Smart Metering Programme

BRIEFING DOCUMENT

Periodic Consumption and Initial EUF Values for Smart Non-Interval Sites

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Contents

Purpose of this Document

This document is intended to provide Suppliers with details of new parameter values that ESB Networks will setup within the Central Market System in relation to Smart Non-Interval sites.

- Periodic Consumption values will be defined for the new Register Types introduced to market [1]

- Initial Estimated Usage Factor values will be defined for the new Time-of-Uses introduced to market [2]

Background

Drop 6 of the Smart Metering Project will see the introduction of the new Meter Configuration Code **MCC16** (Standard Smart Tariff Import) for smart non-interval sites.

The meter configuration denoted by MCC16 brings three new Register Types to the market, along with the three new Time-of-Use codes associated with the new register types:

- **Register Type 78**   Import Day Off-Peak (kWh)   **Time-of-Use 01D**
- **Register Type 79**   Import Night Off-Peak (kWh)   **Time-of-Use 01N**
- **Register Type 80**   Import Peak (kWh)   **Time-of-Use 01P**

Consequently, it will be required to setup new default *Periodic Consumption* values for the new Register Types, and new *Initial Estimated Usage Factor* (EUF) values for the new Time-of-Uses.

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[1] The separate "Estimation of Non-Interval Meter Readings" briefing document describes in detail the use of default Periodic Consumption values within the estimation procedure for non-interval meter readings

[2] The separate "Aggregation Briefing Document" describes in detail the use of Estimated Usage Factors within the Data Aggregation procedure.

Periodic Consumption values for newly introduced Register Types

The Periodic Consumption for a register is the value (in kWh) representing its estimated annual consumption.

For the purposes of estimating non-interval meter readings:

>The Periodic Consumption for a register provides the *default* basis for estimating register readings in the following scenarios:

>* Where a representative base period does not exist within the history of actual meter readings.

>* Following initial meter installation where no meter reading history yet exists.

Within the Central Market System, every installed consumption register is automatically allocated a default Periodic Consumption value upon its installation.

Periodic Consumptions are allocated in accordance with the:

* DUoS Group, Meter Configuration Code & Standard Profile (at site level)

* Time of Use (at register level)

The default *Periodic Consumption* values for the new meter configuration MCC16 will be based on the default *Periodic Consumption* values currently utilised within the Central Market System for the existing meter configuration MCC02.

The table below shows the parameter data that currently exists for DG1 / MCC02:

DUoS Group	MCC		Standard Profile	Time of Use		Periodic Consumption
DG1	MCC02		2	00D	Day	2,964
DG1	MCC02		2	00N	Night	3,597

For DG1 / MCC16, the new 01N time-of-use (23:00 to 08:00) equates directly to the existing 00N time-of-use (23:00 to 08:00)

Therefore, the default Periodic Consumption value for DG1 / MCC16 / 01N will be set to 3,597 kWh
(which is the existing default Periodic Consumption value for DG1 / MCC02 / 00N)

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However, for DG1 / MCC16, the new 01D time-of-use (08:00 to 17:00, and 19:00 to 23:00) and the new 01P time-of-use (17:00 to 19:00) do **not** equate directly to the existing 00D time-of-use (08:00 to 23:00)

It is therefore required to pro-rate the existing default Periodic Consumption value 2,964 kWh

Smart Standard Profile 25 (published on the RMDS website) models the distribution of consumption per quarter hour per day for Smart-relevant **DG1** sites, and the associated profile coefficients provide the basis for the pro-ration of the existing default 'Day' Periodic Consumption value 2,964 kWh

(That is, to determine the proportion of the 'Day' consumption which relates to the 'Peak' time-of-use, and the proportion which relates to the 'Off-Peak' time-of-use)

Based on the data published for the year 2021 [3]

> **83.2 %** of the sum of day-relevant profile coefficients for Smart Standard Profile 25 relate to the 01D time-of-use

> **16.8 %** of the sum of day-relevant profile coefficients for Smart Standard Profile 25 relate to the 01P time-of-use

Therefore,

> The default Periodic Consumption value for DG1 / MCC16 / 01D will be set to 2,466 kWh
> *(which is 83.2% of the existing default Periodic Consumption value of 2,964 kWh for DG1 / MCC02 / 00D)*

> The default Periodic Consumption value for DG1 / MCC16 / 01P will be set to 498 kWh
> *(which is 16.8% of the existing default Periodic Consumption value of 2,964 kWh for DG1 / MCC02 / 00D)*

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[3] At the time of writing, the latest available Smart Standard Profiles are those published for the year 2021

The table below shows the parameter data that currently exists within the Central Market System for DG2 / MCC02:

DUoS Group	MCC		Standard Profile	Time of Use		Periodic Consumption
DG2	MCC02		4	00D	Day	6,829
DG2	MCC02		4	00N	Night	5,295

Therefore, the default Periodic Consumption value for DG2 / MCC16 / 01N will be set to 5,295 kWh

(which is the existing default Periodic Consumption value for DG2 / MCC02 / 00N)

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Smart Standard Profile 27 (published on the RMDS website) models the distribution of consumption per quarter hour per day for Smart-relevant **DG2** sites, and the associated profile coefficients provide the basis for the pro-ration of the existing default 'Day' Periodic Consumption value 6,829 kWh

(That is, to determine the proportion of the 'Day' consumption which relates to the 'Peak' time-of-use, and the proportion which relates to the 'Off-Peak' time-of-use)

Based on the data published for the year 2021

> **83.6 %** of the sum of day-relevant profile coefficients for Smart Standard Profile 27 relate to the 01D time-of-use

