Energy Portfolio Management

Load Aggregation Implementation Guide

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Contents

Chapter 1: Overview

This implementation guide covers the initial configuration required for Retail Operations Load Aggregation. After completion of the activities in this guide, authorized Retail Operations users will be able to:

- Configure the necessary objects to support the data import of static customer data
- Import load profiles
- Validate customer and profile data prior to execution of a backcast (load aggregation)
- Execute a backcast and validate the results
- Accept the results for use in SEM Market Settlements

Chapter 2: Assumptions

It is assumed that the reader has an understanding of the static data and market message import process and is capable of performing these operations.

2.1 Application Server

The MarketManager application server has been successfully configured per the document "MarketManager Server Installation." In particular, the MM and MEX war files must have been successfully deployed, and the MEX user must have been configured in the Tomcat Administrator.

2.2 Database Server

The MarketManager database server has been successfully configured, and a MarketManager schema has been created or imported.

2.3 Client Browser

The following configurations have been performed and verified on the client machine:

- The Retail Operations v5.2 Client (or higher) has been installed
- The Oracle 10.2 Client (or higher) has been installed
- The MarketManager login URL is accessible
- Data source(s) have been configured
- Application login is successful (home screen available)
- The Retail Data Management and Load Aggregation (Settlement) menu on the home page are functional

Chapter 3: System Settings

3.1 Meter Units

The valid meter units are configured on system installation. You may hide any unused values through the System Settings user interface.

1. From the menu bar in the Retail Data Management module, select Tools > Configuration > System Settings
2. On the System Settings screen, drill down to Global > Entity Manager > Meter Units
3. To hide unused settings check the **Is Hidden** box and click the **Save** button (or Ctrl S)

3.2 Meter Channels

The system must be configured to expand the available list of Meter Channel units to include KVARH, KVA and MWH.

1. From the menu bar in the Retail Data Management module, select Tools > Configuration > System Settings.
2. On the System Settings screen, drill down to Global > Entity Manager > Meter Channel > Unit
3. To add units, click in the Labels grid. Select **Insert Row** from the popup menu. Enter the desired value (e.g. KVARH). Click the **Save** button (or Ctrl S)

3.3 Data Import Date Format

The system may be configured to change the default date format used in standard data imports.

1. From the menu bar in the Retail Data Management module, select Tools > Configuration > System Settings
2. On the System Settings screen, drill down to Global > Data Import
3. To change the default format, select the Value column next to Date Format in the Dictionary Entries grid.
4. Change the MM/DD/YYY to DD/MM/YYYY. Click the **Save** button (or Ctrl S)

Chapter 4: Initial Entity Manager Configuration

The following data objects must be configured prior to importing static account data referencing these objects.

4.1 External System

The External System allows objects within the Retail Operations database to be assigned an External Identifier that uniquely identifies the object with that external system or is used in the look up of objects when interfacing with that external system. An External System named "Irish T&D" must exist to support the DUoS and TUoS settlements.

Note: The Entity Manager does not enforce uniqueness of external identifiers within the Retail Operations database.

To create the Irish T&D external system:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Configuration > External System
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):

Attribute	Value	Description
Name	Irish T&D	
Type	ISO	
Display Name	Irish T&D	The name that will appear on the External Identifier tab on business objects
Is Enabled	Checked	Uncheck this field to hide the system on the External Identifier tab
External Account Domain	Not Assigned	
Has Uname Pwd Credentials	Unchecked	
Number of Certificates	0	

4. Click the **Save** button (or Ctrl S)

4.2 Settlement Types

The Settlement Type corresponds to the result set in which the load aggregation (or backcast) results are stored. Upon acceptance of load aggregation results, the data is copied from the Settlement Type to the corresponding Statement Type in the Market Manager SEM Operations module.

To create a Settlement Type:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Configuration > Settlement Type
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):

Attribute	Value	Description
Name		The label of the Settlement Type (e.g. T&D IE Indicative)
Order		The order in which the Settlement Types should appear on the Load Aggregation tool bar
Service Code		B = Backcast, A = Actual
Scenario		The Scenario in which the Backcast results are stored. Each Settlement Type must have its own Scenario (see below)
Statement Type		The Settlement Type from Market Manager in which the Load Aggregation results should be stored.

