

## **Balancing and Settlement Code**

### **BSC PROCEDURE**

#### **ALLOCATION OF PROFILE CLASSES & SSCs FOR NON-HALF HOURLY SVA METERING SYSTEMS REGISTERED IN SMRS**

**BSCP516**

**Version 8.0**

**Date: 25 June 2015**

**BSCP516**  
**relating to**  
**Allocation of Profile Classes and SSCs for Non-Half Hourly SVA Metering Systems**  
**Registered in SMRS**

1. Reference is made to the Balancing and Settlement Code (the Code) for the Electricity Industry in Great Britain and, in particular, to the definition of "BSC Procedure".
2. This is BSCP516, Version 8.0 relating to Allocation of Profile Classes and SSCs for Non-Half Hourly Metering System Registered in SMRS.
3. This BSC Procedure is effective from 25 June 2015.
4. This BSC Procedure has been approved by the Panel.

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**AMENDMENT RECORD**

<b>Version</b>	<b>Date</b>	<b>Description of Changes</b>	<b>Changes Included</b>	<b>Mods/ Panel/ Committee Refs</b>
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D.02	Code Effective Date	Incorporated version D.01 review comments		
D.03	Code Effective Date	Comments embodied following CMC1273		
2.0	Code Effective Date	Approved for use by the Panel		
3.0	Code Effective Date	Version alignment changes from AP516 embodied.	NCR 329	
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## 1. Introduction

### 1.1 Scope and Purpose of the Procedure

This BSC Procedure defines the process of allocating Profile Classes and Standard Settlement Configurations (SSCs) to all Non-Half Hourly (NHH) Metering Systems<sup>1</sup> registered in the Supplier Meter Registration Service (SMRS). The processes defined within this BSC Procedure are enduring processes and are to be used from the GSP Group implementation date for each Supplier.

The method of allocating a Profile Class is dependent on whether:

- i. the Metering System Identifier (MSID) is Import or Export;
- ii. meter usage is Domestic or Non-Domestic;
- iii. meter has 'switched load' capabilities;
- iv. Maximum Demand (MD) is required to be recorded.

The Profile Class suite currently consists of 8 Profile Classes (as defined in Appendix 4.1 - Allocation of Profile Classes to NHH MSIDs), two of which are for Domestic usage (Profile Classes 01 and 02) and 6 of which are for Non-Domestic usage (Profile Classes 03 to 08). Each NHH MSID will be assigned to a Profile Class.

From 1 April ~~2016~~2017 non-domestic customers with an Advanced Meter for Import fitted in accordance with the requirements of Standard Licence Condition (SLC) 12.17 -12.22 of the Electricity Supply Licence are mandated<sup>2</sup> to be settled on a Half Hourly basis and should not be registered under Profile Classes 5 to 8 using this BSC Procedure. For the avoidance of doubt once an Advanced Meter has been fitted in accordance with the SLC then that Metering System is mandated to be settled on a Half-Hourly basis from 1 April ~~2016~~2017.

MSIDs for unmetered connections or for Export metering can continue to be registered against Profile Class 8 after 1 April ~~2016~~2017.

The allocation of SSCs to NHH MSIDs is described in Appendix 4.2 - Allocation of NHH MSIDs to SSCs.

### 1.2 Main Users of Procedure and their Responsibilities

Suppliers will be responsible for allocating a Profile Class to a NHH MSID based on the criteria i to vi defined in section 1.3 below. The Supplier will send the details of the NHH MSID affected by the allocation of the Profile Class to the Non-Half Hourly Data Collector (NHHDC) and Supplier Meter Registration Agent (SMRA).

In the case of those NHH Import MSIDs allocated to one of the Load Factor (LF) banded MD Profile Classes (codes 05 to 08), the LF must be re-calculated annually

<sup>1</sup> The detailed requirements for unmetered supplies are not documented in this BSC Procedure. They are documented in BSCP520: Unmetered Supplies Registered in SMRS.

<sup>2</sup> ~~This requirement was implemented by BSC Modification P272.~~

by the NHHDC as defined in Appendix 4.4. The NHHDC will send details of these Profile Class changes to the Supplier. The Supplier will then notify the SMRA of the Profile Class changes.

The Supplier may also request the addition of a new Profile Class to the Profile Class suite and this is documented in BSCP509 - Changes to Market Domain Data. In addition an overview of the process is described in a [BSC Guidance Note](#).

