

## ANNEX S-2: SUPPLIER VOLUME ALLOCATION RULES

### 1. GENERAL

#### 1.1 Introduction

1.1.1 This Annex S-2 forms a part of Section S.

1.1.2 This Annex S-2 sets out the basis upon which quantities of Active Energy associated with SVA Metering Systems are determined and allocated to Supplier BM Units and Suppliers and Secondary BM Units for the purposes of Settlement, including rules in respect of:

- (a) Supplier Meter Registration Services;
- (b) Half Hourly Data Collection and Aggregation;
- (c) Non Half Hourly Data Collection and Aggregation;
- (d) Supplier Volume Allocation Standing Data;
- (e) Supplier Volume Allocation Periodic Data;
- (f) Reconciliation Allocation Data Input;
- (g) Daily Profile Coefficients;
- (h) Half Hourly Metering System Consumption;
- (i) Non Half Hourly Metering System Consumption;
- (j) GSP Group Correction;
- (k) Adjustment of Supplier Deemed Takes;
- (l) Determination of BM Unit Allocated Demand Volumes and Secondary BM Unit Demand Volumes;
- (m) Reallocation Volumes;
- (n) Volume Allocation Runs; and
- (o) Secondary BM Unit Supplier Delivered Volumes.

1.1.3 This Annex S-2 also sets out the basis upon which quantities of Active Energy associated with SVA Metering Systems are determined and allocated to Supplier BM Units and Suppliers for other purposes, including rules in respect of:

- (a) Half Hourly Data Aggregation;
- (b) Half Hourly Metering System Consumption; and
- (c) determination of aggregated storage volumes.

## **1.2 Interpretation**

### **1.2.1 In this Annex S-2:**

- (a) references to Metering Systems are to SVA Metering Systems (and references to Metering System Numbers shall be construed accordingly);
  - (b) references to paragraphs are to paragraphs of this Annex S-2,
- unless otherwise expressly stated.

## **2. THE SUPPLIER METER REGISTRATION SERVICES**

### **2.1 Provision of data**

- 2.1.1 Each Supplier shall ensure that, in respect of each of the Metering Systems for which it is responsible, data is supplied to the SMRA pursuant to this paragraph 2 by itself and/or its agents which is complete and accurate in all material respects, valid and timely.
- 2.1.2 Each SMRA shall use its reasonable endeavours to procure the provision to it by the SVAA of such data as are specified in BSCP501 as being provided to such SMRA by the SVAA together with the Settlement Days from which such data are to be effective from the SVAA.
- 2.1.3 The SVAA shall notify the data referred to in paragraph 2.1.2 promptly to the SMRA in accordance with BSCP508 and the SMRA shall ensure that processes are put in place which are designed to ensure that such data is input promptly into its Supplier Meter Registration Service system.
- 2.1.4 Each SMRA shall make and maintain arrangements with those Distribution System Operators whose Distribution Systems have a connected Metering System for which Metering System the SMRA is required to store information in its Supplier Meter Registration Service system.
- 2.1.5 The purpose of the arrangements referred to in paragraph 2.1.4 shall be to provide for the transfer of such data as are specified in BSCP501 as being provided by the Distribution System Operators to such SMRA in respect of each such Metering System.
- 2.1.6 Distribution System Operators shall notify such data promptly to such SMRA and such SMRA shall ensure that processes are put in place which are designed to ensure that such data are promptly input into its Supplier Meter Registration Service system in accordance with BSCP501.
- 2.1.7 Each SMRA shall make and maintain arrangements with all those Suppliers who are responsible for Metering Systems, details of which are required to be maintained by the SMRA in its Supplier Meter Registration Service system.
- 2.1.8 The purpose of the arrangements referred to in paragraph 2.1.7 shall be to provide for the transfer of such data as are specified in BSCP501 as being provided by such Supplier to such SMRA together with the Settlement Days on which such data are to be effective from each such Supplier and in respect of each such Metering System.
- 2.1.9 Each such Supplier shall notify such data promptly to such SMRA and such SMRA shall ensure that processes are put in place which are designed to ensure that such data are input promptly into the Supplier Meter Registration Service system.

- 2.1.10 Each SMRA shall ensure that processes are put in place which are designed to ensure that the data received by it pursuant to this paragraph 2 are validated and complete in accordance with BSCP501 and that there is a Supplier responsible for each Metering System for which such SMRA has a requirement to store information in its Supplier Meter Registration Service system.
- 2.1.11 Each Supplier shall ensure that all data sent by it pursuant to this paragraph 2 are valid and complete.
- 2.1.12 Each SMRA shall:
- (a) supply such data as are specified in BSCP501 as being provided by such SMRA to a Data Aggregator, together with the Settlement Days on which such data are to be effective, from such SMRA's Supplier Meter Registration Service system to the relevant Half Hourly Data Aggregator and Non Half Hourly Data Aggregator on initial allocation of such data, on any change of such data and on request from the relevant Data Aggregator;
  - (b) supply such data in respect of each Metering System for which such SMRA is required to store information in its Supplier Meter Registration Service system and for which such Half Hourly Data Aggregator or Non Half Hourly Data Aggregator, as the case may be, is responsible.
- 2.1.13 In respect of each Metering System for which a SMRA is required to store information in its Supplier Meter Registration Service system, the SMRA shall supply to the persons specified in BSCP501 (together with the Settlement Days on which such data are to be effective) such data as are specified in BSCP501 in the following circumstances:
- (a) on the change of Supplier; and
  - (b) on disconnection of such Metering System.
- 2.1.14 In respect of each Settlement Day, for each BM Unit for which such data is received the SAA shall send to the SVAA the Replacement Reserve Bid Data in respect of each Quarter Hour period within each Replacement Reserve Auction Period within such Settlement Day.

### **3. HALF HOURLY DATA COLLECTION AND AGGREGATION**

#### **3.1 Supplier's responsibility for the collection and aggregation of half hourly data**

- 3.1.1 Subject to paragraph 3.1.2, each Supplier shall ensure that aggregated consumption figures for each Settlement Period of each Settlement Day are made available to the SVAA pursuant to this paragraph 3, in respect of all of such Supplier's Metering Systems which are subject to half hourly metering and Unmetered Supplies subject to Equivalent Metering.
- 3.1.2 If:
- (a) a SVA Generator provides Export Active Energy through a SVA Metering System and such Export Active Energy is allocated between two or more Suppliers, and/or
  - (b) a SVA Customer consumes Import Active Energy through a SVA Metering System and such Import Active Energy is allocated between two or more Suppliers,

each such Supplier shall ensure that aggregated consumption figures for each Settlement Period of each Settlement Day shall be made available to the SVAA pursuant to this paragraph 3 in respect of all of such Supplier's Metering System Numbers associated with Metering Systems which are subject to half hourly metering.

- 3.1.3 Each Supplier shall ensure that all the aggregated consumption figures which it is required to make available to the SVAA pursuant to paragraphs 3.1.1 or 3.1.2 shall be collected, processed and aggregated in accordance with the provisions of this paragraph 3.

### **3.2 Metered Data**

- 3.2.1 In this paragraph 3 "**Metered Data**" shall mean only Metered Data in respect of

- (a) Metering Systems subject to half hourly metering collected by:
  - (i) automatic/remote means; or
  - (ii) site meter reading; and
- (b) Unmetered Supplies subject to Equivalent Metering.

- 3.2.2 Data relating to Unmetered Supplies subject to Equivalent Metering shall be collected pursuant to BSCP520 and processed in the same way as other metered half hourly data.

### **3.3 Half Hourly Data Collection**

- 3.3.1 Paragraph 3.3.2 shall apply in respect of each Metering System subject to half hourly metering and each Unmetered Supply subject to Equivalent Metering (other than a Metering System through which a SVA Generator provides Export Active Energy or a SVA Customer consumes Import Active Energy and such Export Active Energy or Import Active Energy (as the case may be) is allocated between a Primary Supplier and the associated Secondary Supplier(s), in which case the provisions of paragraph 3.3.4 shall apply).

- 3.3.2 Each Supplier shall ensure that each of its Half Hourly Data Collectors shall in respect of such Supplier's Metering Systems and Unmetered Supplies subject to Equivalent Metering (other than those to which the provisions of paragraph 3.3.4 apply) for which such Half Hourly Data Collector is responsible:

- (a) collect the Metered Data in accordance with BSCP502 or, as the case may be, BSCP520;
- (b) check the Metered Data and provide reports in accordance with BSCP502 or, as the case may be, BSCP520;
- (c) enter the Supplier's Meter Register Consumption (SMRC<sub>ZaKj</sub>) into the relevant data collection system;
- (d) update standing data entries provided by the relevant Supplier or, as the case may be, the SVAA, and update the Meter Technical Details (in accordance with BSCP502) to take account of new or revised information as provided by the relevant Meter Operator Agent;
- (e) save in the case of an Unmetered Supply subject to Equivalent Metering, carry out meter advance reading and reconcile the actual meter advance with synthesised meter advance derived from the Supplier's Meter Register Consumption input to the relevant data collection system;

- (f) process the Supplier's Meter Register Consumption and provide the resulting Supplier's Metering System Metered Consumption (SMMC<sub>ZaKj</sub>) to the relevant Half Hourly Data Aggregators; and
- (g) provide the Supplier's Metering System Metered Consumption report to the relevant Supplier and the relevant Distribution System Operator.

3.3.3 Paragraph 3.3.4 shall apply in respect only of each Metering System subject to half hourly metering through which:

- (a) a SVA Generator provides Export Active Energy and such Export Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s); or
- (b) a SVA Customer consumes Import Active Energy and such Import Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s).

