for security deposit calculated by billing, based on whether it is a fixed/floating rate |

### 4.5.1 Description

BILLING_SECDEP_INTEREST_PAY data is confidential, and is available only to the relevant participant.

### 4.5.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Private |

### 4.5.3 Primary Key Columns

Name
BILLRUNNO
CONTRACTYEAR
PARTICIPANTID
SECURITY_DEPOSIT_ID
WEEKNO

### 4.5.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| CONTRACTYEAR | NUMBER(4,0) | X | The billing contract year the SDA application is processed and interest calculated |
| WEEKNO | NUMBER(3,0) | X | The billing week no. the SDA application is processed and interest calculated |
| BILLRUNNO | NUMBER(3,0) | X | The billing run no. the SDA application is processed and interest calculated |
| SECURITY_DEPOSIT_ID | VARCHAR2(20) | X | The security deposit ID for which billing has calculated the Interest amount |
| PARTICIPANTID | VARCHAR2(20) | X | The participant ID of the security deposit for whom the interest is paid |
| INTEREST_AMOUNT | NUMBER(18,8) | | The security deposit interest amount calculated by billing |
| INTEREST_CALC_TYPE | VARCHAR2(20) | | FIXED or DAILY |
| INTEREST_ACCT_ID | VARCHAR2(20) | | The interest account ID used by billing for calculating the interest.<br>NULL if INTEREST_CALC_TYPE = FIXED |
| INTEREST_RATE | NUMBER(18,8) | | The STATIC Interest Rate used by Billing for calculating the interest. This is NULL if INTEREST_CALC_TYPE <> FIXED |

## 4.6 Table: BILLING_SECDEP_INTEREST_RATE

*Name* BILLING_SECDEP_INTEREST_RATE

*Comment* The DAILY interest rates used by billing when calculating the interest amount

### 4.6.1 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 4.6.2 Primary Key Columns

Name
BILLRUNNO
CONTRACTYEAR
EFFECTIVEDATE
INTEREST_ACCT_ID
WEEKNO

### 4.6.3 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| CONTRACTYEAR | NUMBER(4,0) | X | The billing contract year the SDA application is processed and interest calculated |
| WEEKNO | NUMBER(3,0) | X | The billing week no. the SDA application is processed and interest calculated |
| BILLRUNNO | NUMBER(3,0) | X | The billing run no. the SDA application is processed and interest calculated |
| INTEREST_ACCT_ID | VARCHAR2(20) | X | The interest account ID used by security deposit interest calculation |
| EFFECTIVEDATE | DATE | X | The effective date of the new interest change |
| INTEREST_RATE | NUMBER(18,8) | | The interest rate to apply from the effective date |

## 4.7 Table: BILLING_SECDEPOSIT_APPLICATION

| | |
|---|---|
| *Name* | BILLING_SECDEPOSIT_APPLICATION |
| *Comment* | The security deposit application details |

### 4.7.1 Description

BILLING_SECDEPOSIT_APPLICATION data is confidential, and is available only to the relevant participant.

### 4.7.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Private |

### 4.7.3 Primary Key Columns

Name
BILLRUNNO
CONTRACTYEAR
PARTICIPANTID
WEEKNO

### 4.7.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| CONTRACTYEAR | NUMBER(4,0) | X | The billing contract year where (security deposit application) SDA is applied |
| WEEKNO | NUMBER(3,0) | X | The billing week no. where the SDA is applied |
| BILLRUNNO | NUMBER(3,0) | X | The billing run no. where the SDA is applied |
| PARTICIPANTID | VARCHAR2(20) | X | The Participant ID lodging the SDA |
| APPLICATION_AMOUNT | NUMBER(18,8) | | The SDA application amount |