### 1.3 Use of the Procedure

This BSC Procedure will be used:

- i as a result of the creation of new NHH MSIDs e.g. new connections, additional meters;
- ii where there is a shift from a Domestic to a Non-Domestic use or vice versa;
- iii where there is a change in the meter configuration which requires a change in the SSC to which the NHH MSID is allocated e.g. a single register meter to a multi-rate meter, switched load;
- iv where the Supplier becomes aware of a change to the switched load capability of a meter (whether or not a change of SSC is required);
- v where the Supplier becomes aware that a Metering System allocated to a switched load Profile Class under the applicable rules at the start of the 1998 Trading Arrangements should be allocated to the equivalent non-switched Profile Class under the rules set out in Appendix 4.1 of this procedure (or vice versa);
- vi when there is a change in the LF at the time of the annual LF re-calculation; and
- vii when there is both an Import and Export MSID registered at a site.

This BSC Procedure does not cover half hourly SVA Metering Systems.

The remaining sections in this document are:

Section 2 – Not Used.

Section 3 - Interface and Timetable Information: this section defines in detail the requirements of each business process.

Section 4 - Appendices: this section contains information which is relevant to Section 3.

### 1.4 Balancing and Settlement Code Provision

This BSC Procedure has been produced in accordance with the provisions of the Balancing and Settlement Code (the Code). In the event of an inconsistency between

the provisions of this BSC Procedure and the Code, the provisions of the Code shall prevail.

## **1.5 Associated BSC Procedures**

BSCP501 Supplier Meter Registration Service

BSCP504 Non-Half Hourly Data Collection for SVA Metering Systems  
Registered in SMRS

BSCP509 Changes to Market Domain Data

BSCP520 Unmetered Supplies Registered in SMRS

## **1.6 Acronyms and Definitions**

### **1.6.1 Acronyms**

The terms used in this BSC Procedure are defined as follows:

BSCCo	Balancing and Settlement Code Company
CTCU	Central Teleswitch Control Unit
LF	Load Factor
NHH	Non-Half Hourly
NHHDA	Non-Half Hourly Data Aggregator
NHHDC	Non-Half Hourly Data Collector
MD	Maximum Demand
MSID(s)	Metering System Identifier(s)
SLC	Standard Licence Condition
SSC	Standard Settlement Configuration
SMA	Special Metering Arrangement
SMRA	Supplier Meter Registration Agent
SMRS	Supplier Meter Registration Service
SVA	Supplier Volume Allocation
TPR(s)	Time Pattern Regime(s)

## 1.6.2 Definitions

Full definitions of the above acronyms are, where appropriate, included in the Code.

Switched Load Capacity	<p>A switched load is any load supplied by a dedicated circuit that is opened and closed by a time switch or teleswitch receiver that is part of the SVA Metering System.</p> <p>A Metering System will be deemed to be capable of switching load, if the switch (or meter) is wired to a restricted consumer unit or other consumer circuit. It is this capability, rather than the presence or otherwise of any load (of which the Meter Operator Agent and Supplier cannot reasonably be expected to be aware) that differentiates between switched and normal loads. If a Metering System with a switch is not connected to a switched circuit then the Metering System is not capable of switching load.</p>
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## **2. Not Used**

### 3. Interface and Timetable Information

#### 3.1 Allocate SSC/Profile Class to Non-Half Hourly SVA Metering System

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.1.1	As a result of : a) new MSID b) change of use <sup>3</sup> c) change in meter configuration (including change of switched load capability)	Identify relevant NHH MSID(s) which require allocation of a Profile Class.	Supplier.			Internal Process.
3.1.2	Within 3 WD of 3.1.1.	Assign NHH MSID(s) to appropriate SSC/Profile Class combination <sup>4</sup> .	Supplier.		Appendix 4.1 and 4.2.	Internal Process.
3.1.3	Within 3 WD of 3.1.2	Send NHH MSID(s) and SSC/Profile Class details.	Supplier.	NHHDC. SMRA.	D0052 Affirmation of Metering System Settlement Details.  D0205 Update Registration Details.  Refer to BSCP504 and BSCP501 respectively for NHHDC and SMRS processing instructions.	Electronic or other method as agreed.

<sup>3</sup> From Domestic to Non-Domestic or vice versa.

<sup>4</sup> Should the Profile Class change require the creation of a new combination of Profile Class and SSC, then the Supplier must procure the creation of the valid combination for the GSP Group.