4. Click the **Save** button (or Ctrl S)

To create a (Backcast) Scenario:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Configuration > Scenario
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):

Attribute	Value	Description
Name		The label of the Settlement Type (e.g. T&D IE Indicative)
Category	Settlement	For the SEM retail implementation the Scenarios will be created for Backcast

4. Click the **Save** button (or Ctrl S)

The following Settlement States and Scenarios must be configured for the SEM retail market.

Name	Order	Service Code	Scenario	Statement Type
T&D IE Indicative	1	B	Base	T&D IE Indicative
T&D IE Initial	2	B	Initial	T&D IE Initial
Revision 1	3	B	Revision 1	T&D IE Revision #1
Revision 2	4	B	Revision 2	T&D IE Revision #2
…	…	…	…	…

Note: The Settlement State named "Final" is a required type and must not be deleted. You may change its order so that it appears last on the combo box.

4.3 Ancillary Services

The Ancillary Service objects correspond to capacity allocation types assigned to accounts. One entry must exist for both MIC and MEC.

To create the MIC and MEC values:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Commodity > Ancillary Service
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional).
4. Enter one object for CSC, MIC and MEC.

Attribute	Value	Description
Name	CSC	Enter one for each value

5. Click the **Save** button (or Ctrl S)

4.4 Loss Factors

The Loss Factor objects correspond to the standard loss factor rates designated in the static data import file. Loss factor rates are defined for the Loss Factors and can change over time.

To create a Loss Factor:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Distribution > Loss Factor
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for 110KV, 38KV, LV, MV, NIEHV, NIHV, NIMV

Attribute	Value	Description
Name	LV	Enter one for each value
Alias	LV	
Description	LV	Optional

5. Click the **Save** button (or Ctrl S)

To edit the Loss Factor rate:

1. Select Retail Data Management from the home page.
2. Navigate to the Transmission and Distribution > Loss Factors > Daily Values sub-tab
3. Select the Loss Factor from the tree on the left
4. Select **Insert Row** from the right-click popup menu or click the **Insert** button on the keyboard
5. Select the Loss Factor from the combo-box
6. Select Loss Type = Distribution
7. Select Factor Type = Expansion
8. Enter the effective date range of the value
9. Enter the value (e.g. 5% = 0.05).
10. Click the **Save** button (or Ctrl S)

4.5 Schedule Coordinator

The Schedule Coordinator corresponds to the transmission network operator. The settings on this object dictate how the load aggregation results are converted into schedules for use in Market Manager shadow settlements.

To create a Schedule Coordinator:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Business Entity > Schedule Coordinator
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for ESBN and NIE

Attribute	Value	Description
Name	ESBN	
Alias	ESBN	
Status	Active	
External Identifier	ESBN	
Schedule Name Prefix	<null>	
Schedule Format	Schedule Group	The load schedules will be aggregated at the Schedule Group level
Schedule Interval	15 Minute	The load schedules will be aggregated in 15 minute intervals NIE should be set to 30 minute
Load Rounding Preference	Standard	Load schedules will be rounded using conventional (>= .5) rules
Create TX Loss Schedule	Unchecked	
Create DX Loss Schedule	Unchecked	
Create UFE Loss Schedule	Unchecked	
Minimum Schedule Amount	0.001	The lowest volume at which a load schedule will be created. A schedule will not be created if there isn't a non-zero value for the Schedule Group on a given day.

5. Click the **Save** button (or Ctrl S)

External Identifiers – The following External Identifiers should be populated.

External System	Id
Irish T&D	ESBN or NIE

4.6 Energy Distribution Companies

The energy distribution company (EDC) corresponds to the distribution system operator. One should be created for ESBN and NIE.

To create an EDC:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Business Entity > Energy Distribution Company
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for ESBN and NIE

Attribute	Value	Description
Name	ESBN	
Alias	ESBN	
Status	Active	
External Identifier	ESBN	
Loss Factor Option	Account	Designates loss factors will be assigned at the account or meter level
Schedule Coordinator	ESBN	The SC designates the level at which load aggregation results get converted to schedules in Market Manager

5. Click the **Save** button (or Ctrl S)

4.7 Purchasing Selling Entity

The purchasing selling entity corresponds to the Participant (PT).PSEs are automatically created through the download of SEM Market reports.

