

MMS DATA MODEL UPGRADE REPORT

MMS Data Model v4.26 Oracle

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DATE: Released on: 28/10/2016

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1 Description of MMS Data Model v4.26 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 Current product supplied by AEMO for data transfer is Participant Data Replication (PDR), with some support for the superseded Parser.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_RUN

Name BILLING_RUN

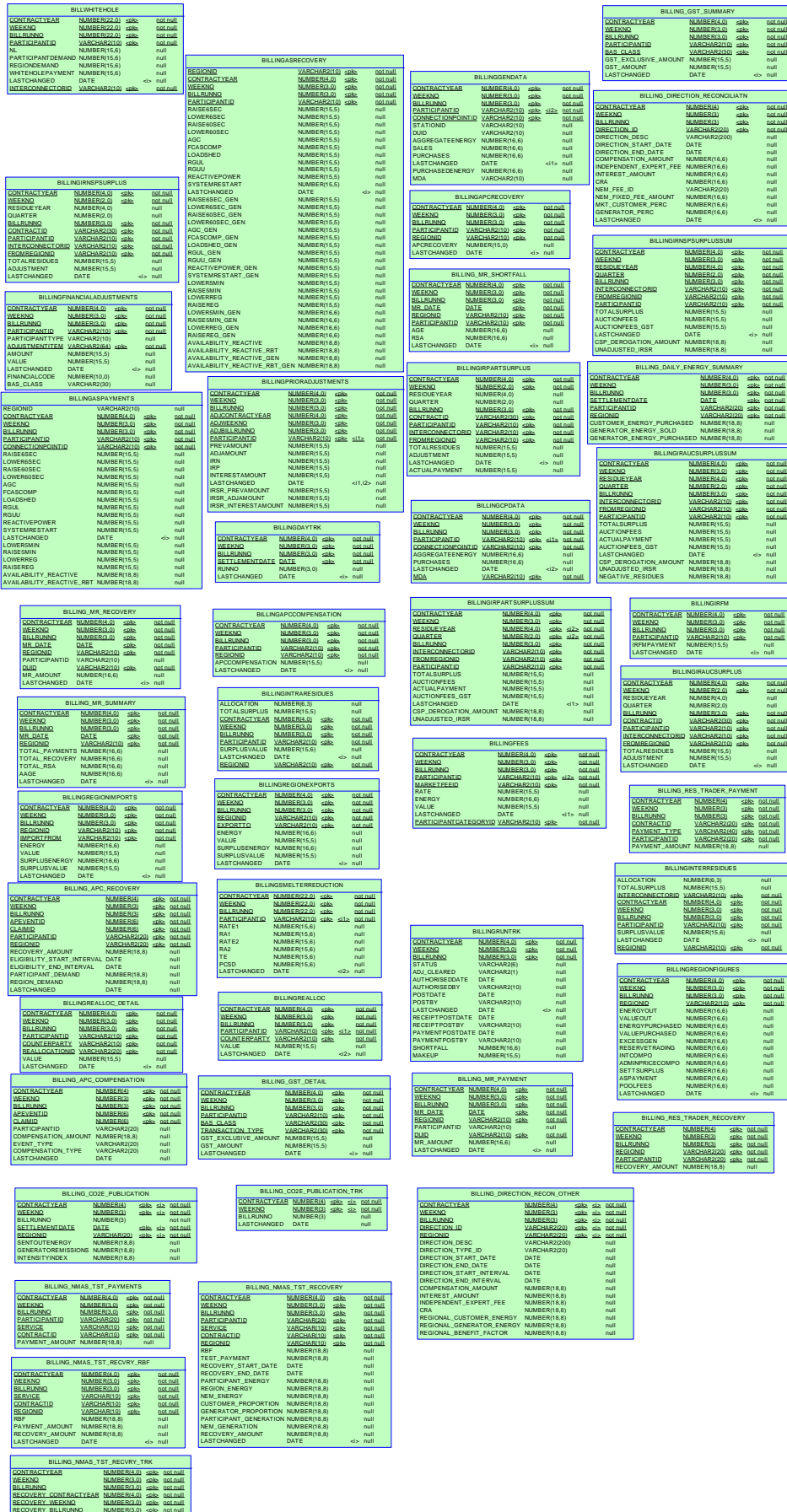
Comment Results from a published Billing Run. The settlement data and billing run data are updated daily between 6am and 8am for AEMO's prudential processes. In a normal week, AEMO publishes one PRELIM, one FINAL and two REVISION runs in addition to the daily runs.

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

3.1 List of tables

Name	Comment
BILLING_APC_COMPENSATION	Billing result table for APC compensation payments.
BILLING_APC_RECOVERY	Billing result table for recovery of APC compensation payments

3.2 Diagram: Entities: Billing Run



3.3 Table: BILLING_APC_COMPENSATION

Name BILLING_APC_COMPENSATION
Comment Billing result table for APC compensation payments.