### 3.2 Re-Calculate Load Factor for Import MSID(s)<sup>5</sup>

REF.	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.2.1	Annually in May.	Identify all NHH Non-Domestic Import MSID(s) where MD is recorded.	NHHDC.		Appendix 4.4 - Load Factor Allocation.	Internal Process.
3.2.2	Within 5 WD of 3.2.1.	Carry out the LF calculation for NHH Import MSID(s).	NHHDC.			Internal Process.
3.2.3	If calculation indicates a change of Profile Class is required.	Assign NHH Import MSID(s) to appropriate Profile Class combination.	NHHDC.			Internal Process.
3.2.4	Within 3 WD of 3.2.3.	Record and send those NHH Import MSID(s) and Profile Class details where the Profile Class has changed.	NHHDC.	Supplier <sup>6</sup> .	P0206 Required Change of Profile Class.	Electronic or other method, as agreed.
3.2.5	Within 20 WD of 3.2.4	Review information received from the NHHDC. Where appropriate <sup>7</sup> , send NHH MSID(s) and updated SSC/Profile Class details.  The effective date will be the date of the last meter readings used to calculate the LF.	Supplier	NHHDC. SMRA.	D0052 Affirmation of Metering System Settlement Details.  D0205 Update Registration Details.  Refer to BSCP504 and BSCP501 respectively for NHHDC and SMRS processing instructions.	Electronic or other method, as agreed.

<sup>5</sup> This procedure is reserved for NHH Non-domestic Import customers, without an Advanced Meter, registered to Profile Classes 05 to 08 prior to 1 April ~~2016~~2017 or remaining in Profile Classes 05 to 08 after 1 April ~~2016~~2017

<sup>6</sup> The Supplier must process Profile Class changes received from the NHHDC unless he can prove that the NHHDC calculation has been done incorrectly. However the NHHDC must not use the new Profile Class when sending EACs/AAs to the NHHDA until notified of the change by the Supplier, via process 3.2.5.

<sup>7</sup> The Supplier must process Profile Class changes received from the NHHDC unless the Supplier can show that the NHHDC has carried out the calculation incorrectly.

## 4. Appendices

### 4.1 Allocation of Profile Classes to NHH MSIDs

This Profile Allocation method will be used from the GSP Group implementation date for each Supplier. The table below contains the set of Profile Classes in the current Profile Class suite.

Code	Profile Class
01	Domestic Unrestricted
02	Domestic Economy 7
03	Non-Domestic Unrestricted
04	Non-Domestic Economy 7
05	Non-domestic, with MD recorded <sup>8</sup> and with LF less than or equal to 20%
06	Non-domestic, with MD recorded <sup>88</sup> and with LF less than or equal to 30% and greater than 20%
07	Non-domestic, with MD recorded <sup>88</sup> and with LF less than or equal to 40% and greater than 30%
08	Non-domestic, with MD recorded <sup>88</sup> and with LF greater than 40% <sup>9</sup>

A Domestic Customer means a customer supplied or requiring to be supplied with electricity at Domestic premises (but excluding such customer in so far as he is supplied or requires to be supplied at premises other than Domestic premises).

A Non-Domestic Customer means any customer not included in the above Domestic Customer definition.

From 1 April ~~2016~~2017 non-domestic customers with an Advanced Meter for Import fitted in accordance with the requirements of SLC 12.17 -12.22 of the Electricity Supply Licence are mandated<sup>22</sup> to be settled on a Half Hourly basis and should not be registered under Profile Classes 5 to 8. For the avoidance of doubt once an Advanced Meter has been fitted in accordance with the SLC then that Metering System is mandated to be settled on a Half Hourly basis from 1 April ~~2016~~2017.

MSIDs for unmetered connections or for Export metering can continue to be registered against Profile Class 8 after 1 April ~~2016~~2017.

<sup>8</sup> The requirement to record the MD for distribution charging prior to 1 April ~~2016~~2017.

<sup>9</sup> Profile Class 08 is also used for all NHH Export MSIDs (see Procedure 6).

#### 4.1.1 Import Metering used for Domestic Purposes

**Procedure 1:**

Import Metering used for Domestic purposes with switched load capabilities (as defined in paragraph 1.6.2) must be allocated to the 'Domestic Economy 7' Profile Class (Profile Class 2).

**Procedure 2:**

Metering used for Domestic purposes without switched load capabilities (as defined in paragraph 1.6.2) and all new connections, where the Supplier is not aware of the switched load capabilities of the Metering System, must be allocated to the 'Domestic Unrestricted' Profile Class (Profile Class 1).