3.3.4 Where this paragraph 3.3.4 applies:

- (a) the relevant Primary Supplier and the associated Secondary Supplier(s) shall appoint the same Half Hourly Data Collector to be responsible for such Metering System;
- (b) the Primary Supplier shall provide an initial Allocation Schedule in respect of such Metering System to such Half Hourly Data Collector and the associated Secondary Supplier(s) pursuant to BSCP550;
- (c) the Primary Supplier shall provide any subsequent Allocation Schedules in respect of such Metering System to such Half Hourly Data Collector and to the associated Secondary Supplier(s) pursuant to BSCP550;
- (d) each such Primary Supplier and the associated Secondary Supplier(s) shall ensure that their Half Hourly Data Collector shall in respect of each such Metering System for which such Half Hourly Data Collector is responsible:
  - (i) collect the Metered Data in accordance with BSCP550;
  - (ii) check the Metered Data and provide reports in accordance with BSCP550;
  - (iii) enter the Supplier's Meter Register Consumption (SMRC<sub>ZaKj</sub>) into the relevant data collection system (where for such Metering System and such consumption the subscript "Z" shall denote both the Primary Supplier "Z1" and each associated Secondary Supplier "Zn" responsible for such Metering System; and the subscript "a" shall denote both the Primary Supplier's Half Hourly Data Aggregator "a1" (and, where Section K2.5.4(c)(ii) applies to the Primary Supplier, "a1.1") responsible for such Metering System and each associated Secondary Supplier's Half Hourly Data Aggregator "an" (and, where Section K2.5.4(c)(ii) applies to the Secondary Supplier, "an.1") responsible for such Metering System);
  - (iv) check for consistency of standing data entries provided by the Primary Supplier and the associated Secondary Supplier(s) responsible for such Metering System, resolve inconsistencies with such Suppliers and, when consistent, update such standing data

entries or, if such inconsistencies cannot be resolved pursuant to BSCP550, carry out the relevant default procedures in accordance with such BSC Procedure;

- (v) update standing data entries provided by the SVAA; and update the Meter Technical Details to take account of new or revised information as provided by the relevant Meter Operator Agent;
- (vi) carry out meter advance reading and reconcile the actual meter advance with synthesised meter advance derived from the Supplier's Meter Register Consumption input to the relevant data collection system;
- (vii) process the Supplier's Meter Register Consumption (SMRC<sub>ZaKj</sub>) employing the Allocation Schedule in respect of such Metering System for the relevant Settlement Period and Settlement Day (but disregarding, in respect of such Settlement Period, any Allocation Schedule to the extent that it was submitted after Gate Closure for that Settlement Period) and provide the resulting Supplier's Metering System Metered Consumptions (SMMC<sub>ZaKj</sub>) in respect of the Primary Supplier and the associated Secondary Supplier(s) to the relevant Half Hourly Data Aggregators;
- (viii) provide the Supplier's Metering System Metered Consumption report (which, in the event of a dispute related to the Metered Data in respect of such Metering System, shall include the Shared Suppliers' Metering System Metered Consumption in respect of such Metering System and each Settlement Period of the relevant Settlement Day) in respect of the Primary Supplier to the Primary Supplier responsible for such Metering System and the relevant Distribution System Operator; and
- (ix) provide the Supplier's Metering System Metered Consumption report (which, in the event of a dispute related to the Metered Data in respect of such Metering System, shall include the Shared Suppliers' Metering System Metered Consumption in respect of such Metering System and each Settlement Period of the relevant Settlement Day) in respect of each Secondary Supplier to the relevant Secondary Supplier responsible for such Metering System and the relevant Distribution System Operator.

3.3.5 For the avoidance of doubt, each Secondary Supplier shall be bound, for the purposes of the Code, by the Allocation Schedule submitted from time to time by the Primary Supplier in accordance with BSCP550 and no dispute may be raised under the Code as to the accuracy or completeness of an Allocation Schedule submitted in accordance with BSCP550 (but without prejudice to any rights which the Secondary Supplier(s) may have under any other agreement with the Primary Supplier in respect thereof).

### **3.4 Half Hourly Data Aggregation**

3.4.1 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall in respect of such Supplier's Metering Systems subject to half hourly metering and Unmetered Supplies subject to Equivalent Metering for which such Half Hourly Data Aggregator is responsible and in respect of a particular Settlement Day:

- (a) receive half hourly Supplier's Metering System Metered Consumption from the relevant Half Hourly Data Collectors;
- (b) undertake checks and provide reports in accordance with BSCP503;
- (c) update standing data entries, notified by the SVAA to the Half Hourly Data Aggregator, to the relevant data aggregation system;
- (d) update the Line Loss Factor data provided by BSCCo pursuant to BSCP128 and other data supplied by the SMRA to the Half Hourly Data Aggregator pursuant to BSCP501;
- (e) aggregate the Metered Data in MWh in the relevant data aggregation system;
- (f) provide either:
  - (i) Supplier's Metered Consumption (Losses) ( $SMCL_{HZaNj}$ ) and Supplier's Metered Consumption ( $SMC_{HZaNj}$ ) data in accordance with paragraphs 3.5.9 to 3.5.12; or
  - (ii) BM Unit's Metered Consumption (Losses) ( $BMMCL_{iaNj}$ ) and BM Unit's Metered Consumption ( $BMMC_{iaNj}$ ) data in accordance with paragraph 3.6
 to the SVAA;
- (g) provide data to the relevant Supplier in accordance with BSCP503; and
- (h) where applicable provide to the SVAA the Allocated Supplier's Metering System Metered Consumption ( $ASMMC_{HZaNLKj}$ ).

### 3.5 Determination of Supplier's Metered Consumption

3.5.1 Each Supplier shall ensure that the Supplier's Meter Register Consumption ( $SMRC_{ZaKj}$ ) for each Settlement Register "J" within such Supplier's Metering System and Unmetered Supply subject to Equivalent Metering "K" for such Supplier "Z" and which is associated with a particular Half Hourly Data Aggregator "a" shall be collected by the relevant Half Hourly Data Collector.

3.5.2 In the case of a Metering System through which:

- (a) a SVA Generator provides Export Active Energy and such Export Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s), or
- (b) a SVA Customer consumes Import Active Energy and such Import Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s).

the relevant Primary Supplier and the associated Secondary Supplier(s) shall ensure that the Supplier's Meter Register Consumption shall be so collected and the subscripts "Z" and "a" shall be construed as set out in paragraph 3.3.4.

3.5.3 Save where paragraph 3.5.5 or 3.5.7 applies, each Supplier shall ensure that the Supplier's Metering System Metered Consumption ( $SMMC_{ZaKj}$ ) for each such Supplier's Metering System and Unmetered Supply subject to Equivalent Metering "K" for such Supplier "Z" which is associated with a particular Half Hourly Data Aggregator "a" shall be determined

by the relevant Half Hourly Data Collector according to the following formula and shall be provided to the relevant Half Hourly Data Aggregator:

$$SMMC_{ZaKj} = \sum^K_j SMRC_{ZaKj}$$

3.5.4 The provisions of paragraph 3.5.5 apply in the case of a Metering System:

- (a) through which:
- (i) a SVA Generator provides Export Active Energy and such Export Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s); or
  - (ii) a SVA Customer consumes Import Active Energy and such Import Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s); and
- (b) for which the relevant Half Hourly Data Collector appointed to be responsible for such Metering System has not identified or, if it has identified, has resolved, any inconsistencies in notifications from the Primary Supplier and the associated Secondary Supplier(s) responsible for such Metering System pursuant to BSCP550; and
- (c) for which the Primary Supplier has provided the relevant Allocation Schedule for the Settlement Period being processed to such Half Hourly Data Collector pursuant to such BSC Procedure and no later than Gate Closure for that Settlement Period.

3.5.5 In the case of a Metering System to which this paragraph applies, the Primary Supplier and the associated Secondary Supplier(s) responsible for such Metering System shall ensure that the relevant Half Hourly Data Collector shall for each Settlement Period "j":

- (a) determine the Shared Suppliers' Metering System Metered Consumption ( $SHMMC_{ZaKj}$ ) for such Metering System "K" according to the following formula:

$$SHMMC_{ZaKj} = \sum^K_j SMRC_{ZaKj}$$

where the subscripts "Z" and "a" shall be construed as set out in paragraph 3.3.4;

- (b) determine the Primary Supplier's Metering System Metered Consumption ( $PSMMC_{Z1a1K1j}$ ) for such Primary Supplier "Z1" for the relevant Primary Metering System Number "K1" which is associated with such Metering System "K" and against which the particular Half Hourly Data Aggregator "a1" is appointed by the Primary Supplier to be responsible, employing the relevant Allocation Schedule associated with such Metering System and Settlement Day submitted in accordance with BSCP550 and no later than Gate Closure for the relevant Settlement Period, as:
- (i) if a percentage fraction is specified in such Allocation Schedule to be employed for the relevant Settlement Period, such percentage fraction of the Shared Suppliers' Metering System Metered Consumption; or
  - (ii) if an amount of energy is specified in such Allocation Schedule to be employed by way of capped block for the relevant Settlement



Period, the lesser of such amount and the Shared Suppliers' Metering System Metered Consumption; or

- (iii) if an amount of energy is specified in such Allocation Schedule to be employed by way of fixed block for the relevant Settlement Period and the Primary Supplier is identified as the fixed supplier, such amount of energy or, where such amount exceeds the Relevant Capacity Limit, the amount of energy determined for the equivalent Settlement Period in the preceding Settlement Day; or
  - (iv) if an amount of energy is specified in such Allocation Schedule to be employed by way of multiple fixed block for the relevant Settlement Period and the Primary Supplier is identified as a fixed supplier, the amount of energy allocated to the Primary Supplier or, where the total amount of energy specified in such Allocation Schedule for all Suppliers identified as fixed suppliers exceeds the Relevant Capacity Limit (in accordance with BSCP550), the amount of energy determined in respect of the Primary Supplier for the equivalent Settlement Period in the preceding Settlement Day; or
  - (v) if an amount of energy is specified in such Allocation Schedule to be employed by way of fixed block for the relevant Settlement Period and the Primary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption exceeds the amount of energy allocated to the associated Secondary Supplier and, if no such excess, zero; or
  - (vi) if an amount of energy is specified in such Allocation Schedule to be employed by way of multiple fixed block for the relevant Settlement Period and the Primary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption exceeds the total amount of energy allocated to all the associated Secondary Suppliers and, if no such excess, zero;
- (c) where applicable, determine the Primary Supplier's Metering System Metered Consumption (PSMMC<sub>Z1a1.1K1.1j</sub>) for such Primary Supplier "Z1" for the relevant Primary Metering System Number "K1.1" which is associated with such Metering System "K" and against which the particular Half Hourly Data Aggregator "a1.1" is appointed by the Primary Supplier to be responsible, employing the relevant Allocation Schedule associated with such Metering System and Settlement Day submitted in accordance with BSCP550 and no later than Gate Closure for the relevant Settlement Period, as:
- (i) if an amount of energy is specified in such Allocation Schedule to be employed by way of fixed block for the relevant Settlement Period and the Primary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption falls short of the amount of energy allocated to the associated Secondary Supplier and, if no such shortfall, zero; or
  - (ii) if an amount of energy is specified in such Allocation Schedule to be employed by way of multiple fixed block for the relevant Settlement Period and the Primary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption falls short of the total amount of energy

allocated to all the associated Secondary Suppliers and, if no such shortfall, zero;