To create a PSE:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Business Entity > Purchasing Selling Entity
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for PT_500023, PT_400028, etc.

Attribute	Value	Description
Name	Bord Gais NI (PT_500023)	The name of the PT, the name will appear in combo-boxes, statements, etc.
Alias	PT_500023	
Status	Active	
Type	Marketer	
External Identifier	PT_500023	
Is Retail Aggregator	Checked	
Is Backup Generation	Unchecked	
Exclude Load Schedule	Unchecked	

5. Click the **Save** button (or Ctrl S)

Custom	Value
Currency	GBP (or EUR for the ROI PTs)

External Identifiers – The following External Identifiers should be populated.

External System	Id
SEM	PT_500023

4.8 Energy Service Providers

The energy service provider corresponds to the supplier unit. One should be created for each Supplier Unit.

To create an ESP:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Business Entity > Energy Service Provider
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for each supplier unit

Attribute	Value	Description
Name	SU_400020	
Alias	SU_400020	
Status	Active	
External Identifier	SU_400020	
Type	Certified	
PSE-ESP	PT_######	The PSE is the PT corresponding to the supplier unit

5. Click the **Save** button (or Ctrl S)

External Identifiers – The following External Identifiers should be populated.

External System	Id
SEM	SU_400020

4.9 Pools

The pool corresponds to the supplier unit and load profile (or loss factor for QH metered accounts). One should be created for each Supplier Unit and profile group. The pool is redundant with the Schedule Group but provides for additional filtering on the load aggregation user interface.

To create a Pool:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Business Entity > Pool
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for each supplier unit

Attribute	Value	Description
Name	SU_400020	
Status	Active	
Category	< null >	
Exclude Load Schedule	Unchecked	

5. Click the **Save** button (or Ctrl S)

4.10 Entity Groups

The entity group is a system defined value that can be used to categorize any business object in the system. For the SEM retail market, this value is used to classify the DUoS and TUoS tariff assignments for the accounts. An Entity Group should be created for each DUoS, TUoS and UoS code.

To create an Entity Group:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Grouping > Entity Group
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for each tariff code.

Attribute	Value	Description
Name	DG1	
Alias	DG1	
Entity Domain	Account	Designates the type of object to be supported by the Group
Group Category	Distribution Group	Or Transmission Group for TuoS codes

5. Click the **Save** button (or Ctrl S)

4.11 Service Points

The Service Point is used by the SEM Settlements process and is assigned to the Schedule Group (see next step). The Service Point corresponds to the generation or load resource in SEM.

To create a Service Point:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Distribution > Service Point
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for each supplier unit.

Attribute	Value	Description
Name	SU_400040	
Alias	SU_400040	
External Identifier	SU_400040	
Type	Retail	
Participant	PT_400040	The PT associated with the Service Point
Custom: Resource Type	SU	Designates the Service Point type

5. Click the **Save** button (or Ctrl S)

4.12 Schedule Groups

The schedule group dictates the load schedule to which the account level load will be aggregated for use in Market Manager settlements. For SEM Retail this corresponds to the supplier unit and load profile group (or voltage class for QH meters). A schedule group should be created for each combination of supplier unit and profile (or voltage class).

To create a Schedule Group:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Grouping > Schedule Group
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create new objects for each combination of supplier unit and load profile

Attribute	Value	Description
Name	SU_400040_1	
Alias	SU_400040_1	
Service Zone	Not Assigned	
Schedule Coordinator	ESBN	Designates the SC to be assigned to load schedule upon accepting the load aggregation results.
Service Point	SU_400040	Designates the Service Point to be assigned to load schedule upon accepting the load aggregation results.
Meter Type		

5. Click the **Save** button (or Ctrl S)

4.13 Period

The period corresponds to the time period designation on time-of-use (TOU) meters or usage factors. There should be one for each unique label designated by TOU tariffs. A period can be defined differently for each tariff so you do not need to create unique periods. For example, Day/Night can be defined differently for two different tariffs; therefore you only need to create one Day period and one Night period (instead of 4).

To create a Period:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Products and Rates > Period
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create as many objects as needed to map to the TOU codes on the 3xx messages

Attribute	Value	Description
Name	00D	
Alias	00D	
Color		Choose a color to uniquely identify the Period.