# 5 Package: DEMAND_FORECASTS

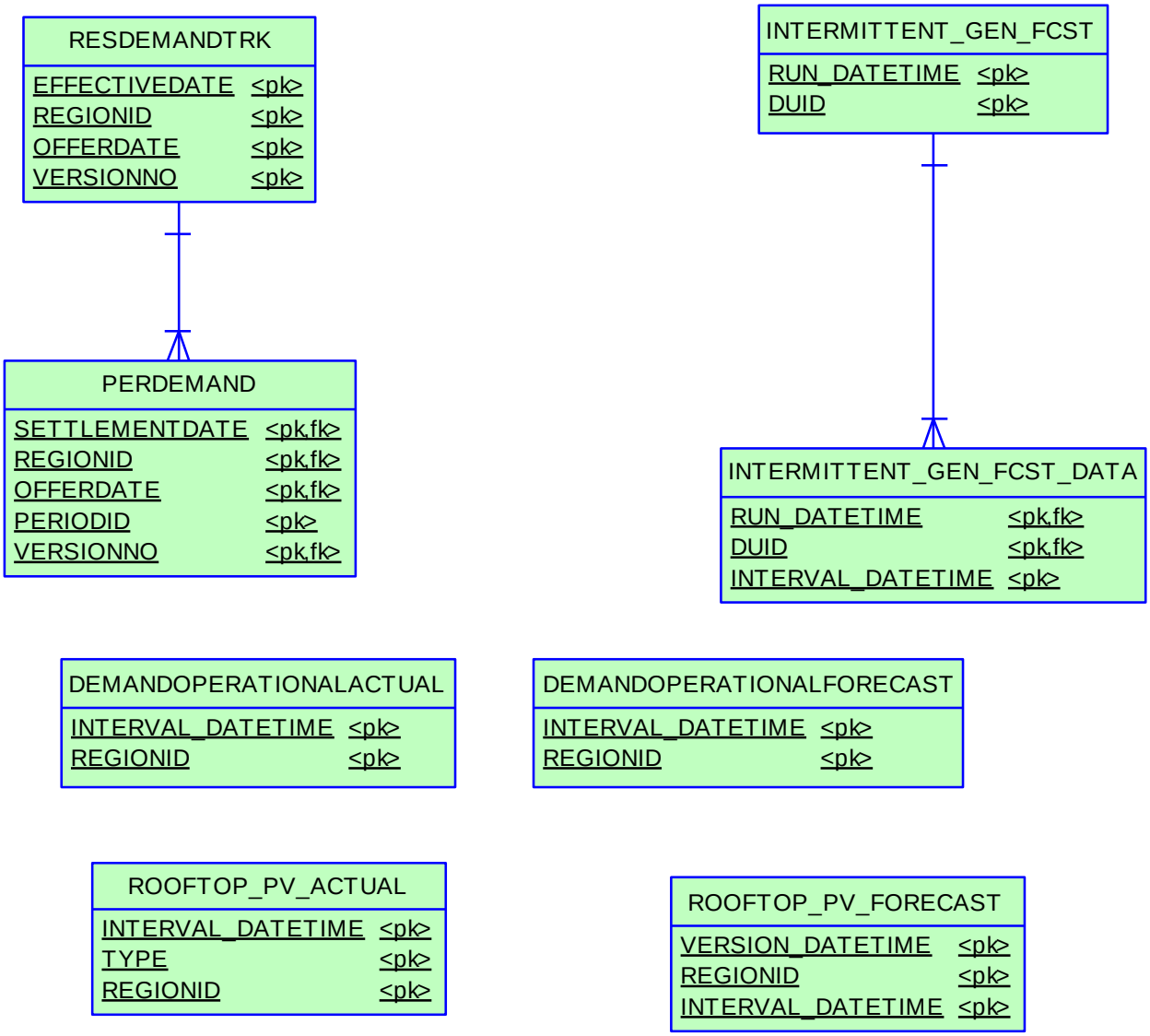
*Name* DEMAND_FORECASTS

*Comment* Regional Demand Forecasts and Intermittent Generation forecasts.

## 5.1 List of tables

| Name | Comment |
|---|---|
| ROOFTOP_PV_ACTUAL | Estimate of regional Rooftop Solar actual generation for each half-hour interval in a day |

## 5.2 Diagram: Entities: Demand Forecasts



## 5.3 Table: ROOFTOP_PV_ACTUAL

*Name* ROOFTOP_PV_ACTUAL

*Comment* Estimate of regional Rooftop Solar actual generation for each half-hour interval in a day

### 5.3.1 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 5.3.2 Primary Key Columns

Name
INTERVAL_DATETIME
REGIONID
TYPE

### 5.3.3 Index Columns

Name
INTERVAL_DATETIME
TYPE
REGIONID

### 5.3.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| INTERVAL_DATETIME | DATE | X | The forecast half-hour interval (time ending) |
| TYPE | VARCHAR2(20) | X | One of DAILY, MEASUREMENT or SATELLITE |
| REGIONID | VARCHAR2(20) | X | Region identifier |
| POWER | NUMBER(12,3) | | Estimated generation in MW at the interval end |
| QI | NUMBER(2,1) | | Quality indicator. Represents the quality of the estimate. |
| LASTCHANGED | DATE | | Last date and time record changed |