(d) determine each Secondary Supplier's Metering System Metered Consumption ( $SSMMC_{ZnanKnj}$ ) for such Secondary Supplier "Zn" for the relevant Secondary Metering System Number "Kn" which is associated with such Metering System "K" and against which the particular Half Hourly Data Aggregator "an" is appointed by the Secondary Supplier to be responsible employing the relevant Allocation Schedule associated with such Metering System and Settlement Day submitted in accordance with BSCP550 and no later than Gate Closure for the relevant Settlement Period, as:

(i) where paragraph (b)(i) or (b)(ii) above apply in respect of the Primary Supplier:

$$SSMMC_{ZnanKnj} = \max ((SHMMC_{ZaKj} - PSMMMC_{Z1a1K1j}), 0);$$

where  $PSMMMC_{Z1a1K1j}$  is the Primary Supplier's Metering System Metered Consumption associated with such Metering System "K" determined pursuant to paragraph (b)(i) or (b)(ii) as applicable;

(ii) if an amount of energy is specified in such Allocation Schedule to be employed by way of fixed block for the relevant Settlement Period and the Secondary Supplier is identified as the fixed supplier, such amount of energy or, where such amount exceeds the Relevant Capacity Limit, the amount of energy specified for the equivalent Settlement Period in the preceding Settlement Day; or

(iii) if an amount of energy is specified in such Allocation Schedule to be employed by way of multiple fixed block for the relevant Settlement Period and the Secondary Supplier is identified as a fixed supplier, the amount of energy allocated to the Secondary Supplier or, where the total amount of energy specified in such Allocation Schedule for all Suppliers identified as fixed suppliers exceeds, the amount of energy allocated to the Secondary Supplier for the equivalent Settlement Period in the preceding Settlement Day; or

(iv) if an amount of energy is specified in such Allocation Schedule to be employed by way of fixed block for the relevant Settlement Period and the Secondary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption exceeds the amount of energy allocated to the Primary Supplier and, if no such excess, zero; or

(v) if an amount of energy is specified in such Allocation Schedule to be employed by way of multiple fixed block for the relevant Settlement Period and the Secondary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption exceeds the total amount of energy allocated to the Primary Supplier and all the other associated Secondary Suppliers and, if no such excess, zero;

(e) where applicable, determine each Secondary Supplier's Metering System Metered Consumption ( $SSMMC_{Znan.1Kn.1j}$ ) for such Secondary Supplier "Zn" for the relevant Secondary Metering System Number "Kn.1" which is associated with such Metering System "K" and against which the particular Half Hourly

Data Aggregator "an.1" is appointed by the Secondary Supplier to be responsible, employing the relevant Allocation Schedule associated with such Metering System and Settlement Day submitted in accordance with BSCP550 and no later than Gate Closure for the relevant Settlement Period, as:

- (i) if an amount of energy is specified in such Allocation Schedule to be employed by way of fixed block for the relevant Settlement Period and the Secondary Supplier is identified as the variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption falls short of the amount of energy allocated to the Primary Supplier identified as the fixed supplier and, if no such shortfall, zero; or
- (ii) if an amount of energy is specified in such Allocation Schedule to be employed by way of multiple fixed block for the relevant Settlement Period and the Secondary Supplier is identified as a variable supplier, the amount by which the Shared Suppliers' Metering System Metered Consumption falls short of the total amount of energy allocated to the Primary Supplier and all other Secondary Suppliers identified as fixed suppliers and, if no such shortfall, zero;

(f) determine the Supplier's Metering System Metered Consumption ( $SMMC_{ZaKj}$ ) in respect of the Primary Supplier as:

- (i) where  $PSMMC_{Z1a1.1K1.1j}$  has a non-zero value:

$$SMMC_{ZaKj} = PSMMC_{Z1a1.1K1.1j}$$

- (ii) otherwise:

$$SMMC_{ZaKj} = PSMMC_{Z1a1K1j}$$

and provide such Supplier's Metering System Metered Consumption to the relevant Half Hourly Data Aggregator appointed by the Primary Supplier to be responsible for such Metering System against the related Primary Metering System Number where the values of "Z", "a" and "K" are those values applicable to such Primary Supplier, such Half Hourly Data Aggregator and such Primary Metering System Number respectively; and

(g) determine the Supplier's Metering System Metered Consumption ( $SMMC_{ZaKj}$ ) in respect of each Secondary Supplier as:

- (i) where  $SSMMC_{Znan.1Kn.1j}$  has a non-zero value:

$$SMMC_{ZaKj} = SSMMC_{Znan.1Kn.1j}$$

- (ii) otherwise:

$$SMMC_{ZaKj} = SSMMC_{ZnanKnj}$$

and provide such Supplier's Metering System Metered Consumption to the relevant Half Hourly Data Aggregator appointed by the Secondary Supplier to be responsible for such Metering System against the related Secondary Metering System Number where the values of "Z", "a" and "K" are those values applicable to such Secondary Supplier, such Half Hourly Data Aggregator and such Secondary Metering System Number respectively.

- 3.5.6 Paragraph 3.5.7 applies:
- (a) in the case of a Metering System through which:
    - (i) a SVA Generator provides Export Active Energy and such Export Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s); or
    - (ii) a SVA Customer consumes Import Active Energy and such Import Active Energy is allocated between a Primary Supplier and the associated Secondary Supplier(s); and
  - (b) (in either case) either:
    - (i) the relevant Half Hourly Data Collector appointed to be responsible for such Metering System has identified and has not resolved inconsistencies in notifications from the Primary Supplier and the associated Secondary Supplier(s) responsible for such Metering System pursuant to BSCP550; or
    - (ii) the Primary Supplier has not provided the relevant Allocation Schedule for the Settlement Period being processed to such Half Hourly Data Collector pursuant to BSCP550 and no later than Gate Closure for the relevant Settlement Period.
- 3.5.7 Where this paragraph 3.5.7 applies, the Primary Supplier and the associated Secondary Supplier(s) responsible for such Metering System shall ensure that the relevant Half Hourly Data Collector shall take such actions as are specified in BSCP550 to be taken by such Half Hourly Data Collector in such circumstances.
- 3.5.8 The provisions of paragraphs 3.5.9 to 3.5.12 (inclusive) shall apply in the case of a GSP Group "H" where the relevant Half Hourly Data Aggregator is not aggregating energy values per Supplier BM Unit in accordance with paragraph 3.6.
- 3.5.9 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall determine the Allocated Supplier's Metering System Metered Consumption ( $ASMMC_{HZaNLKj}$ ) by assigning a GSP Group "H", Line Loss Factor Class "L", and Consumption Component Class "N" to the Supplier's Metering System Metered Consumption provided, pursuant to paragraph 3.5.3, 3.5.5 or, as the case may be, 3.5.7, by the Half Hourly Data Collector appointed by such Supplier to be responsible for the relevant Metering System "K" for the relevant Settlement Day.
- 3.5.10 For the purposes of paragraph 3.5.9 and any subsequent processing of Supplier's Metering System Metered Consumption and data derived from such processing pursuant to the Supplier Volume Allocation Rules the term "**Metering System**" shall be construed to include Primary Metering System Numbers and Secondary Metering System Numbers as if such Primary Metering System Numbers and Secondary Metering System Numbers represented physical metering systems.
- 3.5.11 Each Supplier shall ensure that the Supplier's Metered Consumption ( $SMC_{HZaNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) within such Supplier "Z" for a particular GSP Group "H", Line Loss Factor Class "L" and Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$SMC_{HZaNLj} = \sum_{LK}^N ASMMC_{HZaNLKj} / 1000$$

- 3.5.12 Each Supplier shall ensure that, for each Supplier's Metered Consumption ( $SMC_{HZaNLj}$ ) value determined pursuant to paragraph 3.5.11, one or more values of Supplier's Metered Consumption (Losses) ( $SMCL_{HZaNLj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses), within such Supplier "Z" for a particular GSP Group "H", Line Loss Factor Class "L" and Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$SMCL_{HZaNLj} = \sum^{(vv)L}_K ((LLF_{Lj} - 1) * ASMMC_{HZaNLKj}) / 1000$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $SMCL_{HZaNLj}$  is to be determined.

### 3.6 Determination of BM Unit's Metered Consumption

- 3.6.1 The provisions of paragraphs 3.6.2 to 3.6.5 (inclusive) shall apply in the case of a GSP Group "H" where the relevant Half Hourly Data Aggregator is to aggregate energy values per Supplier BM Unit in accordance with Section S6.

- 3.6.2 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall determine the Allocated BM Unit's Metering System Metered Consumption ( $ABMMMC_{iaNLKj}$ ) by assigning a BM Unit "i", Line Loss Factor Class "L", and Consumption Component Class "N" to the Supplier's Metering System Metered Consumption provided, pursuant to paragraph 3.5.3, 3.5.5 or, as the case may be, 3.5.7, by the Half Hourly Data Collector most recently appointed by such Supplier to be responsible for the relevant Metering System "K", where the BM Unit "i" shall be:

- (a) the Additional BM Unit "i" notified by the Supplier to the Half Hourly Data Aggregator in accordance with Section S6.3 for the Metering System "K", provided that the notification was determined by the Half Hourly Data Aggregator in accordance with BSCP503 to be a valid notification; or
- (b) if no such notification has been made, the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H" to which the Metering System "K" is assigned.

- 3.6.3 For the purposes of paragraph 3.6.2 and any subsequent processing of Allocated BM Unit's Metering System Metered Consumption and data derived from such processing pursuant to the Supplier Volume Allocation Rules the term "**Metering System**" shall be construed to include Primary Metering System Numbers and Secondary Metering System Numbers as if such Primary Metering System Numbers and Secondary Metering System Numbers represented physical metering systems.

- 3.6.4 Each Supplier shall ensure that the BM Unit's Metered Consumption ( $BMMC_{iaNLj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) within each Supplier BM Unit "i" of such Supplier for a particular Line Loss Factor Class "L" and Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$BMMC_{iaNLj} = \sum_{K}^{NL} ABMMMC_{iaNKj} / 1000$$

- 3.6.5 Each Supplier shall ensure that, for each BM Unit's Metered Consumption ( $BMMC_{iaNLj}$ ) value determined pursuant to paragraph 3.6.4, one or more values of BM Unit's Metered Consumption (Losses) ( $BMMCL_{iaNLj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses), within each Supplier BM Unit "i" of such Supplier for a particular Line Loss Factor Class "L" and Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$BMMCL_{iaNLj} = \sum^{(vv)}_K ((LLF_{Lj} - 1) * ABMMMC_{iaNLKj}) / 1000$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $BMMCL_{iaNLj}$  is to be determined.