5. Click the **Save** button (or Ctrl S)

External Identifiers – The following External Identifiers should be populated. The Id must match the designation in the 3xx file.

External System	Id
Irish T&D	00D

- Click the **Save** button (or Ctrl S)

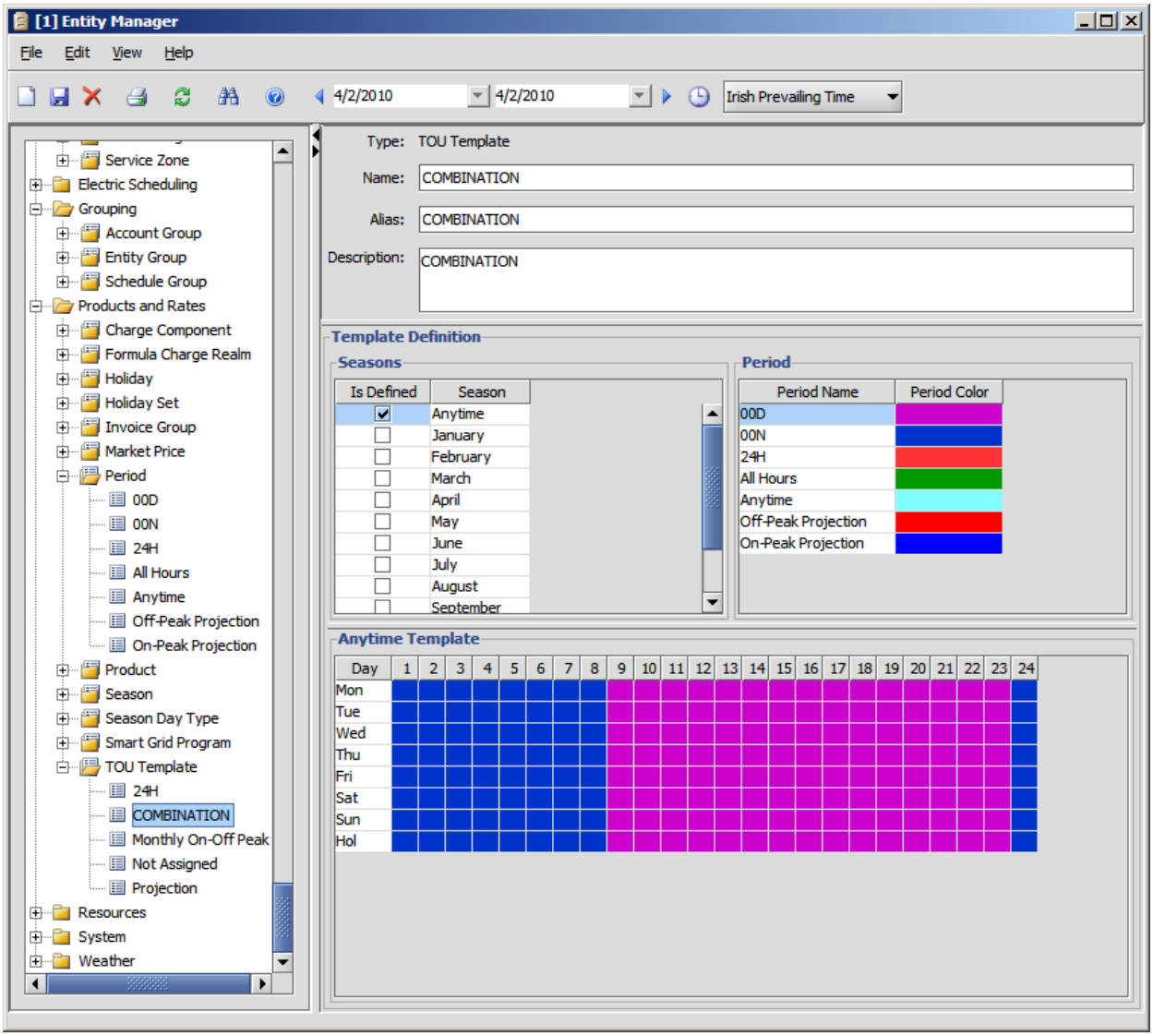
4.14 TOU Template

The TOU Template defines the day and time periods associated with the tariff periods. The TOU Template will determine which profile interval to apply the usage factor coefficients.