# 6 Package: DISPATCH

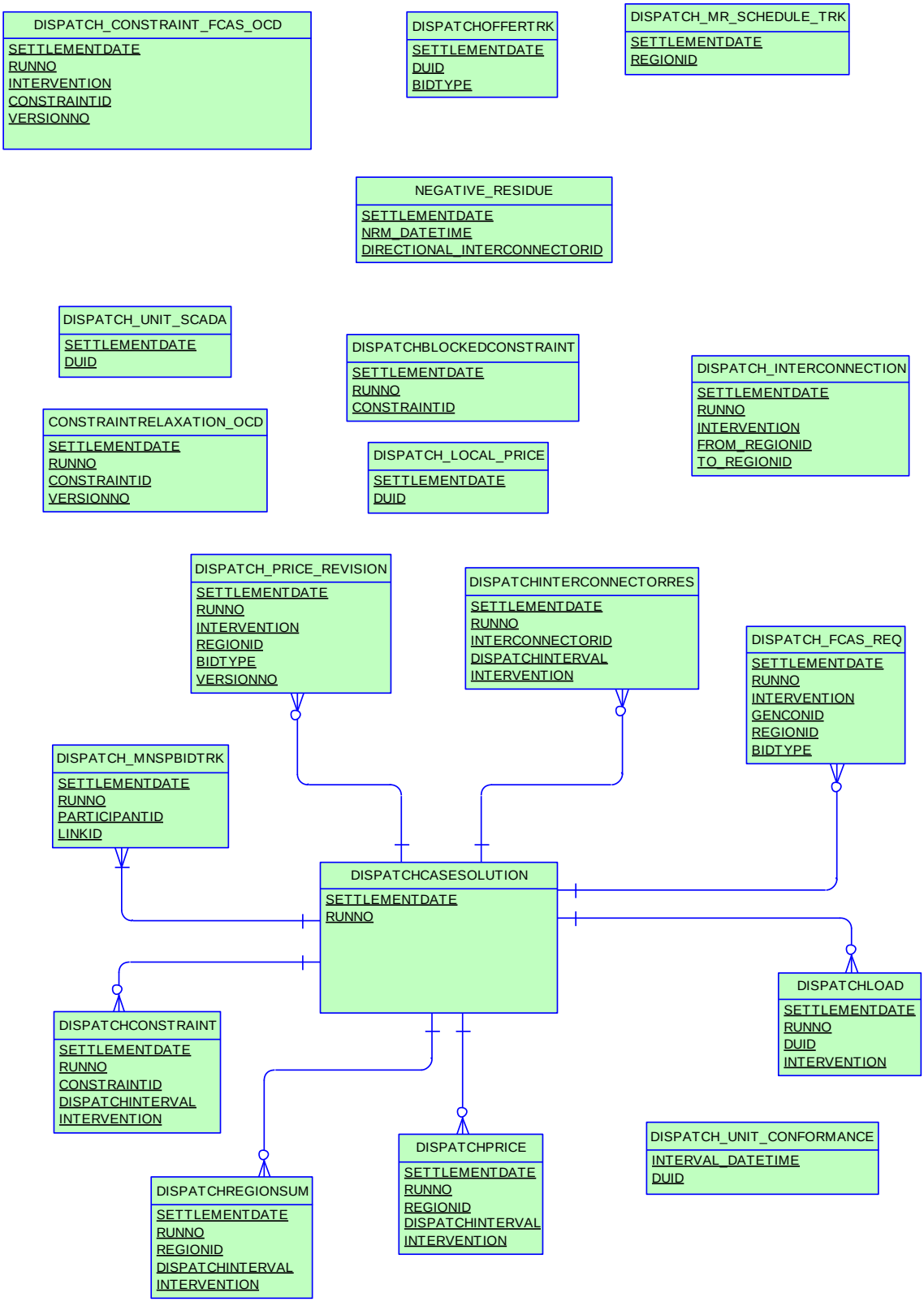
*Name* DISPATCH

*Comment* Results from a published Dispatch Run

## 6.1 List of tables

| Name | Comment |
|---|---|
| DISPATCH_INTERCONNECTION | Inter-regional flow information common to or aggregated for regulated (i.e. not MNSP) Interconnectors spanning the From-Region and To-Region - NB only the physical run is calculated' |

## 6.2 Diagram: Entities: Dispatch



## 6.3 Table: DISPATCH_INTERCONNECTION

*Name* DISPATCH_INTERCONNECTION

*Comment* Inter-regional flow information common to or aggregated for regulated (i.e. not MNSP) Interconnectors spanning the From-Region and To-Region - NB only the physical run is calculated'

### 6.3.1 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 6.3.2 Primary Key Columns

Name
FROM_REGIONID
INTERVENTION
RUNNO
SETTLEMENTDATE
TO_REGIONID

### 6.3.3 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| SETTLEMENTDATE | DATE | X | Market date starting at 04:05 |
| RUNNO | NUMBER(3,0) | X | Dispatch run no; always 1 |
| INTERVENTION | NUMBER(2,0) | X | Intervention case or not |
| FROM_REGIONID | VARCHAR2(20) | X | Nominated RegionID from which the energy flows |
| TO_REGIONID | VARCHAR2(20) | X | Nominated RegionID to which the energy flows |
| DISPATCHINTERVAL | NUMBER(22,0) | | Dispatch period identifier, from 001 to 288 in format YYYYMMDDPPP |
| IRLF | NUMBER(15,5) | | Inter-Regional Loss Factor. Calculated based on the MWFLOW and the nominal From and To Region losses. |
| MWFLOW | NUMBER(16,6) | | Summed MW flow of the parallel regulated Interconnectors |
| METEREDMWFLOW | NUMBER(16,6) | | Summed Metered MW flow of the parallel regulated Interconnectors |
| FROM_REGION_MW_LOSSES | NUMBER(16,6) | | Losses across the Interconnection attributable to the nominal From Region |
| TO_REGION_MW_LOSSES | NUMBER(16,6) | | Losses across the Interconnection attributable to the nominal To Region |
| LASTCHANGED | DATE | | The datetime that the record was last changed |