### 3.7 Estimation of Demand Disconnection Volumes

- 3.7.1 The provisions of paragraph 3.7.2 shall only apply to Demand Control Impacted Settlement Periods.
- 3.7.2 Each Supplier shall ensure that, for each Demand Control Impacted Settlement Period and each Half Hourly Metering System "K" impacted by a Demand Disconnection, the Half Hourly Data Collector responsible for that Metering System shall estimate the Half Hourly Demand Disconnection Volume ( $HDD_{Kj}$ ) for each Settlement Period in accordance with the following formula and provides this to the relevant Half Hourly Data Aggregator:

$$HDD_{Kj} = \max (0, E - SMMC_{ZaKj} - NBSVD_{ZaKj})$$

where:

E is an estimate of the metered data during the Demand Control Impacted Settlement Period in normal conditions calculated in accordance with BSCP502;

$SMMC_{ZaKj}$  is the Supplier's Metering System Metered Consumption during the Demand Control Impacted Settlement Period;

$NBSVD_{ZaKj}$  is the estimated Non-BM STOR Instruction Volume anticipated to have been delivered during the Demand Control Impacted Settlement Period; and

- 3.7.3 The provisions of paragraphs 3.7.4 to 3.7.7 (inclusive) shall only apply to Demand Control Impacted Settlement Periods and shall apply in the case of a GSP Group "H" where the relevant Half Hourly Data Aggregator is not aggregating energy values per Supplier BM Unit in accordance with paragraph 3.6.
- 3.7.4 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall determine the Allocated Supplier's Demand Disconnection Volume ( $ASDD_{HZaNLKj}$ ) by assigning a GSP Group "H", Line Loss Factor Class "L", and Consumption Component Class "N" to the Half Hourly Demand Disconnection Volume provided, pursuant to paragraph 3.7.2, by the Half Hourly Data Collector appointed by such Supplier to be responsible for the relevant Metering System "K" for the relevant Settlement Day.
- 3.7.5 For the purposes of paragraph 3.7.4 and any subsequent processing of Half Hourly Demand Disconnection Volume and data derived from such processing pursuant to the Supplier Volume Allocation Rules the term "**Metering System**" shall be construed to include Primary Metering System Numbers and Secondary Metering System Numbers as if such Primary Metering System Numbers and Secondary Metering System Numbers represented physical metering systems.

- 3.7.6 Each Supplier shall ensure that the Supplier's Demand Disconnection Volume ( $SDD_{HZaNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) within such Supplier "Z" for a particular GSP Group "H" and Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$SDD_{HZaNj} = \sum_{LK}^N ASDD_{HZaNLKj} / 1000$$

- 3.7.7 Each Supplier shall ensure that, for each Supplier's Demand Disconnection Volume ( $SDD_{HZaNj}$ ) value determined pursuant to paragraph 3.7.6, one or more values of Supplier's Demand Disconnection Volume (Losses) ( $SDDL_{HZaNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses), within such Supplier "Z" for a particular GSP Group "H" and Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$SDDL_{HZaNj} = \sum_{LK}^{(vv)} ((LLF_{Lj} - 1) * ASDD_{HZaNLKj}) / 1000$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $SDDL_{HZaNj}$  is to be determined.

### 3.8 Estimation of BM Unit's Demand Disconnection Volumes

- 3.8.1 The provisions of paragraphs 3.8.2 to 3.8.5 (inclusive) shall apply in the case of a GSP Group "H" where the relevant Half Hourly Data Aggregator is to aggregate energy values per Supplier BM Unit in accordance with Section S6, and shall only apply to Demand Control Impacted Settlement Periods.
- 3.8.2 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall determine the Allocated BM Unit's Demand Disconnection Volume ( $ABDD_{iaNLKj}$ ) by assigning a BM Unit "i", Line Loss Factor Class "L", and Consumption Component Class "N" to the Supplier's Half Hourly Demand Disconnection Volumes provided, pursuant to paragraph 3.7.2, by the Half Hourly Data Collector most recently appointed by such Supplier to be responsible for the relevant Metering System "K", where the BM Unit "i" shall be:
- (a) the Additional BM Unit "i" notified by the Supplier to the Half Hourly Data Aggregator in accordance with Section S6.3 for the Metering System "K", provided that the notification was determined by the Half Hourly Data Aggregator in accordance with BSCP503 to be a valid notification; or
  - (b) if no such notification has been made, the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H" to which the Metering System "K" is assigned.
- 3.8.3 For the purposes of paragraph 3.8.2 and any subsequent processing of Allocated BM Unit's Half Hourly Demand Disconnection Volume and data derived from such processing pursuant to the Supplier Volume Allocation Rules the term "**Metering System**" shall be construed to include Primary Metering System Numbers and Secondary Metering System Numbers as if such Primary Metering System Numbers and Secondary Metering System Numbers represented physical metering systems.
- 3.8.4 Each Supplier shall ensure that the BM Unit's Demand Disconnection Volume ( $BMDD_{iaNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) within each Supplier BM Unit "i" of such Supplier for a particular Half Hourly Data Aggregator "a" shall be determined by

the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$BMDD_{iaNj} = \sum_{LK}^N ABDD_{iaNLKj} / 1000$$

- 3.8.5 Each Supplier shall ensure that, for each BM Unit's Half Hourly Demand Disconnection Volume ( $BMDD_{iaNj}$ ) value determined pursuant to paragraph 3.8.4, one or more values of BM Unit's Demand Disconnection Volume (Losses) ( $BMDDL_{iaNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses), within each Supplier BM Unit "i" of such Supplier for a particular Half Hourly Data Aggregator "a" shall be determined by the relevant Half Hourly Data Aggregator according to the following formula and shall be provided to the SVAA:

$$BMDDL_{iaNj} = \sum_{LK}^{(vv)} ((LLF_{Lj} - 1) * ABDD_{iaNLKj}) / 1000$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $BMDDL_{iaNj}$  is to be determined.

### 3.9 Determination of Allocated Metering System Metered Consumption

- 3.9.1 The provisions of paragraphs 3.9.2 to 3.9.4 (inclusive) shall apply in the case of a GSP Group "H" where the relevant Half Hourly Data Aggregator is to provide energy values for each:

- (a) relevant SVA Metering System in accordance with Section S10.5; or
- (b) Metering System on the SVA Storage Facilities Register in accordance with paragraph 13.

- 3.9.2 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall determine the Allocated Metering System Metered Consumption ( $AVMMC_{HZaNLKji}$ ) by assigning a Supplier BM Unit "i", GSP Group "H", Consumption Component Class "N" and Line Loss Factor Class "L" to the Supplier's Metering System Metered Consumption provided, pursuant to paragraph 3.5.3, 3.5.5 or, as the case may be, 3.5.7, by the Half Hourly Data Collector most recently appointed by such Supplier to be responsible for the relevant Metering System "K" and shall be provided to the SVAA.

- 3.9.3 For the purposes of paragraph 3.9.2 and any subsequent processing of Allocated Metering System Metered Consumption and data derived from such processing pursuant to the Supplier Volume Allocation Rules the term "**Metering System**" shall be construed to include Primary Metering System Numbers and Secondary Metering System Numbers as if such Primary Metering System Numbers and Secondary Metering System Numbers represented physical metering systems.

### 3.10 Determination of Metering System Delivered Volumes

- 3.10.1 The provisions of paragraphs 3.10.2 and 3.10.3 shall apply where the relevant Party is to provide MSID Pair Delivered Volume ( $MPDV_j$ ) per MSID Pair in accordance with Section S11.
- 3.10.2 For each Settlement Period and for each relevant Metering System per Settlement Run, the SVAA shall determine the Metering System Delivered Volume ( $QVMD_{Kj}$ ) from the MSID Pair Delivered Volume ( $MPDV_j$ ) relating to such MSID Pair and the Metering System Metered Consumption ( $VMMC_{HZaNLKji}$ ) for the relevant Metering Systems.



3.10.3 If  $MPDV_j$  is greater than or equal to zero the following formulae shall apply:

(a) for the Export MSID in the MSID Pair:

$$QVMD_{Kj} = \text{MIN}(MPDV_j, VMMC_{HZaNLKji}); \text{ and}$$

(b) for the Import MSID in the MSID Pair:

$$QVMD_{Kj} = MPDV_j - QVMD_{\text{Export}}$$

where  $QVMD_{\text{Export}}$  is the value of  $QVMD_{Kj}$  allocated to the Export MSID in accordance with paragraph (a), or zero if there is no Export MSID in the MSID Pair.

3.10.4 If  $MPDV_j$  is less than zero the following formulae shall apply:

(a) for the Import MSID in the MSID Pair, subject to (c):

$$QVMD_{Kj} = -\text{MIN}(-MPDV_j, VMMC_{HZaNLKji});$$

(b) for the Export MSID in the MSID Pair:

$$QVMD_{Kj} = MPDV_j - QVMD_{\text{Import}}$$

where  $QVMD_{\text{Import}}$  is the value of  $QVMD_{Kj}$  allocated to the Import MSID in accordance with paragraph (a); and

(c) if  $MPDV < -VMMC_{HZaNLKji}$  and there is no Export MSID in the MSID Pair then for the Import MSID:

$$QVMD_{Kj} = 0$$

and the SVAA shall inform the relevant Party and BSCCo that the MSID Pair Delivered Volume could not be allocated to MSIDs.

3.10.5 For the purposes of paragraph 3.10.2 and any subsequent processing of Metering System Delivered Volumes and data derived from such processing pursuant to the Supplier Volume Allocation Rules the term "**Metering System**" shall be construed to include Primary Metering System Numbers and Secondary Metering System Numbers as if such Primary Metering System Numbers and Secondary Metering System Numbers represented physical metering systems.

## 4. NON HALF HOURLY DATA COLLECTION AND AGGREGATION

### 4.1 Supplier's responsibilities

4.1.1 Each Supplier shall ensure that a Supplier Purchase Matrix for each Settlement Day is made available to the SVAA in respect of all of such Supplier's metered Metering Systems which are not subject to half hourly metering and Unmetered Supplies not subject to Equivalent Metering.