To create a Period:

1. Select Entity Manager from the Tools menu in Retail Data Management
2. Drill down to Products and Rates > TOU Template
3. Click the **New** button and populate the following fields (any fields omitted from the table are optional and should take the default value):
4. Create one for each unique tariff time period definitions
5. Click the **Save** button (or Ctrl S)

The following screen shot demonstrates the definition for a Day/Night TOU.



Note: The UI for defining time periods will change significantly in version 5.1.1 to support time periods that change on sub-hourly intervals.

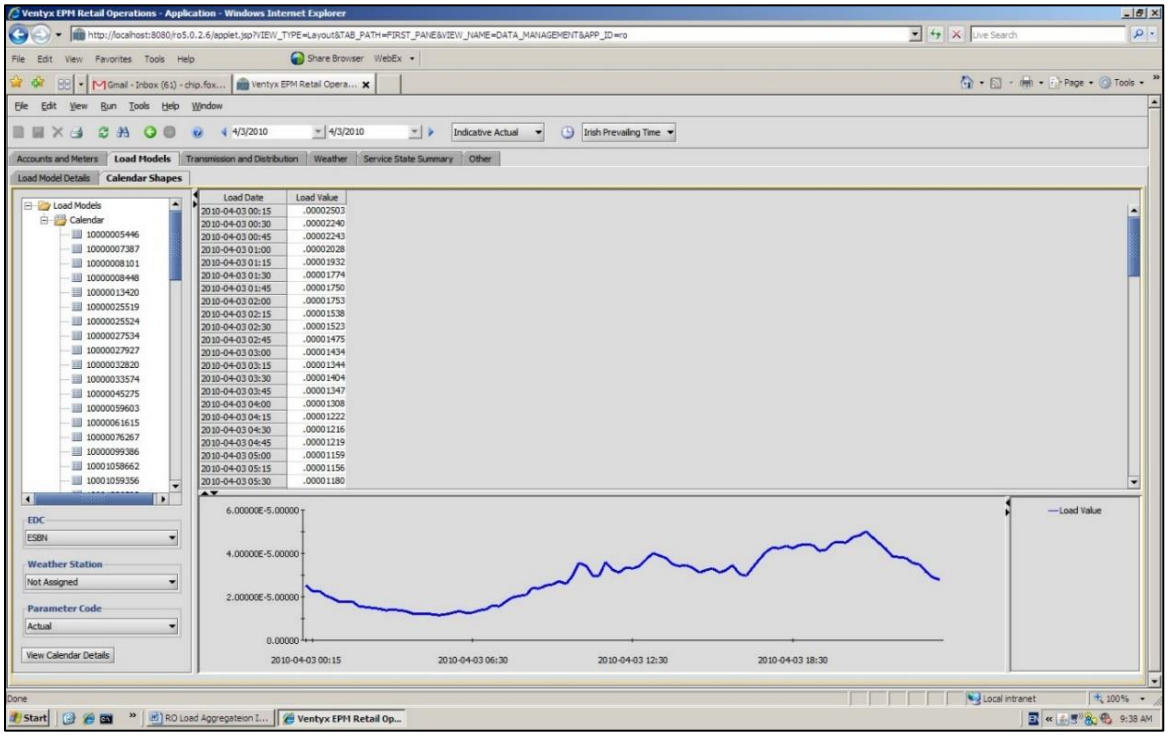
Chapter 5: Load Profiles

5.1 Validate Load Profiles

Retail Operations supports a default file format for the import of load profiles. The default import process creates the load profiles and associates them to a calendar. The calendar is assigned to accounts during the static data import process.

Profiles must be created for the 24H, Day/Night, and Night Storage versions of each load profile. Each load profile should be converted to the supported format and imported. To verify the load profile after import:

1. Open the Retail Data Management module from the home page
2. Select the Load Models tab
3. Select the Load Model Details sub-tab
4. Drill down to the Load Model > Calendar folder
5. Select a profile from the list
6. On the Profile Assignments tab you will see the Profile. Verify the following:
   - Begin Date is set to the start date of the profile. The load aggregation process will not use the profile outside of the effective begin date end date process.
   - Profile Status is set to Production. To change the profile status, select Edit Associated Profile Status and Operation from the popup menu.
7. Click the **View Composite Profile** button to see the profile coefficients and a graph for the selected date on the tool bar.