3.3.1 Description

Updated with each billing run

3.3.2 Notes

Name Comment Value
 Visibility Data in this table is: Private

3.3.3 Primary Key Columns

Name
 APEVENTID
 BILLRUNNO
 CLAIMID
 CONTRACTYEAR
 WEEKNO

3.3.4 Content

Name	Data Type	Mandatory	Comment
CONTRACTYEAR	NUMBER(4)	X	Billing contract year
WEEKNO	NUMBER(3)	X	Billing week number
BILLRUNNO	NUMBER(3)	X	Billing run number
APEVENTID	NUMBER(6)	X	AP Event Id
CLAIMID	NUMBER(6)	X	AP Event Claim Id
PARTICIPANTID	VARCHAR2(20)		Participant identifier
COMPENSATION_AMOUNT	NUMBER(18,8)		Payment amount to the participant
EVENT_TYPE	VARCHAR2(20)		The Administered Price Event Type. Valid values: ENERGY, FCAS, BOTH
COMPENSATION_TYPE	VARCHAR2(20)		The Type of Administered Price Compensation Claim. Valid values: DIRECT_COST, OTHER_COST
LASTCHANGED	DATE		The date and time of last changed record

3.4 Table: BILLING_APC_RECOVERY

<i>Name</i>	BILLING_APC_RECOVERY
<i>Comment</i>	Billing result table for recovery of APC compensation payments

3.4.1 Description

Updated with each billing run

3.4.2 Notes

Name	Comment	Value
Visibility	Data in this table is:	Private

3.4.3 Primary Key Columns

Name
 APEVENTID
 BILLRUNNO
 CLAIMID
 CONTRACTYEAR
 PARTICIPANTID
 REGIONID
 WEEKNO

3.4.4 Content

Name	Data Type	Mandatory	Comment
CONTRACTYEAR	NUMBER(4)	X	Billing contract year
WEEKNO	NUMBER(3)	X	Billing week number
BILLRUNNO	NUMBER(3)	X	Billing run number
APEVENTID	NUMBER(6)	X	AP Event Id
CLAIMID	NUMBER(6)	X	AP Event Claim Id
PARTICIPANTID	VARCHAR2(20)	X	Participant identifier
REGIONID	VARCHAR2(20)	X	Region Identifier
RECOVERY_AMOUNT	NUMBER(18,8)		Recovery amount attributable to the participant in that region
ELIGIBILITY_START_INTERVAL	DATE		The starting half hourly interval for the eligibility period for recovery of APC Payment
ELIGIBILITY_END_INTERVAL	DATE		The ending half hourly interval for the eligibility period for recovery of APC Payment
PARTICIPANT_DEMAND	NUMBER(18,8)		The participant demand in the cost recovery region
REGION_DEMAND	NUMBER(18,8)		The sum of demand of all participants in the cost recovery region (Region Sum)
LASTCHANGED	DATE		The date and time of last changed record