4.1.2 Each Supplier shall ensure that, where a calculation or determination of a value is specified in accordance with the provisions of this paragraph 4, its Non Half Hourly Data Collectors or, as the case may be, Non Half Hourly Data Aggregators shall make such calculation or, as the case may be, determination in respect of such Supplier's Metering Systems and

associated data for which each such Non Half Hourly Data Collector or, as the case may be, Non Half Hourly Data Aggregator is responsible.

## **4.2 Metered Data**

4.2.1 In this paragraph 4 "Metered Data" shall mean only Metered Data in respect of:

- (a) metered Metering Systems collected by:
  - (i) automatic/remote means;
  - (ii) site meter reading; or
  - (iii) customer reading;
 and which are not subject to half hourly metering;
- (b) Unmetered Supplies not subject to Equivalent Metering; and
- (c)
  - (i) a Meter reading, in relation to a metered Metering System which is not subject to half hourly metering, which is agreed between the old Supplier and the new Supplier in accordance with BSCP504 and is used for the Settlement Day of a change of Supplier; and
  - (ii) this paragraph 4.2.1(c) shall only apply to Settlement Days occurring on or after the Implementation Date of the Approved Modification that first introduced this paragraph 4.2.1(c).

4.2.2 Each Distribution System Operator shall, in respect of each Unmetered Supply not subject to Equivalent Metering connected to such Distribution System, provide the then current Estimated Annual Consumption data for each such Unmetered Supply to the relevant Supplier's Non Half Hourly Data Collector responsible for such Metering System pursuant to BSCP520.

## **4.3 Non Half Hourly Data Collection**

4.3.1 Each Supplier shall ensure that each of its Non Half Hourly Data Collectors shall in respect of each of the Supplier's metered Metering Systems "K" for which such Non Half Hourly Data Collector is responsible and which are not subject to half hourly metering:

- (a) collect the Metered Data in accordance with BSCP504;
- (b) check the Metered Data and provide reports in accordance with BSCP504;
- (c) enter the Metered Data in kWh into the relevant data collection system and calculate Meter Advance values;
- (d) receive Daily Profile Coefficients and, from time to time, Period Profile Class Coefficients from the SVAA;
- (e) investigate reports on inconsistencies in Estimated Annual Consumption and Annualised Advance data provided by the relevant Non Half Hourly Data Aggregators;
- (f) update standing data entries, provided by the relevant Supplier or, as the case may be, by the SVAA, and Meter Technical Details, as provided by the relevant Meter Operator or, as the case may be, the Supplier (in accordance with

BSCP504), to the relevant data collection system to take account of new information;

- (g) determine Estimated Annual Consumption ( $EAC_{KR}$ ) data and Annualised Advance ( $AA_{KR}$ ) data pursuant to this paragraph 4.3;
- (h) provide the Annualised Advance data, their Effective From Settlement Date and Effective To Settlement Date, the Estimated Annual Consumption data and their Effective From Settlement Date, and Metering System details to the relevant Non Half Hourly Data Aggregators;
- (i) provide the validated Metered Data and Metering System reports to the relevant Supplier and the relevant Distribution System Operator; and
- (j) from time to time receive the details of Metering System that have been subject to Demand Disconnection from Distribution System Operators.

4.3.2 Each Supplier shall ensure that for each metered Metering System "K" for which it is responsible, the Non Half Hourly Data Collector responsible for such Metering System shall calculate Meter Advance values ( $MADV_{KR}$ ) for each Settlement Register and, for this purpose, the provisions of paragraphs 4.3.3 to 4.3.8 (inclusive) shall apply, except in the cases where:

- (a) such Non Half Hourly Data Collector is supplied with an initial value of Estimated Annual Consumption ( $EAC_{KR}$ ) together with its Effective From Settlement Date for such Settlement Register (such date being the Settlement Day on which the event giving rise to the actions taken pursuant to this paragraph (a) occurs), which such Supplier undertakes to supply in the event that:
  - (i) the Profile Class "P" of such Metering System "K" changes, in which case the provisions of paragraphs 4.3.9 and 4.3.10 only shall apply;
  - (ii) such Metering System "K" is registered as a new metered Metering System (and for which a Meter Advance has not yet been calculated) in which case the provisions of paragraph 4.3.11 shall apply;
  - (iii) the physical meter for such metered Metering System "K" changes or, as the case may be, is reconfigured, in which case the provisions of paragraph 4.3.12 shall apply;
- (b) such Non Half Hourly Data Collector is notified of a change of Supplier for such metered Metering System for which a Meter Advance Period as described in paragraphs 4.3.13 or 4.3.14 is available, in which case:
  - (i) if the metered Metering System "K" is not subject to half hourly metering on the Settlement Day of the change of Supplier, then the provisions of paragraph 4.3.13 shall apply; or
  - (ii) if the metered Metering System "K" is subject to half hourly metering on the Settlement Day of the change of Supplier, then the provisions of paragraph 4.3.14 shall apply;
- (c) BSCP504 provides that such Non Half Hourly Data Collector shall and, in particular circumstances, may, calculate a Deemed Meter Advance, in which case:

- (i) such Non Half Hourly Data Collector must comply with the provisions of BSCP504; and
- (ii) the provisions of paragraphs 4.3.15 to 4.3.17 shall apply

provided that prior to calculating a Deemed Meter Advance the Non Half Hourly Data Collector shall, in all circumstances, make reasonable endeavours to calculate a Meter Advance including taking any steps specified in BSCP504.

- (d) the Supplier treats or intends to treat a metered Metering System "K" as Long Term Vacant, in which case paragraphs 4.3.19 to 4.3.22 (inclusive) shall apply.

4.3.3 Each Supplier shall ensure that, for each Meter Advance ( $MADV_{KR}$ ), for each such Supplier's metered Metering System "K", the relevant Non Half Hourly Data Collector responsible for such Metering System shall calculate the Fraction Of Yearly Consumption ( $FYC_{KR}$ ) for the Meter Advance Period for each Settlement Register according to the following formula:

$$FYC_{KR} = \Sigma_T DPC_{HPRT} - \Sigma_T DDDPC_{HPKRT}$$

where:

$\Sigma_T DPC_{HPRT}$  is the sum of the individual Daily Profile Coefficients appropriate to the GSP Group "H", Time Pattern Regime and Standard Settlement Configuration "R" and Profile Class "P" applying to the Metering System on each Settlement Day in the Meter Advance Period as provided by the SVAA and provided pursuant to paragraph 6.8 or paragraph 5.1.7 as applicable; and

$\Sigma_T DDDPC_{HPKRT}$  is the sum of the individual Demand Disconnection Daily Profile Coefficients appropriate to the GSP Group "H", Time Pattern Regime and Standard Settlement Configuration "R" and Profile Class "P" applying to the Metering System "K" on each Settlement Day in the Meter Advance Period as calculated in paragraph 4.3.3A,

and the Non Half Hourly Data Collector shall recalculate the Fraction of Yearly Consumption upon receipt of any updated information in relation to any relevant Demand Disconnection Daily Profile Coefficients.

4.3.3A Each Supplier shall ensure that, in respect of each Settlement Day "T", each GSP Group "H" and each valid combination of Profile Class "P" and Time Pattern Regime within Standard Settlement Configuration "R", the relevant Non Half Hourly Data Collector responsible for a Metering System "K" shall determine a Demand Disconnection Daily Profile Coefficient ( $DDDDPC_{HPKRT}$ ) as:

$$DDDDPC_{HPKRT} = \Sigma_j (PPCC_{HPRj} * (M_{Kj} / SPD))$$

where  $M_{Kj}$  shall be set to zero for any MSID notified under Section S9.3.1.

4.3.4 Each Supplier shall ensure that a value of Annualised Advance shall be determined from each Meter Advance by the relevant Non Half Hourly Data Collector responsible for each such Supplier's metered Metering System "K" for each Settlement Register within such Metering System according to the following formula:

if  $FYC_{KR} \neq 0$  then:

$$AA_{KR} = MADV_{KR} / FYC_{KR}$$

where  $MADV_{KR}$  is the Meter Advance obtained by the relevant Non Half Hourly Data Collector for the same Meter Advance Period as employed in the determination of the Fraction of Yearly Consumption pursuant to paragraph 4.3.3;

but if  $FYC_{KR} = 0$  then

$$AA_{KR} = 0$$

and the Effective From Settlement Date for each such value of Annualised Advance shall be the date of the first Settlement Day in the Meter Advance Period and the Effective To Settlement Date for each such value of Annualised Advance shall be the date of the last Settlement Day in the Meter Advance Period. Such values so determined shall replace any previous Annualised Advance, Effective From Settlement Date and Effective To Settlement Date determined for such Settlement Days.

4.3.5 NOT USED.

4.3.6 Each Supplier shall ensure that for each of its metered Metering Systems "K", a value for the Estimated Annual Consumption ( $EAC_{KR}$ ) shall be determined by the relevant Non Half Hourly Data Collector responsible for such Metering System for each Settlement Register according to the formulae set out in paragraph 4.3.7.

4.3.7 For the purposes of this paragraph 4.3.7 the Previous Estimated Annual Consumption ( $PEAC_{KR}$ ) shall be defined as the effective value of  $EAC_{KR}$  for each Settlement Day in the Meter Advance Period which applies before a new value is determined in accordance with this paragraph. An Annualised Advance Adjustment Factor ( $AAAF_{KR}$ ) and a new Estimated Annual Consumption shall be determined as follows using the value of Annualised Advance determined pursuant to paragraph 4.3.4:

(a)  $AAAF_{KR} = \max(0, \min((FYC_{KR} * SPAR), 1.0));$  and

(b)  $EAC_{KR} = AAAF_{KR} * AA_{KR} + (1 - AAAF_{KR}) * PEAC_{KR}$

where SPAR is the value of the Smoothing Parameter set from time to time by the Panel applicable on the last Settlement Day of the Meter Advance Period. The Effective From Settlement Date for each such value of Estimated Annual Consumption shall be the date of the Settlement Day following the last Settlement Day of the Meter Advance Period and shall replace any previous Estimated Annual Consumption effective on such Settlement Days.

4.3.8 Each Supplier shall ensure that for each of its metered Metering Systems "K" the Non Half Hourly Data Collector responsible for such Metering System shall provide the Annualised Advance and Effective From Settlement Date and Effective To Settlement Date, Estimated Annual Consumption and Effective From Settlement Date for each Settlement Register determined pursuant to paragraphs 4.3.4 and 4.3.7 to the relevant Non Half Hourly Data Aggregator responsible for such Metering System.