Note: When querying for dates beyond the available profile date range, the system will automatically select a date of the same day-type from the available date range.

5.2 Default QHM Calendar

Requirements TBD.

Chapter 6: Account Data Validation

Account, Service Location and Meter data is automatically imported from the static data file. Following the import of static data, the account and meter data should be verified as follows.

6.1 Finding an Account

To search for an account:

- Open the Retail Data Management module from the home page
- Select the **Find** button (binocular icon) from the tool bar
- Select the search criteria from the Search Options combo-box. You may search on the following fields:
  - Account Name = MPRN
  - Account Alias = Customer name
  - Meter External Identifier = Meter serial number
- Enter the desired search name (the"%" can be used as a wildcard)
- Click the **Find** button
- Select the desired row
- Click the **Ok** button

The desired account will appear in the tree on the left. You may drill-down to the Account, Service Location or Meter level from the tree.

6.2 Account Data

Retail data consist of both scalar (single values without effective dates) and temporal (with begin and end dates) values. Accounts have the following scalar data properties.

Attribute	Value	Description
Name		Will be set to the MPRN
Alias		Will be set to the customer's name
Display Name		The display name is automatically derived from a system defined trigger
Model Option	Meter	
External Identifier		Will be set to the MPRN
Is UFE Participant	Unchecked	
Create Settlement Profile		Unchecked

6.3 Account Status

The status parameter is set during the static data import. The list of available status values (Active, Inactive, etc.) are system defined with each status value being designated as either Active or not based on the Is Active check box field.

Attribute	Value	Description
Status		One of possible settings from a system defined list. This value is set during the static data import.
Is Active	Checked	Must be checked to include in the data aggregation for the effective time period.
Begin Date		Defines the time period for which the record is valid. The MPRN must active during the data aggregation date to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Entry Date		The date and time that the record was last updated.

6.4 EDC

The EDC designates the distribution company serving the account. This value is set during the static data import and must have a valid record effective for the retail aggregation date.

Attribute	Value	Description
EDC		Either ESBN or NIE
Begin Date		Defines the time period for which the record is valid. The MPRN must be assigned to an EDC during the data aggregation date to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
EDC Account Number	Optional	The number by which the EDC identifies the accounts. Not used on the SEM implementation.
EDC Rate Class	Optional	May designate the DUoS tariff. This value is not used in SEM, the DUoS is designated via a Group assignment.
Strata	Optional	Optional sub-classification of the Rate Class. Unused in SEM.
Entry Date		The date and time that the record was last updated.

6.5 ESP and Pool

The ESP and Pool designates the supplier serving the account and the profile or voltage class assignment. This value is set during the static data import and must have a valid record effective for the retail aggregation date.

Attribute	Value	Description
ESP		The supplier unit to which the account is assigned.
Pool		The supplier unit and profile or voltage class. This value is redundant with the Schedule Group but is maintained to provide additional GUI filtering options unavailable to the Schedule Group.
Begin Date		Defines the time period for which the record is valid. The MPRN must be assigned to an ESP and Pool during the data aggregation date to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
ESP Account Number	Optional	The number by which the ESP identifies the accounts. Not used on the SEM implementation.
Entry Date		The date and time that the record was last updated.

6.6 Service Locations

The Service Location allows multiple sites to be associated with an Account. This functionality is not currently used in the SEM implementation but is a required data relationship for linking Meters to Accounts. This value is set during the static data import and must have a valid record effective for the retail aggregation date.

Attribute	Value	Description
Service Location		The MPRN number. Set during the static data import.
Begin Date		Defines the time period for which the record is valid. The MPRN must have a service location during the data aggregation date to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Service Point	Optional	May be used to link the MPRN to the SEM Resource. This is achieved automatically via the Schedule Group Assignment in the SEM implementation.
Weather Station	Optional	May be used for linking weather data to a meter for forecast modeling.
Entry Date		The date and time that the record was last updated.