#### 4.1.2 Import Metering used for Non Domestic Purposes

**Procedure 3:**

Import Metering used for Non Domestic purposes with switched load capabilities (as defined in paragraph 1.6.2) and where MD is not recorded must be allocated to the 'Non-Domestic Economy 7' Profile Class (Profile Class 4).

**Procedure 4:**

Metering used for Non-Domestic purposes without switched load capabilities (as defined in paragraph 1.6.2) where MD is not recorded and all new connections, where MD is not recorded and the Supplier is not aware of the switched load capabilities of the Metering System, must be allocated to the 'Non-Domestic Unrestricted' Profile Class (Profile Class 3).

**Procedure 5:**

Import Metering registered before 1 April ~~2016~~ 2017 used for Non-Domestic purposes where MD is recorded must be allocated to one of the MD Load Factor Banded Profile Classes.

#### 4.1.3 Export Metering

**Procedure 6:**

Export Metering must be allocated to the 'Non-domestic Profile Class, with MD recorded and with LF greater than 40%' Profile Class.

## 4.2 Allocation of NHH MSIDs to SSCs

Each NHH MSID must be allocated to one valid SSC. This allocation will depend on:

- i) whether the MSID registers Import or Export energy;
- ii) the number of settlement registers associated with the meter;

- iii) the TPR governing the switching behaviour of each settlement register;
- iv) whether the meter switching behaviour is controlled by timeswitch or teleswitch.

An Import MSID shall be allocated to an Import SSC and an Export MSID shall be allocated to an Export SSC.

#### Meter Registers and Settlement Registers

Each NHH SVA Metering System contains one or more meter registers. A meter register records consumption during defined time periods. For example, an unrestricted meter contains one meter register e.g. a Domestic tariff, whereas a multi-rate meter e.g. an E7 meter measuring day and night consumption contains two meter registers.

For most NHH SVA Metering Systems, a settlement register will correspond to the physical meter register. This means that a NHH SVA Metering System with two physical meter registers would be mapped to a SSC with two settlement registers (regardless of whether there is only one unit billing rate).

However, the following are exceptions:

- a) Where single phase meters are being used to measure a polyphase supply and registers on those meters have the same time periods, then all meter registers measuring concurrent periods within this NHH SVA Metering System are treated as one settlement register.
- b) Where a meter has one or more switched registers which are collectively not active all the time and a total register which is active all the time. A settlement register is required for the periods during which the total register only is recording demand. The time periods for this settlement register are derived by differencing; e.g. a meter with a total register and a night register being used for a day and night tariff would have the following settlement registers:

Night Settlement Register = Night Meter Register

Day Settlement Register = Total Meter Register - Night Meter Register.

Where a customer is supplied on an unrestricted tariff but has two rate (e.g. E7) metering, the two meter registers must be mapped to two settlement registers and two TPRs.

#### Time Pattern Regimes

A TPR is required for each settlement register. This indicates the 'on' times of a settlement register. The 'on' times of each register can be controlled by either time or teleswitch.

### Standard Settlement Configurations

An SSC identifies a population of time or teleswitch NHH SVA Metering Systems with the same combination of time periods sharing the same configurations of registers and switching times. It effectively groups together NHH SVA Metering Systems with common TPRs. For teleswitch regimes, the SSC also groups together NHH SVA Metering Systems which use a specific teleswitch channel and group identifier on the Central Teleswitch Control Unit (CTCU) system. For example, Domestic and Non-Domestic E7 NHH SVA Metering Systems with the same TPRs controlled, say, by timeswitch would be allocated to the same SSC.

#### 4.2.1 Standard Cases for Import MSIDs

One SSC must be allocated to each NHH Import MSID. In order to determine which is the valid SSC, the following must be determined for each NHH Import MSID:

1. whether the metering 'on' and 'off' times are controlled by time or teleswitch;
2. the number of settlement registers and time periods associated with each settlement register (i.e. the valid TPRs);
3. if controlled by teleswitch, the teleswitch channel and group identifier.

The time and teleswitch details and valid TPRs can then be used to determine the valid SSC.

Some teleswitch NHH SVA Metering Systems receive teleswitch 'on' and 'off' time messages which change every day. These are known as dynamic teleswitches and must be allocated the appropriate code.