4.3.9 In the case where the Profile Class "P" of a metered Metering System "K" changes and the Settlement Day from which the change of Profile Class is effective does not fall in a Meter Advance Period, the Supplier responsible for such Metering System shall ensure that the Non Half Hourly Data Collector responsible for such Metering System shall for each Settlement Register provide (without adjustment) the initial value of Estimated Annual Consumption provided pursuant to paragraph 4.3.2(a) and its Effective From Settlement Date to the relevant Non Half Hourly Data Aggregator responsible for such Metering System. Such value shall on the Settlement Days it is effective replace the previous Estimated Annual Consumption effective on such Settlement Days. Once a Meter Advance

has been calculated such that such change of Profile Class falls within such Meter Advance Period, the provisions of paragraph 4.3.10 shall apply to such Meter Advance.

- 4.3.10 In the case where the Profile Class "P" of a metered Metering System "K" changes and the date of the Settlement Day from which the new Profile Class takes effect falls in a Meter Advance Period, then the Supplier responsible for such Metering System shall ensure that the Non Half Hourly Data Collector responsible for such Metering System shall:
- (a) determine the value of Annualised Advance for each Settlement Register pursuant to the provisions of paragraphs 4.3.3 to 4.3.4 (inclusive);
  - (b) not determine a value of Estimated Annual Consumption for any Settlement Register within such Metering System "K" and shall not set such value of Estimated Annual Consumption to zero;
  - (c) provide the value of Annualised Advance so calculated together with its Effective From Settlement Date and Effective To Settlement Date and send unadjusted the initial value of Estimated Annual Consumption provided pursuant to paragraph 4.3.2(a) and its Effective From Settlement Date to the relevant Non Half Hourly Data Aggregator responsible for such Metering System.
- 4.3.11 In the case where a metered Metering System "K" is a new Metering System for which a Meter Advance has not yet been calculated the Supplier responsible for such Metering System shall ensure that the Non Half Hourly Data Collector responsible for such Metering System shall set the value of Estimated Annual Consumption to be equal to the value of initial Estimated Annual Consumption provided by such Supplier pursuant to paragraph 4.3.2(a) for each Settlement Register and that such Non Half Hourly Data Collector shall pass such value unadjusted to the relevant Non Half Hourly Data Aggregator responsible for such Metering System. The Effective From Settlement Date for such Estimated Annual Consumption shall be the Settlement Day on which such Metering System is first energised, as determined from data provided by the relevant SMRA by reference to its Supplier Meter Registration Service system. The Supplier shall ensure that the relevant Non Half Hourly Data Collector shall not determine a value of Annualised Advance for such Settlement Register and shall not set the value of Annualised Advance to zero until a Meter Advance has been calculated. Once a Meter Advance has been calculated for such new metered Metering System, the provisions of paragraphs 4.3.3 to 4.3.8 (inclusive) shall apply.
- 4.3.12 In the case where for a metered Metering System "K" the physical meter changes or, as the case may be, is reconfigured, concurrently with a change to the associated Standard Settlement Configuration "C" and there is a Meter Advance Period ending on the Settlement Day before the physical meter changes or, as the case may be, is reconfigured, the Supplier responsible for such Metering System shall ensure that the Non Half Hourly Data Collector responsible for such Metering System shall determine the values of Annualised Advance and Estimated Annual Consumption for each old Settlement Register pursuant to paragraphs 4.3.3 to 4.3.7 (inclusive) and shall provide the Annualised Advance data together with its Effective From Settlement Date and Effective To Settlement Date for such old Settlement Register and, unadjusted, the initial Estimated Annual Consumption together with its Effective From Settlement Date provided by such Supplier pursuant to paragraph 4.3.2(a) for each new Settlement Register to the relevant Non Half Hourly Data Aggregator responsible for such Metering System. Such Non Half Hourly Data Collector shall not be obliged, however, to provide the Estimated Annual Consumption for the old Settlement Register determined pursuant to paragraph 4.3.7 to the relevant Non Half Hourly Data Aggregator responsible for such Metering System.

- 4.3.13 The provisions of this paragraph 4.3.13 shall apply in the case where there is a Meter Advance Period ending on the Settlement Day before there is a change of Supplier for a metered Metering System "K" and the metered Metering System "K" is not subject to half hourly metering on the Settlement Day of the change of Supplier. For this purpose a Meter Advance Period shall end, or as the case may be, shall be deemed to end on such Settlement Day before the change of Supplier in accordance with BSCP504. In this case:
- (a) the old Supplier shall ensure that its Non Half Hourly Data Collector responsible for such Metering System shall:
    - (i) in accordance with BSCP504 and on request from the new Supplier's Non Half Hourly Data Collector provide the Estimated Annual Consumption for each Settlement Register for such Metering System effective on such Settlement Day to the new Supplier's Non Half Hourly Data Collector responsible for such Metering System;
    - (ii) determine the values of Annualised Advance and Estimated Annual Consumption for each Settlement Register for such Metering System pursuant to paragraphs 4.3.3 to 4.3.7 (inclusive); and
    - (iii) provide the value of Annualised Advance for each Settlement Register together with its Effective From Settlement Date and Effective To Settlement Date determined pursuant to paragraph (ii) above, which values shall be attributable to the old Supplier, to the old Supplier's relevant Non Half Hourly Data Aggregators responsible for such Metering System; and
  - (b) except where paragraph (c) applies, the new Supplier shall ensure that its Non Half Hourly Data Collector responsible for such Metering System shall:
    - (i) determine the values of Annualised Advance and Estimated Annual Consumption for each Settlement Register for such Metering System pursuant to paragraphs 4.3.3 to 4.3.7 (inclusive) where the Previous Estimated Annual Consumption shall be that value provided by the old Supplier's Non Half Hourly Data Collector pursuant to paragraph (a) above; and
    - (ii) provide the value of Estimated Annual Consumption for each Settlement Register together with its Effective From Settlement Date determined pursuant to paragraph (i) above, which values shall be attributable to the new Supplier, to such Supplier's relevant Non Half Hourly Data Aggregators responsible for such Metering System; and
  - (c) if any of the circumstances in paragraph 4.3.13A apply, the new Supplier shall:
    - (i) in accordance with and in the circumstances set out in BSCP504, send an initial value of Estimated Annual Consumption (EACKR) for each Settlement Register for such Metering System effective on such Settlement Day to its Non Half Hourly Data Collector responsible for such Metering System; and
    - (ii) ensure that its Non Half Hourly Data Collector responsible for such Metering System shall provide the initial value of Estimated Annual Consumption for each Settlement Register together with its Effective From Settlement Date received pursuant to paragraph (i) above, which values shall be attributable to the new Supplier, to such

Supplier's relevant Non Half Hourly Data Aggregators responsible for such Metering System.

4.3.13A The circumstances referred to in paragraph 4.3.13(c) are that the quantity of energy in respect of the Metering System is recorded by, and available from, a Meter:

- (a) serviced by the DCC; or
- (b) which has been installed in compliance with the Smart Metering Equipment Technical Specifications and the new Supplier and the old Supplier agree that the process in paragraph 4.3.13(c) shall apply.

4.3.14 The provisions of this paragraph 4.3.14 shall apply in the case where there is a Meter Advance Period ending on the Settlement Day before there is a change of Supplier for a metered Metering System "K", and the metered Metering System "K" is subject to half hourly metering on the Settlement Day of the change of Supplier. For this purpose a Meter Advance Period shall end, or as the case may be, shall be deemed to end on the Settlement Day before the change of Supplier in accordance with BSCP504. In this case, the old Supplier shall ensure that its Non Half Hourly Data Collector responsible for such Metering System shall:

- (a) determine the values of Annualised Advance and Estimated Annual Consumption for each Settlement Register for such Metering System pursuant to paragraphs 4.3.3 to 4.3.7 (inclusive); and
- (b) provide the value of Annualised Advance for each Settlement Register together with its Effective From Settlement Date and Effective To Settlement Date determined pursuant to paragraph (a) above, which values shall be attributable to the old Supplier, to the old Supplier's relevant Non Half Hourly Data Aggregators responsible for such Metering System.

4.3.15 Each Supplier shall ensure that for any metered Metering System "K" for which it is responsible and for which BSCP504 provides that a Deemed Meter Advance must or could be calculated for a Deemed Meter Advance Period such Deemed Meter Advance may (where BSCP504 provides that it may) and shall (where BSCP504 provides it must) be calculated for each Settlement Register in accordance with the following formulae:

- (a) Where BSCP504 provides that the Deemed Meter Advance shall be calculated using an Estimated Annual Consumption:

$$DMA_{KR} = \sum_T (DPC_{HPRT} * EAC_{KR})$$

where:

$\sum_T DPC_{HPRT}$  is the sum of the individual Daily Profile Coefficients appropriate to the GSP Group, Time Pattern Regime, Standard Settlement Configuration and Profile Class applying to the Metering System on each Settlement Day in the applicable Deemed Meter Advance Period as set out in BSCP504.

- (b) Where BSCP504 provides that the Deemed Meter Advance shall be calculated using an Annualised Advance:

$$DMA_{KR} = \sum_T (DPC_{HPRT} * AA_{KR})$$

where:



$\Sigma_T DPC_{HPRT}$  is the sum of the individual Daily Profile Coefficients appropriate to the GSP Group, Time Pattern Regime, Standard Settlement Configuration and Profile Class applying to the Metering System on each Settlement Day in the applicable Deemed Meter Advance Period as set out in BSCP504.