6.7 PLC/ICAP

The PLC/ICAP tab displays the MIC or MEC value imported through the static data import. The data grid contains the following values.

Attribute	Value	Description
Type		A system defined list containing MIC and MEC for the SEM implementation. The does not allow overlapping records for the same Type.
Begin Date		Defines the time period for which the value is valid.
End Date		Defines the time period for which the value is valid. NULL implies there is no end date to the record.
Value		The MIC or MEC value.
Entry Date		The date and time that the record was last updated.

6.8 Groups

The Group tab is used to show assignment to one or more system defined groups. For the SEM Implementation group assignments are used to designate the DUoS and TUoS tariff assignments.

Attribute	Value	Description
Group		The Group to which the MPRN is assigned.
Category		Either Distribution or Transmission.
Begin Date		Defines the time period for which the record is valid. The MPRN must be assigned to a DUoS and TUoS group during the retail settlements process to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Entry Date		The date and time that the record was last updated.

6.9 Meters

The meter data is imported from the static data file. Each meter is uniquely identified by the MPRN and Meter Serial Number. One or more meters may exist at a Service Location.

You may search for a Meter using the **Find** dialog (binocular icon) as described in section 6.1 Finding an Account of this document. Alternatively you can navigate to a Meter by first finding the Account and then drilling down using the Account > Service Location > Meter tree.

Retail data consist of both scalar (single values without effective dates) and temporal (with begin and end dates) values. Meters have the following scalar data properties.

Attribute	Value	Description
Name		Will be set to the MPRN plus Serial Number.
Status	Active	Must be set to Active.
Units		Units are not used if Meter Channel units are used. For the SEM implementation this field can be ignored or hidden.
Type		Interval or Period (non-interval) designates the metering type.
Interval		15 Minute or 30 Minute for the SEM implementation. This value is automatically hidden for Period (non-interval) meters.
External Identifier		The Serial Number of the Meter.
Use TOU Usage Factors	Checked	Enables the use of TOU usage factors.

6.10 Meter Channels

The meter channels are used to track multiple metered values at a meter. The meter channels are created during the static data import.

Attribute	Value	Description
Channel Number	50 or 51	For the SEM implementation 50 = KW and 51 = KVAR.
Description		Textual description of the channel values.
Operation Code	Add	The system will combine the values using an Add, Subtract or None operation when aggregating to a meter, service location or account level.
UOM		Unit of Measure, will be KW, KVAR, etc.
Interval		The interval of metering. Will be 15 Minute or 30 Minute for SEM implementation.

6.11 Meter Load Model

The Load Model tab is used to show assignment to the Load Profile. For the SEM Implementation this value is set during the static data import.

Attribute	Value	Description
Case	Base	Only the Base case is used in the SEM implementation.
Calendar		The load profile assignment. Interval meters shall be automatically defaulted to QHMCalendar.
Type		Forecast, Backcast or Settlement. If a Backcast calendar is not specified it will automatically default to the Forecast Calendar assignment.
Begin Date		Defines the time period for which the record is valid. The NWH MPRN must be assigned to load profile during the data aggregation process to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Entry Date		The date and time that the record was last updated.

6.12 Meter Loss Factor

The Loss Factor designates the rate to apply to the load estimation during the load aggregation process. This value is set during the static data import process.

Attribute	Value	Description
Loss Factor		The Loss Factor code. To view or change the Loss Factor rate in effect, select Loss Factor Details from the right-click popup menu.
Begin Date		Defines the time period for which the record is valid.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Entry Date		The date and time that the record was last updated.

6.13 Meter Schedule Group

The Schedule Group tab is used to show assignment to one or more system defined groups representing the supplier unit and load profile or voltage class (for QH). The Schedule Group is assigned during the static data import and designates which load aggregation the MPRN will be assigned.

Attribute	Value	Description
Schedule Group		The Group to which the MPRN will be aggregated. The Schedule Group is equal to the supplier unit and profile group/voltage class.
Category		Either Distribution or Transmission.
Begin Date		Defines the time period for which the record is valid. The MPRN must be assigned to a DUoS and TUoS group during the retail settlements process to be included in the results.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Entry Date		The date and time that the record was last updated.

6.14 Usage Factors

The Usage Factor tab displays the usage factor applied to the load profile during the load aggregation process. This value is set during the 3xx message import process.