# 7 Package: FORCE_MAJEURE

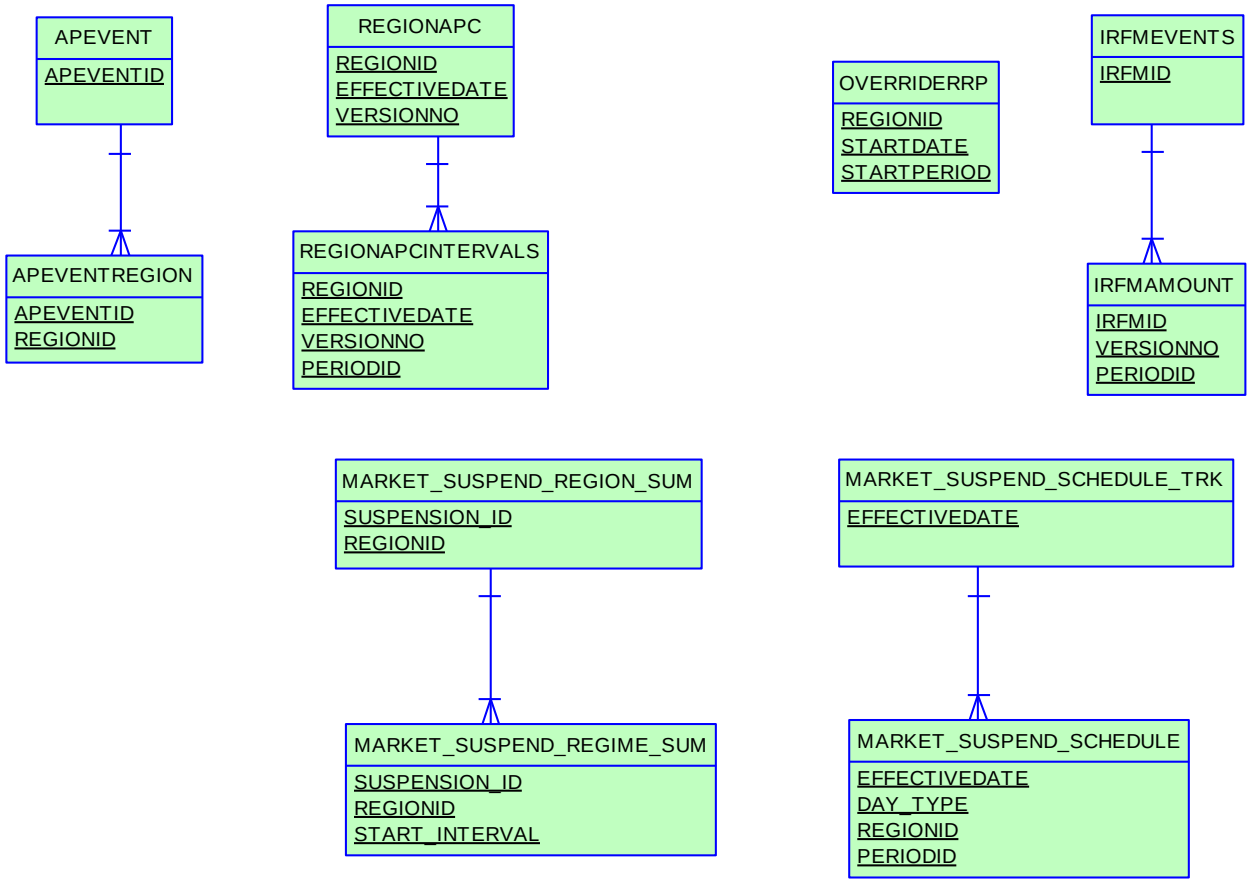
*Name* FORCE_MAJEURE

*Comment* Market Suspensions and administer pricing event data

## 7.1 List of tables

| Name | Comment |
|---|---|
| MARKET_SUSPEND_REGIME_SUM | Tracks the evolution of pricing regimes applied to the suspended region and from which Dispatch Interval |
| MARKET_SUSPEND_REGION_SUM | Summary of Market Suspension timings |
| MARKET_SUSPEND_SCHEDULE | Trading prices that will apply in the event of a market suspension event updated weekly. |
| MARKET_SUSPEND_SCHEDULE_TRK | Parent table for pricing regimes used in suspensions |

## 7.2 Diagram: Entities: Force Majeure



## 7.3 Table: MARKET_SUSPEND_REGIME_SUM

| | |
|---|---|
| *Name* | MARKET_SUSPEND_REGIME_SUM |
| *Comment* | Tracks the evolution of pricing regimes applied to the suspended region and from which Dispatch Interval |

### 7.3.1 Description

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

### 7.3.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 7.3.3 Primary Key Columns

Name
REGIONID
START_INTERVAL
SUSPENSION_ID

### 7.3.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| SUSPENSION_ID | VARCHAR2(20) | X | Unique identifier for this suspension event |
| REGIONID | VARCHAR2(20) | X | Region(s) covered by this evolution of the event |
| START_INTERVAL | DATE | X | First Dispatch interval from which this regime applies |
| END_INTERVAL | DATE | | Last Dispatch interval for which this regime applies |
| PRICING_REGIME | VARCHAR2(20) | | Pricing Regime applied |
| LASTCHANGED | DATE | | Last date and time record changed |

## 7.4 Table: MARKET_SUSPEND_REGION_SUM

| | |
|---|---|
| *Name* | MARKET_SUSPEND_REGION_SUM |
| *Comment* | Summary of Market Suspension timings |

### 7.4.1 Description

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

### 7.4.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 7.4.3 Primary Key Columns

Name
REGIONID
SUSPENSION_ID

### 7.4.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| SUSPENSION_ID | VARCHAR2(20) | X | Unique identifier for this suspension event |
| REGIONID | VARCHAR2(20) | X | Region(s) covered by the Suspension event |
| INITIAL_INTERVAL | DATE | | Initial interval of the Suspension event |
| END_REGION_INTERVAL | DATE | | Last Dispatch interval for the Suspension event for this Region |
| END_SUSPENSION_INTERVAL | DATE | | Last Dispatch interval for the Suspension event |
| LASTCHANGED | DATE | | Last DateTime the Suspension was administered |

## 7.5 Table: MARKET_SUSPEND_SCHEDULE

| | |
|---|---|
| *Name* | MARKET_SUSPEND_SCHEDULE |
| *Comment* | Trading prices that will apply in the event of a market suspension event updated weekly. |