- 4.3.16 Where a Deemed Meter Advance has been calculated, each Supplier responsible for a metered Metering System "K" shall ensure that the relevant Non Half Hourly Data Collector responsible for such Metering System shall:
- (a) determine values of Annualised Advance and Estimated Annual Consumption for each Settlement Register pursuant to paragraphs 4.3.3 to 4.3.7 (inclusive) using the value of Deemed Meter Advance determined pursuant to paragraph 4.3.15 in place of the value of Meter Advance and substituting the Meter Advance Period with the applicable Deemed Meter Advance Period as described in BSCP504; and
  - (b) provide the values of Annualised Advance and/or Estimated Annual Consumption and any further data required to be provided in accordance with BSCP504 to the relevant Non Half Hourly Data Aggregator responsible for such Metering System.
- 4.3.17 Where a Meter Advance has been calculated in accordance with BSCP504 and this has resulted in a new value of Estimated Annual Consumption which is not consistent with the last valid Estimated Annual Consumption or Annualised Advance, as the case may be, then in the circumstances set out in BSCP504, paragraph 4.3.7(b) shall not apply and the Non Half Hourly Data Collector shall apply a value of Estimated Annual Consumption which is representative of the most likely rate of generation or demand for that Metering System or, where this is not available, a value of initial Estimated Annual Consumption ( $EAC_{KR}$ ). The Effective From Settlement Date of the value of Estimated Annual Consumption or initial Estimated Annual Consumption described above shall be the day following the end of the Meter Advance Period or Deemed Meter Advance Period, as the case may be.
- 4.3.18 Each Supplier shall ensure that each of its Non Half Hourly Data Collectors shall in respect of such Supplier's Unmetered Supplies for which such Non Half Hourly Data Collector is responsible and which are not subject to Equivalent Metering set the values of Estimated Annual Consumption to be those defined in the relevant Unmetered Supply Certificate and shall, in accordance with BSCP520, pass such value unadjusted to the relevant Non Half Hourly Data Aggregator responsible for such Unmetered Supply together with the Effective From Settlement Dates of such Estimated Annual Consumption.
- 4.3.19 Subject to paragraph 4.3.21, each Supplier which treats or intends to treat a metered Metering System "K" for which it is responsible as Long Term Vacant shall instruct (in the manner and form required by BSCP504), and ensure that, its Non Half Hourly Data Collector responsible for such metered Metering System "K" calculates a Metered Advance in accordance with the provisions of paragraph 4.3.2 or (where no relevant Metered Data is available) calculates a Deemed Metered Advance in accordance with the provisions of paragraphs 4.3.15 to 4.3.16, and an Estimated Annual Consumption ( $EAC_{KR}$ ) for each Settlement Register (calculated according to the formulae set out in paragraph 4.3.7), and thereafter for all future calculations replace the Estimated Annual Consumption ( $EAC_{KR}$ ) with an Estimated Annual Consumption ( $EAC_{KR}$ ) of zero value.
- 4.3.20 For the purposes of paragraph 4.3.19, the Effective From Settlement Date for the use of an Estimated Annual Consumption ( $EAC_{KR}$ ) of zero value shall be the earlier of:
- (a) the date of the first visit referred to in Section S2.8.3 (a) in respect of which the appropriate notification referred to in Section S2.8.3(b) was given to the

Supplier that no access to the metered Metering System "K" had been obtained by the relevant Non Half Hourly Data Collector; or

- (b) if the Supplier receives notification from an owner and/or occupier of a property on which the metered Metering System "K" is situated that electricity is or will no longer be consumed on the property, the last date on which electricity is consumed on that property (which shall be treated for the purposes of this paragraph 4.3.20 as the "last consumption date"), provided that:
  - (i) Metered Data (as described in BSCP504) is also received for the last consumption date;
  - (ii) the last consumption date is within the applicable timescales specified in BSCP504; and
  - (iii) Section S2.8.2 does not apply and the Supplier has complied with any relevant requirement in BSCP504 relating to the treatment or entitlement to treat the metered Metering System K as Long Term Vacant.

4.3.21 Where the metered Metering System "K" is not or can no longer be treated as Long Term Vacant then the Supplier shall instruct (in the manner and form set out in BSCP504), and ensure that, its Non Half Hourly Data Collector responsible for such metered Metering System "K" calculates a Metered Advance in accordance with the provisions of paragraph 4.3.2 or (where no relevant Metered Data is available) calculates a Deemed Meter Advance in accordance with the provisions of paragraphs 4.3.15 to 4.3.16, and an Estimated Annual Consumption ( $EAC_{KR}$ ) for each Settlement Register (calculated according to the formulae set out in paragraph 4.3.7), and thereafter for future calculations replace the zero value Estimated Annual Consumption ( $EAC_{KR}$ ) with any one of the following:

- (a) an Estimated Annual Consumption ( $EAC_{KR}$ ) calculated according to the formulae set out in paragraph 4.3.7; or
- (b) an initial value of Estimated Annual Consumption ( $EAC_{KR}$ ); or
- (c) an Estimated Annual Consumption ( $EAC_{KR}$ ) which the Supplier reasonably believes is representative of the most likely rate of generation or demand for that metered Metering System "K",

4.3.22 For the purposes of paragraph 4.3.21, the Effective From Settlement Date for the replacement of the value of the Estimated Annual Consumption ( $EAC_{KR}$ ) or initial value of Estimated Annual Consumption ( $EAC_{KR}$ ) shall be:

- (a) the day following that upon which the metered Metering System "K" is not or can no longer be treated as Long Term Vacant by reason of Section S2.8.2 (b), (c) and (d); or
- (b) where the Supplier has failed to comply with requirements in BSCP504 or Section 2.8.5 and relevant Metered Data (as described in BSCP504) has not been obtained, the date of the last visit by the Non Half Hourly Data Collector which complies with the requirements of Section S2.8.5 (a) and (b).

#### **4.4 Non Half Hourly Data Aggregation**

4.4.1 Each Supplier shall ensure that in respect of each Settlement Day for which an Interim Information Volume Allocation Run, Initial Volume Allocation Run or a Reconciliation Volume Allocation Run is being undertaken, each of its Non Half Hourly Data Aggregators

shall in respect of each of the Settlement Registers within such Supplier's Metering Systems, including those Settlement Registers within Unmetered Supplies, for which such Non Half Hourly Data Aggregator is responsible and which are not subject to Equivalent Metering:

- (a) receive Estimated Annual Consumption data together with their Effective From Settlement Dates and Annualised Advance data, together with their Effective From Settlement Dates and Effective To Settlement Dates and Metering System details provided by the relevant Non Half Hourly Data Collectors responsible for such Metering System and for each Settlement Register pursuant to paragraph 4.3;
- (b) check the Estimated Annual Consumption and Annualised Advance data provided by the relevant Non Half Hourly Data Collector in accordance with BSCP505;
- (c) enter the Estimated Annual Consumption and Annualised Advance data as provided pursuant to paragraph (a) into the relevant data aggregation system;
- (d) update standing data entries, including data provided by the SVAA and the relevant SMRA, to the relevant data aggregation system to take account of new information;
- (e) aggregate annualised Consumption Data in MWh; and
- (f) provide the aggregated annualised Consumption Data to the SVAA in the form of Supplier Purchase Matrices.

4.4.2 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall assign a GSP Group "H", Supplier "Z", Line Loss Factor Class "L", Profile Class "P" and valid combination of Time Pattern Regime and Standard Settlement Configuration "R" to each of such Supplier's Metering Systems for which it is responsible using the data held in the relevant Supplier Meter Registration Service system.

4.4.3 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall, in respect of the Settlement Day for which an Interim Information Volume Allocation Run, Initial Volume Allocation Run or Reconciliation Volume Allocation Run is being undertaken and in respect only of such Supplier's Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Day, make the determinations set out in this paragraph 4.4 and, when appropriate, paragraph 4.5. For the purposes of such determinations, such Supplier shall ensure that the relevant Non Half Hourly Data Aggregator shall employ:

- (a) the values of Annualised Advance effective for such Settlement Day which have:
  - (i) been received from any Non Half Hourly Data Collector currently or previously appointed by such Supplier to be responsible for such Metering System in respect of all, or any part of, the latest period for which such Supplier is responsible for such Metering System; and
  - (ii) which have the valid combination of Time Pattern Regime and Standard Settlement Configuration "R" for such Metering System for such Settlement Day according to the data held in the relevant Supplier Meter Registration System.

If there is more than one such value of Annualised Advance, only the value provided by such Non Half Hourly Data Collector with the latest appointment date on or prior to the date on the day on which the determinations in respect of such Settlement Day are being undertaken shall be employed. If a value of Annualised Advance has been identified pursuant to this paragraph (a), then for the purposes of the determinations in this paragraph 4.4, no other value of Annualised Advance or value of Estimated Annual Consumption shall be employed for such Time Pattern Regime and Standard Settlement Configuration "R" for such Metering System for such Settlement Day;

- (b) if such values of Annualised Advance are not available, the values of Estimated Annual Consumption effective for such Settlement Day which have:
  - (i) been received from any Non Half Hourly Data Collector currently or previously appointed by such Supplier to be responsible for such Metering System in respect of all or any part of the latest period for which such Supplier is responsible for such Metering System; and
  - (ii) the valid combination of Time Pattern Regime and Standard Settlement Configuration "R" for such Metering System for such Settlement Day according to the data held in the relevant Supplier Meter Registration System.

If there is more than one such value, only the value of Estimated Annual Consumption with the latest Effective From Settlement Date shall be employed or if there remains more than one such value, only the value provided by such Non Half Hourly Data Collector with the latest appointment date on or prior to the date on the day on which the determinations in respect of such Settlement Day are being undertaken shall be employed; or

- (c) if no such value of Annualised Advance or Estimated Annual Consumption has been identified pursuant to paragraph (a) or (b) respectively, then for the purposes of the determinations in this paragraph 4.4, there shall be deemed to be no value of Annualised Advance or Estimated Annual Consumption for such Time Pattern Regime and Standard Settlement Configuration "R" for such Metering System for such Settlement Day.

