

Calculate BM Unit Allocated Demand Volume:
Produce Profiled Consumption and Disconnection
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Overview / How to read

The aim of this section is to build the profile coefficient or 'fraction of demand' most suited to the Settlement Period (e.g. by factoring in seasons, time of day, etc.) and apply it to each consumption data item provided by Data Aggregators on behalf of Suppliers.

Start with the inputs at the bottom of the model and follow the calculations to the outputs at the top.

Key steps:

Use the relevant variables and coefficients to create the Estimated Regional Average Demand Per Customer (energy).

Divide this by the Group Average Annual Consumption to create the Basic Period Profile Coefficient for the Settlement Period.

Create the Period Profile Class Coefficient by taking into account multiple registers e.g. Economy 7. Aggregate this for each Settlement day and provide to NHHDCs.

Multiply the PPCC by each element of the consumption data (e.g. EACs, AAs, etc.) provided by Data Aggregators (BMPM) to get the Profiled Consumption for a Supplier in the Settlement Period.

Follow a similar process for Demand Disconnection events – these are infrequent events.

Key

Final calculation / output

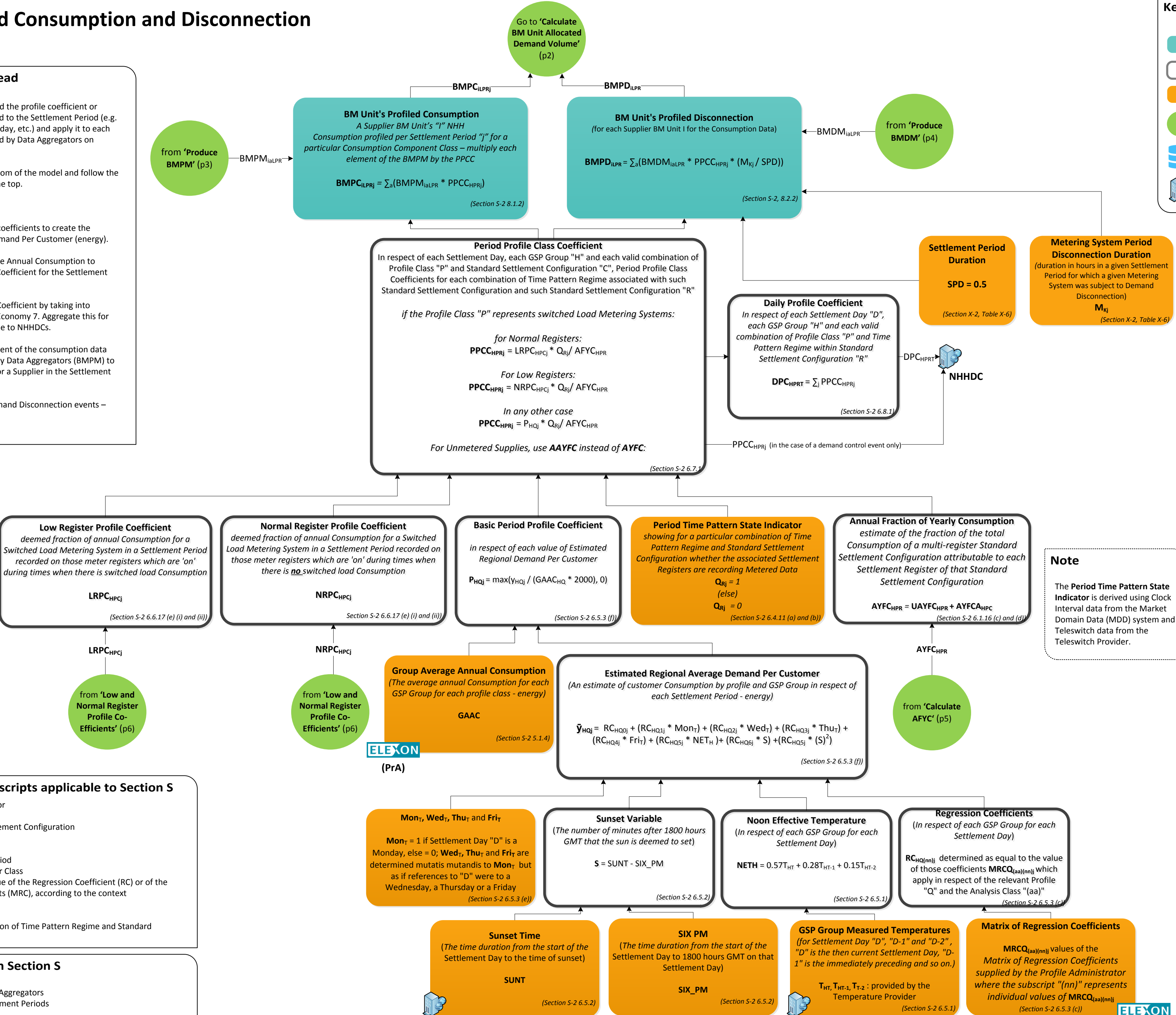
Calculation

Data input

Reference to a particular page on a Settlement Calculation Hierarchy model

System

Agent/Party Agent/external organisation



Subscripts and superscripts applicable to Section S

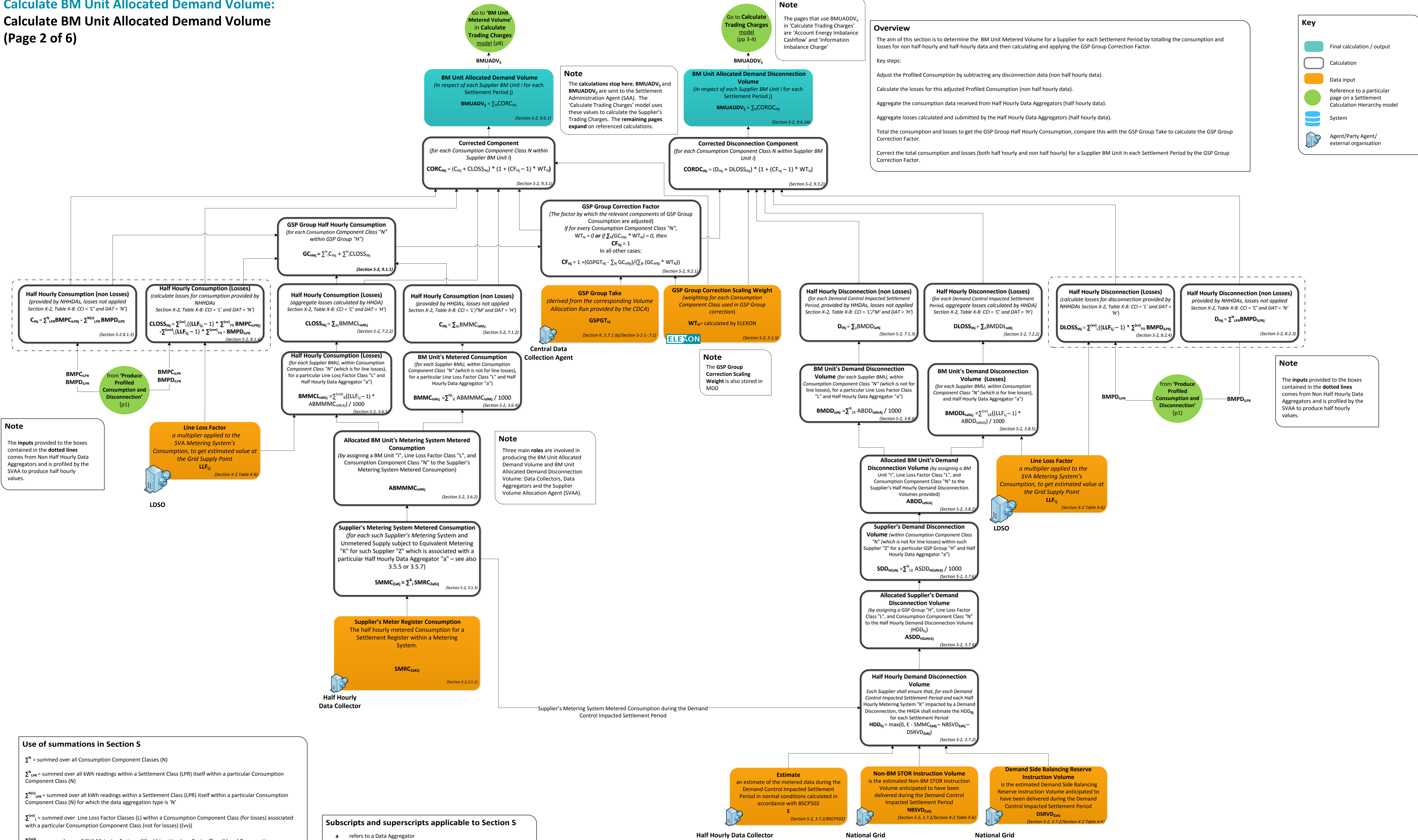
- a refers to a Data Aggregator
- (aa) refers to an Analysis Class
- C refers to a Standard Settlement Configuration
- H refers to a GSP Group
- i refers to a BM Unit
- j refers to a Settlement Period
- L refers to a Line Loss Factor Class
- (nn) refers to an individual value of the Regression Coefficient (RC) or of the Matrix of Regression Coefficients (MRC), according to the context
- P refers to a Profile Class
- Q refers to a Profile
- R refers to a valid combination of Time Pattern Regime and Standard Settlement Configuration