Attribute	Value	Description
Template		The Template defines the time periods that the different usage factors should be applied (e.g. OOD/OON).
Begin Date		Defines the time period for which the usage factor is valid.
End Date		Defines the time period for which the record is valid. NULL implies there is no end date to the record.
Period Usage Details		Displays the usage factor(s) in effect for the date range. To edit the usage factors select Edit Period Usage Factors from the right-click popup menu.
Entry Date		The date and time that the record was last updated.

Chapter 7: Load Aggregation Execution

7.1 Load Aggregation Inputs

NQH Meters

For NQH profiled accounts, the backcast process is performed as follows:

$(UF_{Date-Time\ Period} * LP\ Coefficient_{Date-Interval}) * (1 + DLF_{Date})$

UF = Meter Usage Factor
LP Coefficient = Load Profile Coefficient
DLF = Distribution Loss Factor

QH/HH Meters

For interval metered QH and HH accounts, the backcast process looks for metered usage data on the backcast date. If no metered usage is available the system will default to the account's Forecast or Backcast calendar. For the SEM implementation the QH/HH accounts will be assigned a default calendar that has no associated load profile resulting in zero values for these accounts.

7.2 Load Data Aggregation Execution

The Load Data Aggregation is also referred to as a Backcast within the Retail Office system. To execute a backcast:

1. Open the Load Data Aggregation module from the home page.
2. Set the toolbar dates for which you want to run the load aggregation process.
3. Set the **Settlement Type** from the combo-box on the tool bar.
4. Click the **New** button (blank page icon) on the tool bar to open the **New Backcast** dialog.
5. Verify the **Begin** and **End Dates**
6. Select a **Supplier Unit** from the ESP list or choose **All**
7. Select a **Distribution Company** from the EDC list or choose **All**
8. Select **All Accounts** or you may choose a single **MPRN** from the list
9. Verify the **Apply Usage Factor** option is checked
10. You may choose a date and time to schedule a run as a background process
11. Click **Run** and wait for the **Backcast Completed** message box to appear

Note: Unless you choose to run the process at a Schedule Time the system will lock the Retail Office GUI until the process completes.

Chapter 8: Load Aggregation Results

8.1 Viewing Load Aggregation Results

The following standard screens are provided for viewing Backcast results. The user interface may be configured to rename the tab labels. In the following cases the standard name is provided in ( )s.

- **ESBN/NIE Totals (Summary View)** – This screen provides total load by distribution company for the selected date and settlement type. This screen supports Save As to file and copy/paste to external applications.
- **Supplier Units (EDC/ESP View)** – This screen provides subtotals by multiple criteria including EDC, PSE, ESP or Pool. This screen supports Save As to file and copy/paste to external applications. Additional functionality includes:
  - The ability to compare to results on a different operate date. For example you can select to see the results of Monday April 5 with Tuesday April 6.
  - See Max, Min or Average values when viewing in Daily or higher time intervals.
- **Account** – This screen allows you to drill down to specific MPRN level results. Additional functionality includes:
  - A Data Browser option which orients the results into daily rows and includes additional graph options.
  - A Tree Hierarchy that allows you to change the order at which the drill down is structured.
- **Enrollment** – This screen contains the following sub-tabs:
  - The Total tab shows the number of MPRNs by day for each EDC, PSE, ESP or Pool.
  - The Details tab lists the individual MPRNs with their start and end dates.
  - The Summary tab lists the number of MPRNs by ESP.
- **MIC/MEC (Ancillary Service)** – This tab shows the daily totals of MIC or MEC values by EDC, PSE, ESP or Pool and provides drill down to the daily values for each MPRN.

8.2 Accepting Backcast Results

After the Backcast has been run, the user must accept the results to have them appear in the Market Manager module.

To Accept the Backcast results:

1. Open the Load Data Aggregation module from the home page.
2. Set the toolbar dates for which you want to accept the load aggregation process.
3. Set the Settlement Type from the combo-box on the tool bar.
4. Select **Accept Backcast** from the Options menu on the tool bar.
5. This will open a dialog box labeled **Accept Retail Load Schedules**. Click the **Ok** button.
6. The load schedules are now available for viewing in the SEM Settlements module.