#### 4.2.2 Standard Cases for Export MSIDs

One SSC must be allocated to each NHH Export MSID. In order to determine which is the valid SSC, knowledge is required of which Profile Class the NHH Import MSID at the site is assigned to. The following rules should be followed:

1. if the Supplier of the NHH Export MSID knows the Profile Class of the NHH Import MSID at the site, use an Export SSC relating to the Profile Class of the NHH Import MSID;
2. if the Supplier of the NHH Export MSID knows the Profile Class of the NHH Import MSID at the site is MD, but does not know the LF, the Supplier should assume a Non-domestic Profile Class, with MD recording capability and with LF less than or equal to 30% and greater than 20% (i.e. PC 06), for purposes of choosing an Export SSC;
3. if the Supplier of the NHH Export MSID does not know whether the Profile Class of the NHH Import MSID at the site is MD, the Supplier should assume the site is not MD for purposes of choosing an Export SSC;
4. if the Supplier of the NHH Export MSID knows that the NHH Import MSID at the site is not MD (or has assumed as such) and knows that the site usage is

non-domestic, but does not know whether it is Economy 7 or not, the Supplier should assume a Non-Domestic Unrestricted Profile Class (i.e. PC 03) for purposes of choosing an Export SSC;

5. if the Supplier of the NHH Export MSID knows that the NHH Import MSID at the site is not MD (or has assumed as such), but does not know whether it is domestic, the Supplier should assume the site usage is domestic for purposes of choosing an Export SSC; and
6. if the Supplier of the NHH Export MSID knows that the NHH Import MSID at the site is not MD (or has assumed as such) and knows that the site usage is domestic, but does not know whether it is Economy 7 or not, the Supplier should assume a Domestic Unrestricted Profile Class (i.e. PC 01) for purposes of choosing an Export SSC.

#### 4.2.3 Non-Standard Cases

If the configuration cannot be classified to an SSC because, for example, the NHH SVA Metering System has the facility to switch loads, according to locally determined criteria, then an 'assumed period' must be determined. If in doubt, refer the case to the relevant Panel sub-committee for a decision.

There are three types of Special Metering Arrangements (SMA) and these are:

1. Switched Load under the Supplier control, with direct load under the customer control.

The Supplier will specify the switching times of the switched load such as space and water heating, but the customer has some control of direct load such as boost to water heating.

2. Optimisation within a switching window.

The Supplier will specify the switching window that the switched load can be 'on', but the SMA optimises the take of the load within the window given certain criteria.

3. Site-Specific Switching.

The Supplier has no control of the switching times of the SMA. The site determines the switching time given certain criteria.



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#### 4.4 Import Load Factor Allocation

This procedure is reserved for NHH Non-domestic Import customers, without an Advanced Meter, registered prior to 1 April ~~2016~~2017 or remaining in Profile Classes 05 to 08 after 1 April ~~2016~~2017.

Where an MD is recorded for a given NHH SVA Metering System, an appropriate LF related Profile Class must be allocated to the NHH SVA Metering System. All NHH Import SVA Metering Systems where LF related Profile Classes exist must be reviewed annually covering 12 months' worth of metering data, using the re-calculation formula defined below. Following the re-calculation, where the LF has changed, the NHHDC will assign the NHH SVA Metering System to the appropriate LF related Profile Class.

The LF is calculated as follows:

$$LF^{10} = \frac{\text{Total Consumption over the Period (kWh)}}{\text{MD in the Period (kW) x No. of Hours in Period}}$$

MD in the Period (kW) x No. of Hours in Period

Where MD is defined as:

the highest demand (kW) measured in a half-hour during the period, by Metering Equipment capable of recording MD in all of the half hours during the period.

If the MD is recorded in kVA, this must be converted into kW using a 0.95 power factor, unless other metering information is available to calculate the correct power factor.

and where the Period is defined as:

12 months of metering data. Where 12 months of metering data is unavailable for the Period, the NHHDC will apply the following rules:

- i) Use valid meter readings spanning a 12 month Period, which were obtained prior to the re-calculation Period; or
- ii) If less than 12 months meter readings are available (e.g. due to a new connection) use Profile Class 06 as the default Profile Class until the next annual re-calculation.

Where a change of tenancy has occurred in the previous 12 months, the rules described above must be strictly applied to all available Settlement data relating to the Metering System and not just the data relating to the most recent tenancy.

and where the No. of Hours in Period is defined as:

those hours where the NHH SVA Metering System is energised. However, for those situations where energy is detected on a de-energised NHH SVA

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<sup>10</sup> LF must not be greater than unity.

Metering System(s), the No. of Hours in Period will include the time periods for which energy was consumed.

Where a change of Supplier occurs resulting in the Supplier gaining an MD customer, the Profile Class used by the new Supplier will be the same as the one used by the old Supplier, until the annual re-calculation is undertaken.