Use of summations in Section S

- \sum_a = summed over all Data Aggregators
- \sum_j = summed over all Settlement Periods



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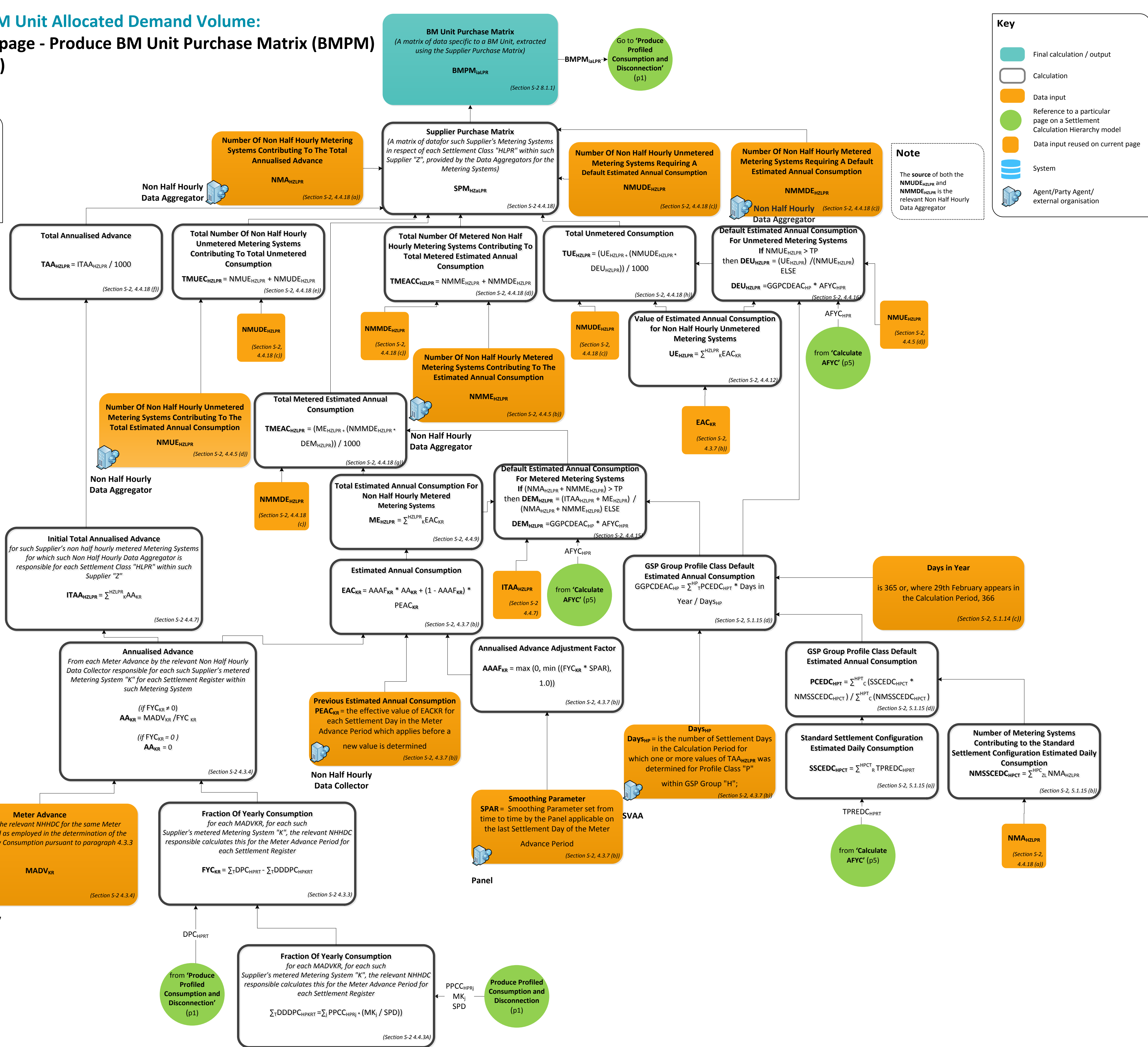


Settlement Calculation Hierarchy

Supporting page - Produce BM Unit Purchase Matrix (BMPM)
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Overview

The SVAA extracts data from the SPM for each BM Unit. SPM data is calculated and provided by Non Half Hourly Data Aggregators for all MSIDs at all times (even during demand control events).