### 7.5.1 Description

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

### 7.5.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 7.5.3 Primary Key Columns

Name
DAY_TYPE
EFFECTIVEDATE
PERIODID
REGIONID

### 7.5.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| EFFECTIVEDATE | DATE | X | Calendar date from when this record set is effective |
| DAY_TYPE | VARCHAR2(20) | X | Distinguishes which record set to apply - at time of writing this was Business or Non-business day but may change in the future depending on outcome of consultation |
| REGIONID | VARCHAR2(20) | X | Region affected. |
| PERIODID | NUMBER(3,0) | X | 48 intervals for a day, midnight base (equates to 00:30 - 00:00) |
| ENERGY_RRP | NUMBER(15,5) | | Energy Price applied for this period for this Day Type |
| R6_RRP | NUMBER(15,5) | | Raise 6Sec contingency Price applied for this period for this Day Type |
| R60_RRP | NUMBER(15,5) | | Raise 60Sec contingency Price applied for this period for this Day Type |
| R5_RRP | NUMBER(15,5) | | Raise 5Min contingency Price applied for this period for this Day Type |
| RREG_RRP | NUMBER(15,5) | | Raise Regulation contingency Price applied for this period for this Day Type |
| L6_RRP | NUMBER(15,5) | | Lower 6Sec contingency Price applied for this period for this Day Type |
| L60_RRP | NUMBER(15,5) | | Lower 60Sec contingency Price applied for this period for this Day Type |
| L5_RRP | NUMBER(15,5) | | Lower 5Min contingency Price applied for this period for this Day Type |
| LREG_RRP | NUMBER(15,5) | | Lower Regulation Price applied for this |

| | | | |
|---|---|---|---|
| | | | period for this Day Type |
| LASTCHANGED | DATE | | Last date and time record changed |

## 7.6 Table: MARKET_SUSPEND_SCHEDULE_TRK

*Name* MARKET_SUSPEND_SCHEDULE_TRK

*Comment* Parent table for pricing regimes used in suspensions

### 7.6.1 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 7.6.2 Primary Key Columns

Name
EFFECTIVEDATE

### 7.6.3 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| EFFECTIVEDATE | DATE | X | Calendar date from when this record set is effective |
| SOURCE_START_DATE | DATE | | Start Date of the date range for the source data |
| SOURCE_END_DATE | DATE | | End Date of the date range for the source data |
| COMMENTS | VARCHAR2(1000) | | Reason why this regime was applied |
| AUTHORISEDDATE | DATE | | DateTime this record set was loaded |
| LASTCHANGED | DATE | | Last date and time record changed |