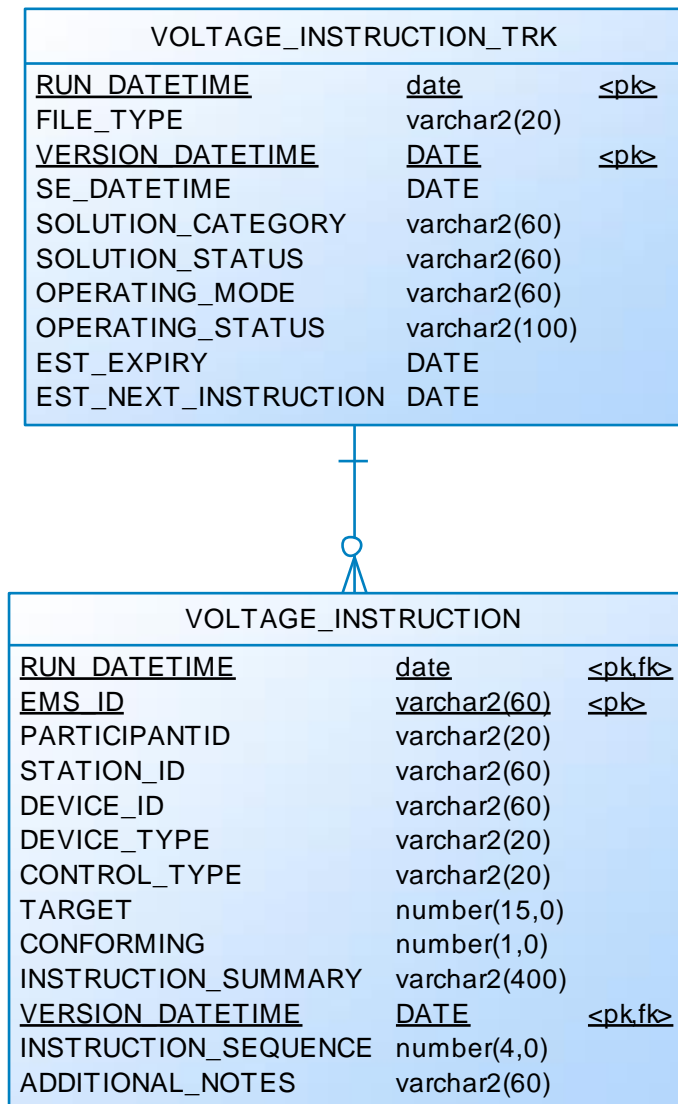
4 Package: VOLTAGE_INSTRUCTIONS

Name VOLTAGE_INSTRUCTIONS
Comment Instructions for MVar Dispatch

4.1 List of tables

Name	Comment
VOLTAGE_INSTRUCTION	Child record for Voltage Instructions (MVar Dispatch)
VOLTAGE_INSTRUCTION_T RK	Parent record for Voltage Instructions (MVar Dispatch). 'SIGNAL' records will have no children; 'INSTRUCTION' records will have children

4.2 Diagram: Entities: Voltage Instructions



4.3 Table: VOLTAGE_INSTRUCTION

<i>Name</i>	VOLTAGE_INSTRUCTION
<i>Comment</i>	Child record for Voltage Instructions (MVar Dispatch)

4.3.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

4.3.2 Primary Key Columns

Name
 EMS_ID
 RUN_DATETIME
 VERSION_DATETIME

4.3.3 Index Columns

Name
 RUN_DATETIME
 VERSION_DATETIME
 EMS_ID

4.3.4 Content

Name	Data Type	Mandator y	Comment
RUN_DATETIME	date	X	MVar Interval – a timestamp of when instructions issued
EMS_ID	varchar2(60)	X	The unique identifier for reference within AEMO –matches equipment names between NOS and EMS
PARTICIPANTID	varchar2(20)		The NEM id of the participant who owns the equipment
STATION_ID	varchar2(60)		The id of the station where the control equipment resides
DEVICE_ID	varchar2(60)		The company/participant preferred name of an equipment
DEVICE_TYPE	varchar2(20)		One of REACTOR, CAPACITOR, GEN, SVC, TRANS or GRPGEN but may be extended to other types
CONTROL_TYPE	varchar2(20)		One of VOLTAGE, TAP, MVAR, SWITCH or COMMIT but may be extended to other types
TARGET	number(15,0)		Instruction for the device, for this interval – null denotes no instruction
CONFORMING	number(1,0)		[0,1] Denotes if the Device is currently conforming
INSTRUCTION_SUMMARY	varchar2(400)		Verbose summary of instruction
VERSION_DATETIME	DATE	X	Datetime the file was published by VDS - Versions differ from Run_DateTime only for Supplemental runs
INSTRUCTION_SEQUENCE	number(4,0)		Order for execution of Instruction

ADDITIONAL_NOTES	varchar2(60)		Additional information pertaining to a particular instruction, e.g. Previously issued instruction revoked
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4.4 Table: VOLTAGE_INSTRUCTION_TRK

Name VOLTAGE_INSTRUCTION_TRK
Comment Parent record for Voltage Instructions (MVar Dispatch). 'SIGNAL' records will have no children; 'INSTRUCTION' records will have children

4.4.1 Notes

Name	Comment	Value
Visibility	Data in this table is:	Public

4.4.2 Primary Key Columns

Name
 RUN_DATETIME
 VERSION_DATETIME

4.4.3 Index Columns

Name
 RUN_DATETIME
 VERSION_DATETIME

4.4.4 Content

Name	Data Type	Mandator y	Comment
RUN_DATETIME	date	X	MVar Interval - a timestamp of when instructions issued
FILE_TYPE	varchar2(20)		Either 'SIGNAL' (childless) or 'INSTRUCTION'
VERSION_DATETIME	DATE	X	Datetime the file was published by VDS - Versions differ from Run_DateTime only for Supplemental runs
SE_DATETIME	DATE		State Estimator start time, when a snapshot is taken of SCADA values
SOLUTION_CATEGORY	varchar2(60)		VDS solver solution category. Valid values: SUCCESS, WARNING, FAILURE
SOLUTION_STATUS	varchar2(60)		VDS solver solution status. Valid values: NOACTCNV [Solved with no instructions], NOVIOACT, CONVERGE, UNMANAGE, UNMANCTG, CTGDIV, SENHDIV [Failed with too many violations], BCDIV
OPERATING_MODE	varchar2(60)		The current VDS operating mode. Valid values: AUTO, AUTO-VERIFIED, MANUAL
OPERATING_STATUS	varchar2(100)		Unstructured code and message from AEMO
EST_EXPIRY	DATE		Estimated expiry time of current Instruction set
EST_NEXT_INSTRUCTION	DATE		Estimated issue time of next Instruction set