Subscripts and superscripts applicable to Section S

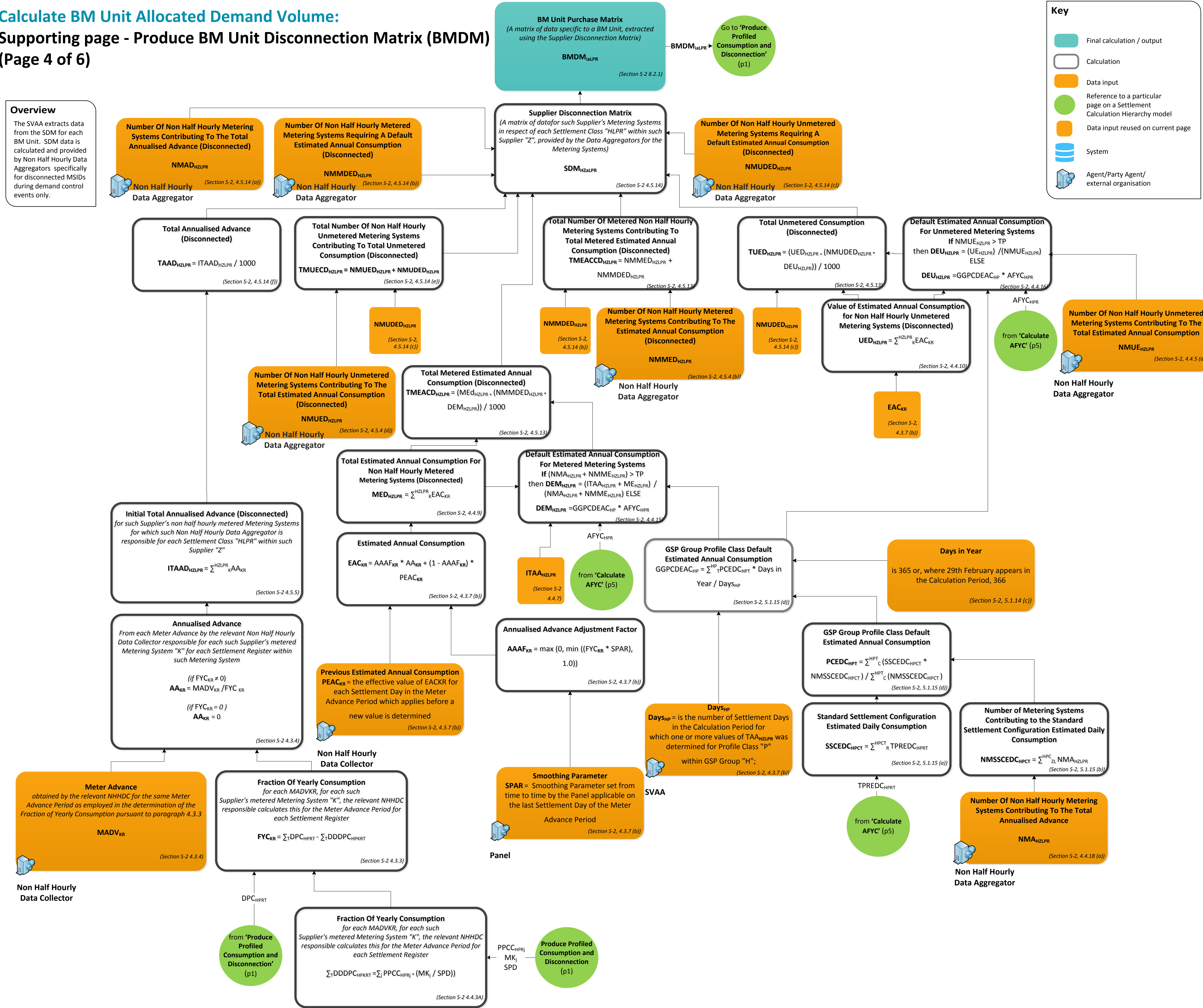
- | | |
|----------|--|
| a | refers to a Data Aggregator |
| C | refers to a Standard Settlement Configuration |
| H | refers to a GSP Group |
| i | refers to a BM Unit |
| j | refers to a Settlement Period |
| K | refers to a Metering System |
| L | refers to a Line Loss Factor Class |
| P | refers to a Profile Class |
| Q | refers to a Profile |
| R | refers to a valid combination of Time Pattern Regime and Standard Settlement Configuration |
| T | refers to a Settlement Day |
| Z | refers to a Supplier |