# 8 Package: MTPASA

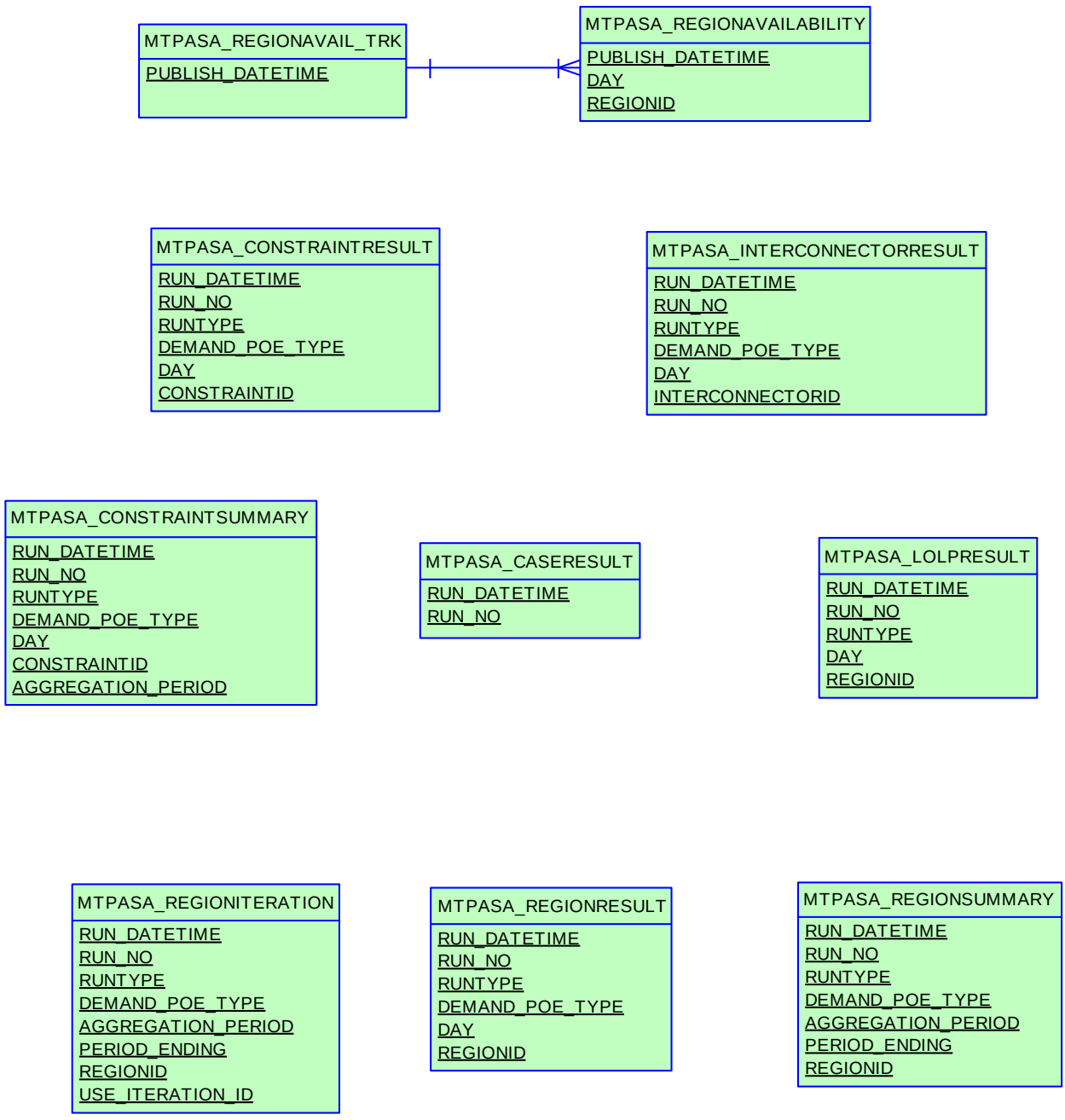
*Name* MTPASA

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

## 8.1 List of tables

| Name | Comment |
|---|---|
| MTPASA_CASERESULT | MTPASA solution header table |
| MTPASA_CONSTRAINTRESULT | Constraint results for Binding or Violating Constraints |
| MTPASA_CONSTRAINTSUMMARY | Constraint Summary results over aggregation periods |
| MTPASA_INTERCONNECTORRESULT | Interconnector results for interval of max demand per day |
| MTPASA_LOLPRESULT | Results for Loss of Load Probability (LOLP) run per day |
| 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. |
| MTPASA_REGIONITERATION | Region results for Unserved Energy (USE) |
| MTPASA_REGIONRESULT | Region results for interval of max demand per day. |
| MTPASA_REGIONSUMMARY | Region Results summary over aggregation periods. |

## 8.2 Diagram: Entities: MT PASA



## 8.3 Table: MTPASA_CASERESULT

| | |
|---|---|
| *Name* | MTPASA_CASERESULT |
| *Comment* | MTPASA solution header table |

### 8.3.1 Description

MTPASA_CASERESULT is public data.

Holds one Record for entire solution

### 8.3.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.3.3 Primary Key Columns

Name
RUN_DATETIME
RUN_NO

### 8.3.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| PLEXOS_VERSION | VARCHAR2(20) | | Version of PLEXOS used |
| LASTCHANGED | DATE | | Last date and time record changed |

## 8.4 Table: MTPASA_CONSTRAINTRESULT

*Name* MTPASA_CONSTRAINTRESULT

*Comment* Constraint results for Binding or Violating Constraints

### 8.4.1 Description

MTPASA_CONSTRAINTRESULT is public data.

### 8.4.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.4.3 Primary Key Columns

Name
CONSTRAINTID
DAY
DEMAND_POE_TYPE
RUN_DATETIME
RUN_NO
RUNTYPE

### 8.4.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always RELIABILITY |
| DEMAND_POE_TYPE | VARCHAR2(20) | X | Demand POE type used. Value is POE10 |
| DAY | DATE | X | Day this result is for |
| CONSTRAINTID | VARCHAR2(20) | X | The unique identifier for the constraint. Only binding or violating constraints are reported |
| EFFECTIVEDATE | DATE | | The effective date of the constraint used |
| VERSIONNO | NUMBER(3,0) | | The version of the constraint used |
| PERIODID | NUMBER(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) |
| PROBABILITYOFBINDING | NUMBER(8,5) | | Proportion of a constraint binding, across iterations and reference years |
| PROBABILITYOFVIOLATION | NUMBER(8,5) | | Proportion of a constraint violating, across iterations and reference years |
| CONSTRAINTVIOLATION90 | NUMBER(12,2) | | The 90th percentile violation degree for this constraint, across iterations and reference years (MW) |
| CONSTRAINTVIOLATION50 | NUMBER(12,2) | | The 50th percentile violation degree for this constraint, across iterations and reference years (MW) |
| CONSTRAINTVIOLATIO | NUMBER(12,2) | | The 10th percentile violation degree for |

| | | | |
|---|---|---|---|
| N10 | | | this constraint, across iterations and reference years (MW) |
| LASTCHANGED | DATE | | Last date and time record changed |

## 8.5 Table: MTPASA_CONSTRAINTSUMMARY

*Name* MTPASA_CONSTRAINTSUMMARY

*Comment* Constraint Summary results over aggregation periods

### 8.5.1 Description

MTPASA_CONSTRAINTSUMMARY is public data.

### 8.5.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.5.3 Primary Key Columns

Name
AGGREGATION_PERIOD
CONSTRAINTID
DAY
DEMAND_POE_TYPE
RUN_DATETIME
RUN_NO
RUNTYPE

### 8.5.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always RELIABILITY |
| DEMAND_POE_TYPE | VARCHAR2(20) | X | Demand POE type used. Value is POE10 |
| DAY | DATE | X | Day this result is for |
| CONSTRAINTID | VARCHAR2(20) | X | The unique identifier for the constraint. Only binding or violating constraints are reported |
| EFFECTIVEDATE | DATE | | The effective date of the constraint used |
| VERSIONNO | NUMBER(3,0) | | The version of the constraintID |
| AGGREGATION_PERIOD | VARCHAR2(20) | X | Period data is aggregated over. Values are PEAK, SHOULDER, OFFPEAK. PEAK = 14:00-19:59, SHOULDER = 07:00-13:59 and 20:00-21:59, OFFPEAK = 22:00-06:59 |
| CONSTRAINTHOURSBINDING | NUMBER(12,2) | | Constraint hours binding or violating for period, averaged across iterations and reference years |
| LASTCHANGED | DATE | | Last date and time record changed |

## 8.6 Table: MTPASA_INTERCONNECTORRESULT

| | |
|---|---|
| *Name* | MTPASA_INTERCONNECTORRESULT |
| *Comment* | Interconnector results for interval of max demand per day |

### 8.6.1 Description

MTPASA_INTERCONNECTORRESULT is public data.