> **16.4 %** of the sum of day-relevant profile coefficients for Smart Standard Profile 27 relate to the 01P time-of-use

Therefore,

> The default Periodic Consumption value for DG2 / MCC16 / 01D will be set to 5,709kWh
> *(which is 83.6% of the existing default Periodic Consumption value of 6,829 kWh for DG2 / MCC02 / 00D)*

> The default Periodic Consumption value for DG2 / MCC16 / 01P will be set to 1,120 kWh
> *(which is 16.4% of the existing default Periodic Consumption value of 6,829 kWh for DG2 / MCC02 / 00D)*

The table below shows the parameter data that currently exists within the Central Market System for DG5 / MCC02:

DUoS Group	MCC		Standard Profile	Time of Use		Periodic Consumption
DG5	MCC02		6	00D	Day	32,715
DG5	MCC02		6	00N	Night	16,190

Therefore, the default Periodic Consumption value for DG5 / MCC16 / 01N will be set to 16,190 kWH

(which is the existing default Periodic Consumption value for DG5 / MCC02 / 00N)

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Smart Standard Profile 29 (published on the RMDS website) models the distribution of consumption per quarter hour per day for Smart-relevant **DG5** sites, and the associated profile coefficients provide the basis for the pro-ration of the existing default 'Day' Periodic Consumption value 32,715 kWh

(That is, to determine the proportion of the 'Day' consumption which relates to the 'Peak' time-of-use, and the proportion which relates to the 'Off-Peak' time-of-use)

Based on the data published for the year 2021

89.2 % of the sum of day-relevant profile coefficients for Smart Standard Profile 29 relate to the 01D time-of-use

10.8 % of the sum of day-relevant profile coefficients for Smart Standard Profile 29 relate to the 01P time-of-use

Therefore,

The default Periodic Consumption value for DG5 / MCC16 / 01D will be set to 29,182kWh
(which is 89.2% of the existing default Periodic Consumption value of 32,715 kWh for DG5 / MCC02 / 00D)

The default Periodic Consumption value for DG5 / MCC16 / 01P will be set to 3,533 kWh
(which is 10.8% of the existing default Periodic Consumption value of 32,715kWh for DG5 / MCC02 / 00D)

The table below provides the consolidated list of default Periodic Consumption values that ESB Networks will provisionally enter within the Central Market System for Smart Non-Interval sites

DUoS Group	MCC		Standard Profile	Time of Use		Periodic Consumption
DG1	MCC16	SST IMP	25	01D	Day Off-Peak	2,466
DG1	MCC16	SST IMP	25	01N	Night Off-Peak	3,597
DG1	MCC16	SST IMP	25	01P	Peak	498
DG2	MCC16	SST IMP	27	01D	Day Off-Peak	5,709
DG2	MCC16	SST IMP	27	01N	Night Off-Peak	5,295
DG2	MCC16	SST IMP	27	01P	Peak	1,120
DG5	MCC16	SST IMP	29	01D	Day Off-Peak	29,182
DG5	MCC16	SST IMP	29	01N	Night Off-Peak	16,190
DG5	MCC16	SST IMP	29	01P	Peak	3,533

Initial EUF values for newly introduced Time-of-Uses

The Usage Factor for a time-of-use is the value (in kWh) representing the estimated annual consumption for the time-of-use, effective for each day within the validity period of the Usage Factor assignment.

> Within the Data Aggregation process, the Usage Factor value effective of a day for a time-of-use provides the basis for determining non-interval consumption for settlement purposes for that day.

Within the Central Market System, whenever a new Time-of-Use is allocated to a non-interval site [4] , it is automatically assigned an *initial* Estimated Usage Factor (EUF) value.

- It is termed an *initial* assignment as it is the first Usage Factor assignment (for the newly allocated Time-of-use).

- Note that existing Usage Factor assignments are delimited (and new Usage Factor assignments are created) upon the processing of meter readings per non-interval site. So, the first EUF value initially assigned will (in the normal course of events) be superseded by subsequent usage factor assignments.

- Where there is a single register at a non-interval site for a Time-of-Use, then the **initial Estimated Usage Factor for that Time-of-Use will be equal to the default Periodic Consumption value** allocated to the register.

- Where there are multiple registers at a non-interval site for the same Time-of-Use, then the initial Estimated Usage Factor for that Time-of-Use will be the sum of the default Periodic Consumption values allocated to the registers.

Initial EUF values are allocated in accordance with the:

- DUoS Group, Meter Configuration Code & Standard Profile (at site level)

- Time of Use

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[4] A new Time-of-Use may be allocated upon initial creation of a site or upon a change of meter configuration for a site

The table below provides the consolidated list of Initial EUF values that ESB Networks will provisionally enter within the Central Market System for Smart Non-Interval sites [5]

DUoS Group	MCC		Standard Profile	Time of Use		Initial EUF
DG1	MCC16	SST IMP	25	01D	Day Off-Peak	2,466
DG1	MCC16	SST IMP	25	01N	Night Off-Peak	3,597
DG1	MCC16	SST IMP	25	01P	Peak	498
DG2	MCC16	SST IMP	27	01D	Day Off-Peak	5,709
DG2	MCC16	SST IMP	27	01N	Night Off-Peak	5,295
DG2	MCC16	SST IMP	27	01P	Peak	1,120
DG5	MCC16	SST IMP	29	01D	Day Off-Peak	29,182
DG5	MCC16	SST IMP	29	01N	Night Off-Peak	16,190
DG5	MCC16	SST IMP	29	01P	Peak	3,533

[5] For MCC16 there will be a single register per Time-of-Use, therefore initial Estimated Usage Factor per Time-of-Use is equal to the default Periodic Consumption value allocated to the associated register