Subscripts and superscripts applicable to Section S Use of summations in Section S

- | | | |
|---|--|--|
| a | refers to a Data Aggregator | $\sum_{K \in \text{HLPR}} \zeta_K$ = summed over all non half hourly SVA Metering Systems (K) by Settlement Class (HLPR) for a particular Supplier (Z) |
| C | refers to a Standard Settlement Configuration | $\sum_{T \in \text{HP}} \tau_T$ = summed over all Settlement Days (T) for Profile Class (P) within GSP Group (H). |
| H | refers to a GSP Group | $\sum_{C \in \text{HPCT}} c_C$ = summed over all Standard Settlement Configurations (C) for Profile Class (P) within GSP Group (H) for Settlement Day (T) |
| i | refers to a BM Unit | $\sum_{R \in \text{HPCT}} r_R$ = is the summation of all Standard Settlement Configuration and Time Pattern Regime combinations "R" valid for Standard Settlement Configuration "C" in Profile Class "P" within GSP Group "H" for Settlement Day "T" |
| j | refers to a Settlement Period | $\sum_{Z \in \text{HPCT}} \zeta_{ZL}$ = is the summation over all Suppliers and Line Loss Factor Classes for any one valid combination of Standard Settlement Configuration and Time Pattern Regime for Standard Settlement Configuration "C" and Profile Class "P" within GSP Group "H" |
| K | refers to a Metering System | $\sum_{Z \in \text{HPR}} \zeta_{ZL}$ = is the summation over all Suppliers and Line Loss Factor Classes for Standard Settlement Configuration and Time Pattern Regime combination "R" in Profile Class "P" within GSP Group "H" |
| L | refers to a Line Loss Factor Class | |
| P | refers to a Profile Class | |
| Q | refers to a Profile | |
| R | refers to a valid combination of Time Pattern Regime and Standard Settlement Configuration | |
| T | refers to a Settlement Day | |
| Z | refers to a Supplier | |

Supporting page - Produce BM Unit Disconnection Matrix (BMDM)
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The SVAA extracts data from the SDM for each BM Unit. SDM data is calculated and provided by Non Half Hourly Data Aggregators specifically for disconnected MSIDs during demand control events only.