### 8.6.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.6.3 Primary Key Columns

Name
DAY
DEMAND_POE_TYPE
INTERCONNECTORID
RUN_DATETIME
RUN_NO
RUNTYPE

### 8.6.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always RELIABILITY |
| DEMAND_POE_TYPE | VARCHAR2(20) | X | Demand POE type used. Value is POE10 |
| DAY | DATE | X | Day this result is for |
| INTERCONNECTORID | VARCHAR2(20) | X | The unique identifier for the interconnector |
| PERIODID | NUMBER(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) |
| FLOW90 | NUMBER(12,2) | | The 90th percentile for flows, across iterations and reference years. Positive values indicate exporting, negative values indicate importing (MW) |
| FLOW50 | NUMBER(12,2) | | The 50th percentile for flows, across iterations and reference years. Positive values indicate exporting, negative values indicate importing (MW) |
| FLOW10 | NUMBER(12,2) | | The 10th percentile for flows, across iterations and reference years. Positive values indicate exporting, negative values indicate importing (MW) |
| PROBABILITYOFBINDINGEXPORT | NUMBER(8,5) | | Proportion of iterations and reference years with interconnector constrained |

| | | | |
|---|---|---|---|
| | | | when exporting |
| PROBABILITYOFBINDINGIMPORT | NUMBER(8,5) | | Proportion of iterations and reference years with interconnector constrained when importing |
| CALCULATEDEXPORTLIMIT | NUMBER(12,2) | | Calculated Interconnector limit of exporting energy on the basis of invoked constraints and static interconnector export limit, averaged across iterations and reference years |
| CALCULATEDIMPORTLIMIT | NUMBER(12,2) | | Calculated Interconnector limit of importing energy on the basis of invoked constraints and static interconnector import limit, averaged across iterations and reference years |
| LASTCHANGED | DATE | | Last date and time record changed |

## 8.7 Table: MTPASA_LOLPRESULT

*Name* MTPASA_LOLPRESULT

*Comment* Results for Loss of Load Probability (LOLP) run per day

### 8.7.1 Description

MTPASA_LOLPRESULT is public data.

### 8.7.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.7.3 Primary Key Columns

Name
DAY
REGIONID
RUN_DATETIME
RUN_NO
RUNTYPE

### 8.7.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always LOLP |
| DAY | DATE | X | Day this result is for |
| REGIONID | VARCHAR2(20) | X | The unique region identifier |
| WORST_INTERVAL_PERIODID | NUMBER(3,0) | | The half hourly interval period with the highest LOLP, or highest region demand if LOLP = 0 for all intervals (1..48) |
| WORST_INTERVAL_DEMAND | NUMBER(12,2) | | The Abstract Operational Demand for the worst interval in this region (MW) |
| WORST_INTERVAL_INTGEN | NUMBER(12,2) | | The half hourly aggregate intermittent generation for the worst interval in this region (MW) |
| WORST_INTERVAL_DSP | NUMBER(12,2) | | The half hourly aggregate demand side participation for the worst interval period in this region (MW) |
| LOSSOFLOADPROBABILITY | NUMBER(8,5) | | Loss of Load Probability for the worst interval in this region |
| LOSSOFLOADMAGNITUDE | VARCHAR2(20) | | Loss of Load Magnitude for the worst interval in this region. Values are LOW, MEDIUM, HIGH |
| LASTCHANGED | DATE | | Last date and time record changed |

## 8.8 Table: MTPASA_REGIONAVAILABILITY

*Name* MTPASA_REGIONAVAILABILITY

*Comment* 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.

### 8.8.1 Description

MTPASA_REGIONAVAILABILITY is public data.

### 8.8.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.8.3 Primary Key Columns

Name
DAY
PUBLISH_DATETIME
REGIONID

### 8.8.4 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 |

## 8.9 Table: MTPASA_REGIONITERATION

*Name* MTPASA_REGIONITERATION

*Comment* Region results for Unserved Energy (USE)

### 8.9.1 Description

MTPASA_REGIONITERATION is public data.

### 8.9.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.9.3 Primary Key Columns

Name
AGGREGATION_PERIOD
DEMAND_POE_TYPE
PERIOD_ENDING
REGIONID
RUN_DATETIME
RUN_NO
RUNTYPE
USE_ITERATION_ID

### 8.9.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always RELIABILITY |
| DEMAND_POE_TYPE | VARCHAR2(20) | X | Demand POE type used. Value is POE10 or POE50 |
| AGGREGATION_PERIOD | VARCHAR2(20) | X | Period data is aggregated over. Values are YEAR |
| PERIOD_ENDING | DATE | X | Datetime of day at end of period (i.e. last day of year reported) |
| REGIONID | VARCHAR2(20) | X | The unique region identifier |
| USE_ITERATION_ID | NUMBER(5) | X | Iteration ID, only produced for iterations showing unserved energy>0 |
| USE_ITERATION_EVENT_NUMBER | NUMBER(12,2) | | Number of half hours showing unserved energy over year, for iteration |
| USE_ITERATION_EVENT_AVERAGE | NUMBER(12,2) | | Average unserved energy event size for iteration over year (MW) |
| LASTCHANGED | DATE | | Last date and time record changed |

## 8.10 Table: MTPASA_REGIONRESULT

*Name* MTPASA_REGIONRESULT

*Comment* Region results for interval of max demand per day.

### 8.10.1 Description

MTPASA_REGIONRESULT is public data.

### 8.10.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.10.3 Primary Key Columns

Name
DAY
DEMAND_POE_TYPE
REGIONID
RUN_DATETIME
RUN_NO
RUNTYPE

### 8.10.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always RELIABILITY |
| DEMAND_POE_TYPE | VARCHAR2(20) | X | Demand POE type used. Value is POE10 |
| DAY | DATE | X | Day this result is for |
| REGIONID | VARCHAR2(20) | X | The unique region identifier |
| PERIODID | NUMBER(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 | NUMBER(12,2) | | Demand value from selected half hourly interval (MW) |
| AGGREGATEINSTALLEDCAPACITY | NUMBER(12,2) | | The total installed capacity of all generation (MW) |
| NUMBEROFITERATIONS | NUMBER(12,2) | | Total number of iterations and reference years performed |
| USE_NUMBEROFITERATIONS | NUMBER(12,2) | | Number of iterations and reference years with unserved energy>0 |
| USE_MAX | NUMBER(12,2) | | Maximum unserved energy, across iterations and reference years (MW) |
| USE_UPPERQUARTILE | NUMBER(12,2) | | Upper quartile unserved energy, across iterations and reference years (MW) |
| USE_MEDIAN | NUMBER(12,2) | | Median unserved energy, across iterations and reference years (MW) |
| USE_LOWERQUARTILE | NUMBER(12,2) | | Lower quartile unserved energy, across |

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

## 8.11 Table: MTPASA_REGIONSUMMARY

*Name* MTPASA_REGIONSUMMARY

*Comment* Region Results summary over aggregation periods.

### 8.11.1 Description

MTPASA_REGIONSUMMARY is public data.

### 8.11.2 Notes

| Name | Comment | Value |
|---|---|---|
| Visibility | Data in this table is: | Public |

### 8.11.3 Primary Key Columns

Name
AGGREGATION_PERIOD
DEMAND_POE_TYPE
PERIOD_ENDING
REGIONID
RUN_DATETIME
RUN_NO
RUNTYPE

### 8.11.4 Content

| Name | Data Type | Mandatory | Comment |
|---|---|---|---|
| RUN_DATETIME | DATE | X | Date processing of the run begins. |
| RUN_NO | NUMBER(4) | X | Unique run id. |
| RUNTYPE | VARCHAR2(20) | X | Type of run. Always RELIABILITY |
| DEMAND_POE_TYPE | VARCHAR2(20) | X | Demand POE type used. Value are POE10, POE50 |
| AGGREGATION_PERIOD | VARCHAR2(20) | X | Period data is aggregated over. Values are YEAR, MONTH |
| PERIOD_ENDING | DATE | X | Datetime of day at end of period (i.e. last day of month or year reported) |
| REGIONID | VARCHAR2(20) | X | The unique region identifier |
| NATIVEDEMAND | NUMBER(12,2) | | Native demand calculated from Operational As Generated trace supplied by Energy Forecasting |
| USE_PERCENTILE10 | NUMBER(12,2) | | Unserved energy period amount at the 10th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE20 | NUMBER(12,2) | | Unserved energy period amount at the 20th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE30 | NUMBER(12,2) | | Unserved energy period amount at the 30th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE40 | NUMBER(12,2) | | Unserved energy period amount at the 40th percentile of iterations and reference years (MWh) |

| | | | |
|---|---|---|---|
| USE_PERCENTILE50 | NUMBER(12,2) | | Unserved energy period amount at the 50th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE60 | NUMBER(12,2) | | Unserved energy period amount at the 60th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE70 | NUMBER(12,2) | | Unserved energy period amount at the 70th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE80 | NUMBER(12,2) | | Unserved energy period amount at the 80th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE90 | NUMBER(12,2) | | Unserved energy period amount at the 90th percentile of iterations and reference years (MWh) |
| USE_PERCENTILE100 | NUMBER(12,2) | | Unserved energy period amount at the 100th percentile of iterations and reference years (MWh) |
| USE_AVERAGE | NUMBER(12,2) | | Average period unserved energy across iterations and reference years (MWh) |
| NUMBEROFITERATIONS | NUMBER(12,2) | | Total number of iterations and reference years performed |
| USE_NUMBEROFITERATIONS | NUMBER(12,2) | | Number of iterations and reference years showing unserved energy |
| USE_EVENT_MAX | NUMBER(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 | NUMBER(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 | NUMBER(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 | NUMBER(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 | NUMBER(12,2) | | Minimum unserved energy event size across all half hourly intervals and iterations and reference years that have unserved energy>0 (MW) |
| WEIGHT | NUMBER(12,2) | | Fixed Values of 0.696 for 50 POE and 0.304 for 10 POE. |
| USE_WEIGHTED_AVG | NUMBER(12,2) | | 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 | NUMBER(12,2) | | LRC Condition reported (Value=1) if USE_WEIGHTED_AVG >= 0.002% otherwise (Value=0) |
| LASTCHANGED | DATE | | Last date and time record changed |