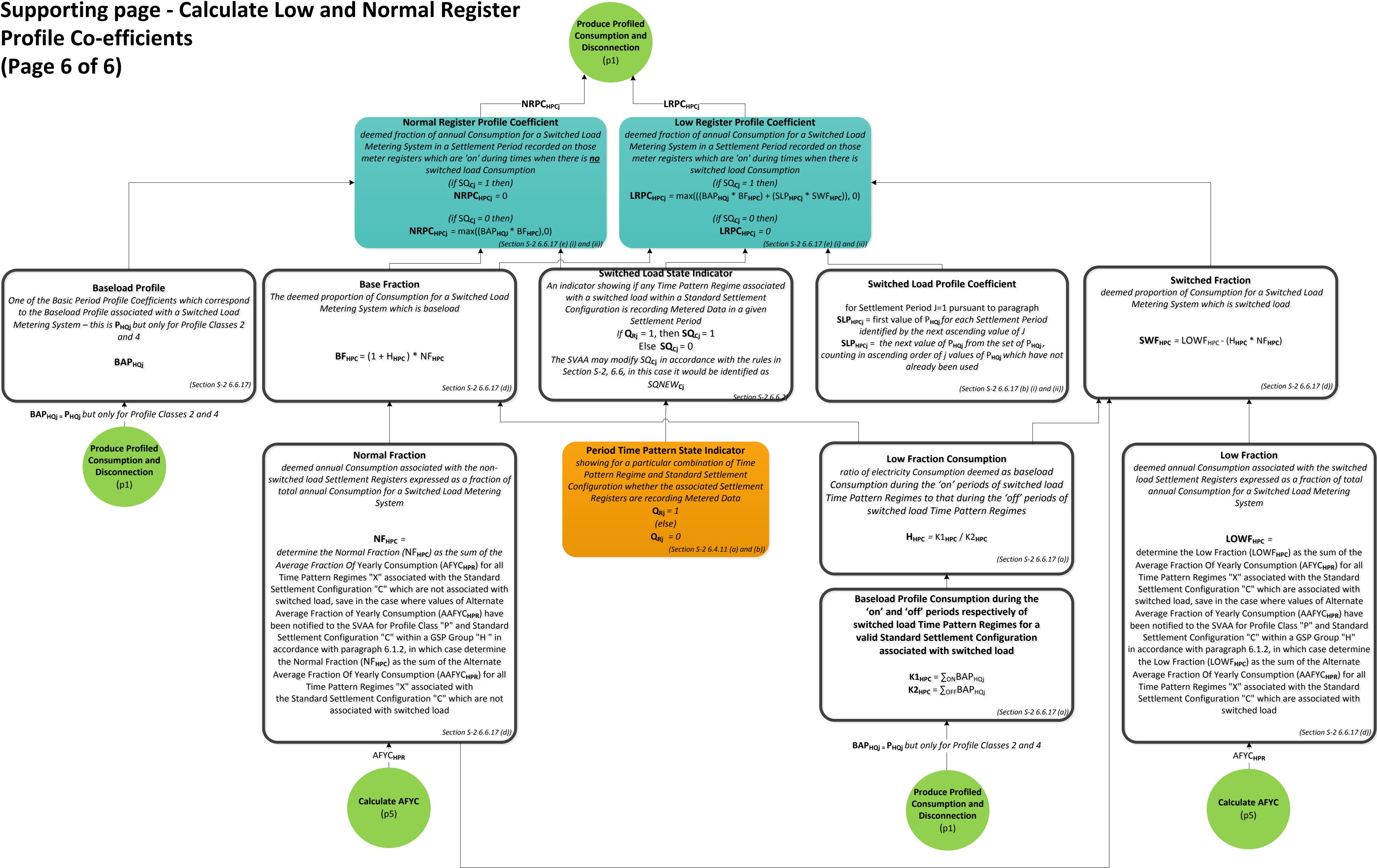
- A** refers to a Data Aggregator
- C** refers to a Standard Settlement Configuration
- H** refers to a GSP Group
- I** refers to a BM Unit
- J** refers to a Settlement Period
- K** refers to a Metering System
- L** refers to a Line Loss Factor Class
- P** refers to a Profile Class
- Q** refers to a Profile
- R** refers to a valid combination of Time Pattern Regime and Standard Settlement Configuration
- T** refers to a Settlement Day
- Z** refers to a Supplier

\sum_{HLPKR} = summed over all non half hourly SVA Metering Systems (K) by Settlement Class (HLPKR) for a particular Supplier (Z)
 $\sum_{\text{HP T}}$ = summed over all Settlement Days (T) for Profile Class (P) within GSP Group (H).
 $\sum_{\text{HP C}}$ = summed over all Standard Settlement Configurations (C) for Profile Class (P) within GSP Group (H) for Settlement Day (T)
 \sum_{HPTCT} = is the summation of all Standard Settlement Configuration and Time Pattern Regime combinations "R" valid for Standard Settlement Configuration "C" in Profile Class "P" within GSP Group "H" for Settlement Day "T"
 $\sum_{\text{HPC ZL}}$ = is the summation over all Suppliers and Line Loss Factor Classes for any one valid combination of Standard Settlement Configuration and Time Pattern Regime for Standard Settlement Configuration "C" and Profile Class "P" within GSP Group "H"
 $\sum_{\text{HPR ZL}}$ = is the summation over all Suppliers and Line Loss Factor Classes for Standard Settlement Configuration and Time Pattern Regime combination "R" in Profile Class "P" within GSP Group "H"

Calculate BM Unit Allocated Demand Volume:

Supporting page - Calculate Low and Normal Register Profile Co-efficients

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Key

- Final calculation / output
- Calculation
- Data input
- Reference to a particular page on a Settlement Calculation Hierarchy model
- System
- Agent/Party Agent/external organisation

Subscripts and superscripts applicable to Section S

C refers to a Standard Settlement Configuration
H refers to a GSP Group
j refers to a Settlement Period
P refers to a Profile Class
Q refers to a Profile

Use of summations in Section S

\sum_{ON} = is the summation over all Settlement Periods in the Settlement Day for which $SQNEW_{Qj} = 1$
 \sum_{OFF} = is the summation over all Settlement Periods in the Settlement Day for which $SQNEW_{Qj} = 0$