4.4.4 Such Supplier shall ensure that the relevant Non Half Hourly Data Aggregator shall in respect of each relevant Metering System and Settlement Day, employing the Annualised Advance or, as the case may be, Estimated Annual Consumption in respect of such Metering System and Settlement Day identified pursuant to paragraph 4.4.3:

- (a) if such metered Metering System "K" has a value of Annualised Advance with an Effective From Settlement Date and an Effective To Settlement Date between or, as the case may be, on which such Settlement Day falls, and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metering System as contributing towards the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance ( $NMA_{HZLPR}$ ) and the provisions of paragraphs 4.4.7 and 4.4.8 shall apply and the provisions of paragraphs 4.4.9 to 4.4.16 (inclusive) shall not apply to such Metering System;
- (b) if such metered Metering System "K" has a value of Annualised Advance with an Effective From Settlement Date and an Effective To Settlement Date between or, as the case may be, on which such Settlement Day falls, and that

value is not equal to zero for one or more Settlement Registers within the Metering System, and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metering System as contributing towards the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance ( $NMA_{HZZLPR}$ ) and the provisions of paragraphs 4.4.7 and 4.4.8 shall apply and the provisions of paragraphs 4.4.9 to 4.4.16 (inclusive) shall not apply to such Metering System;

- (c) if such metered Metering System "K" does not have a value of Annualised Advance which is effective for such Settlement Day but does have an Estimated Annual Consumption which is effective for such Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metering System as contributing towards the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Estimated Annual Consumption ( $NMME_{HZZLPR}$ ) and the provisions of paragraphs 4.4.9 and 4.4.10 shall apply and the provisions of paragraphs 4.4.7, 4.4.8 and 4.4.11 to 4.4.16 (inclusive) shall not apply to such Metering System;
- (d) if such metered Metering System "K" has no Annualised Advance or Estimated Annual Consumption effective for such Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metered Metering System as contributing towards the value of Number Of Non Half Hourly Metered Metering Systems Requiring a Default Estimated Annual Consumption ( $NMMDE_{HZZLPR}$ ) and the provisions of paragraphs 4.4.11 and 4.4.15 shall apply and the provisions of paragraphs 4.4.7 to 4.4.10 (inclusive), 4.4.12 to 4.4.14 (inclusive) and 4.4.16 shall not apply to such Metering System;
- (e) if such Metering System "K" is classified as an Unmetered Supply and has a valid Unmetered Supply Certificate effective on the Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Unmetered Supply as contributing towards the value of Number of Non Half Hourly Unmetered Metering Systems Contributing To The Total Estimated Annual Consumption ( $NMUE_{HZZLPR}$ ) and the provisions of paragraphs 4.4.12 and 4.4.13 shall apply and the provisions of paragraphs 4.4.7 to 4.4.11 (inclusive) and 4.4.14 to 4.4.16 (inclusive) shall not apply to such Unmetered Supply;
- (f) if such Metering System "K" is classified as an Unmetered Supply and does not have a valid Unmetered Supply Certificate effective on the Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, or if such Metering System "K" is classified as an Unmetered Supply and has an Annualised Advance effective for such Settlement Day, count the number of Settlement Registers within such Unmetered Supply as contributing towards the value of Number Of Non Half Hourly Unmetered Metering Systems Requiring A Default Estimated Annual Consumption ( $NMUDE_{HZZLPR}$ ) and the provisions of paragraph 4.4.14 and 4.4.16 shall apply and the provisions of paragraphs 4.4.7 to 4.4.13 (inclusive) and 4.4.15 shall not apply to such Unmetered Supply;
- (g) if such metered Metering System "K" has a value of Annualised Advance with an Effective From Settlement Date and an Effective To Settlement Date

between or, as the case may be, on which such Settlement Day falls, and that value is equal to zero for all Settlement Registers within the Metering System, and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, not count the number of Settlement Registers within such Metering System as contributing towards any of the values set out in this paragraph 4.4.4 and the provisions of paragraphs 4.4.7 to 4.4.16 (inclusive) shall not apply to such Metering System;

- (h) if such metered Metering System "K" does not have a value of Annualised Advance which is effective for such Settlement Day but does have an Estimated Annual Consumption which is effective for such Settlement Day and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, not count the number of Settlement Registers within such Metering System as contributing towards any of the values set out in this paragraph 4.4.4 and the provisions of paragraphs 4.4.7 to 4.4.16 (inclusive) shall not apply to such Metering System;
- (i) if such Metering System "K" is classified as an Unmetered Supply and has a valid Unmetered Supply Certificate which is effective for such Settlement Day and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, not count the number of Settlement Registers within such Metering System as contributing towards any of the values set out in this paragraph 4.4.4 and the provisions of paragraphs 4.4.7 to 4.4.16 (inclusive) shall not apply to such Metering System;
- (j) if such metered Metering System "K" does not have a value of Annualised Advance or a value of Estimated Annual Consumption which is effective for such Settlement Day and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, not count the number of Settlement Registers within such Metering System as contributing towards any of the values set out in this paragraph 4.4.4 and the provisions of paragraphs 4.4.7 to 4.4.16 (inclusive) shall not apply to such Metering System; or
- (k) if such Metering System "K" is classified as an Unmetered Supply and does not have a valid Unmetered Supply Certificate or an Annualised Advance effective for such Settlement Day and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, not count the number of Settlement Registers within such Metering System as contributing towards any of the values set out in this paragraph 4.4.4 and the provisions of paragraphs 4.4.7 to 4.4.16 (inclusive) shall not apply to such Metering System.

4.4.5 Each Supplier shall ensure that its Non Half Hourly Data Aggregators shall maintain the following data items for each Settlement Class within such Supplier for the Settlement Day for which an Interim Information Volume Allocation Run, Initial Volume Allocation Run or Reconciliation Volume Allocation Run is being undertaken for which that Non Half Hourly Data Aggregator is responsible:

- (a) the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance ( $NMA_{HZZLPR}$ );
- (b) the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Estimated Annual Consumption ( $NMME_{HZZLPR}$ );

- (c) the value of Number Of Non Half Hourly Metered Metering Systems Requiring A Default Estimated Annual Consumption ( $NMMDE_{HZZLPR}$ );
- (d) the value of Number Of Non Half Hourly Unmetered Metering Systems Contributing To The Total Estimated Annual Consumption ( $NMUE_{HZZLPR}$ ); and
- (e) the value of Number Of Non Half Hourly Unmetered Metering Systems Requiring A Default Estimated Annual Consumption ( $NMUDE_{HZZLPR}$ ).

4.4.6 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall maintain the following values according to BSCP505 together with the date of the Settlement Day from which they shall be effective and the date, if any, of the last Settlement Day on which they will be effective:

- (a) the value of the Threshold Parameter (TP) which shall be provided for the time being and from time to time by the SVAA and shall be as determined for the time being and from time to time by the Panel;
- (b) the values of Average Fraction of Yearly Consumption ( $AFYC_{HPR}$ ) by Profile Class and valid combinations of Time Pattern Regime and Standard Settlement Configuration within the GSP Group which shall be provided for the time being and from time to time by the SVAA; and
- (c) the values of GSP Group Profile Class Default Estimated Annual Consumption ( $GGPCDEAC_{HP}$ ) by GSP Group and Profile Class which shall be provided for the time being and from time to time by the SVAA.

4.4.7 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the Initial Total Annualised Advance ( $ITAA_{HZZLPR}$ ) and the Total Annualised Advances ( $TAA_{HZZLPR}$ ) for such Supplier's non half hourly metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for each Settlement Class "HLPR" within such Supplier "Z" according to the following formulae:

$$ITAA_{HZZLPR} = \sum^{HZZLPR} KAA_{KR}$$

$$TAA_{HZZLPR} = ITAA_{HZZLPR} / 1000$$

4.4.8 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMA_{HZZLPR}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which a value of Annualised Advance has contributed to the Total Annualised Advance in accordance with paragraph 4.4.7.

4.4.9 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the Total Estimated Annual Consumption For Non Half Hourly Metered Metering Systems ( $ME_{HZZLPR}$ ) for such Supplier's non half hourly metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for each Settlement Class "HLPR" within such Supplier "Z" according to the following formula:

$$ME_{HZZLPR} = \sum^{HZZLPR} K EAC_{KR}$$

4.4.10 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMME_{HZZLPR}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for

which a value of Estimated Annual Consumption has contributed to the Total Estimated Annual Consumption ( $ME_{H\text{ZLPR}}$ ) in accordance with paragraph 4.4.9.

4.4.11 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMMDE_{H\text{ZLPR}}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which there is no value of Estimated Annual Consumption and no value of Annualised Advance, and which therefore require a value of Default Estimated Annual Consumption For Metered Metering Systems ( $DEM_{H\text{ZLPR}}$ ) to be determined pursuant to paragraph 4.4.15.

4.4.12 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the Value of Estimated Annual Consumption for Non Half Hourly Unmetered Metering Systems ( $UE_{H\text{ZLPR}}$ ) for such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible for each Settlement Class "HLPR" within such Supplier "Z" according to the following formula:

$$UE_{H\text{ZLPR}} = \sum^{H\text{ZLPR}}_K EAC_{KR}$$

4.4.13 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMUE_{H\text{ZLPR}}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which there is a value of Estimated Annual Consumption.

4.4.14 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMUDE_{H\text{ZLPR}}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which there is no value of Estimated Annual Consumption, and which therefore require a value of Default Estimated Annual Consumption For Unmetered Metering Systems ( $DEU_{H\text{ZLPR}}$ ) to be determined pursuant to paragraph 4.4.16.

4.4.15 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of Default Estimated Annual Consumption For Metered Metering Systems ( $DEM_{H\text{ZLPR}}$ ) for such Supplier's metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible and for which there is no value of Estimated Annual Consumption for each Settlement Class "HLPR" within such Supplier "Z" according to the following formulae:

if ( $NMA_{H\text{ZLPR}} + NMME_{H\text{ZLPR}}$ ) > TP then:

$$DEM_{H\text{ZLPR}} = (ITAA_{H\text{ZLPR}} + ME_{H\text{ZLPR}}) / (NMA_{H\text{ZLPR}} + NMME_{H\text{ZLPR}});$$

but in all other cases:

$$DEM_{H\text{ZLPR}} = GGPCDEAC_{HP} * AFYC_{HPR}.$$

4.4.16 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of Default Estimated Annual Consumption For Unmetered Metering Systems ( $DEU_{H\text{ZLPR}}$ ) for such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible and for which there is no Certificate of Supply for each Settlement Class "HLPR" within such Supplier "Z" according to the following formulae:

if  $NMUE_{H\text{ZLPR}} > TP$  then:



$$DEU_{H\text{ZLPR}} = (UE_{H\text{ZLPR}}) / (NMUE_{H\text{ZLPR}});$$

but in all other cases:

$$DEU_{H\text{ZLPR}} = GGPCDEAC_{HP} * AFYC_{HPR}$$

- 4.4.17 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the values of Total Metered Estimated Annual Consumption ( $TMEAC_{H\text{ZLPR}}$ ), Total Number Of Metered Non Half Hourly Metering Systems Contributing To Total Metered Estimated Annual Consumption ( $TMEACC_{H\text{ZLPR}}$ ), Total Unmetered Consumption ( $TUE_{H\text{ZLPR}}$ ) and Total Number Of Non Half Hourly Unmetered Metering Systems Contributing To Total Unmetered Consumption ( $TMUEC_{H\text{ZLPR}}$ ) for such Supplier's Metering Systems for which such Non Half Hourly Data Aggregator is responsible according to the following formulae:

$$TMEAC_{H\text{ZLPR}} = (ME_{H\text{ZLPR}} + (NMMDE_{H\text{ZLPR}} * DEM_{H\text{ZLPR}})) / 1000;$$

$$TMEACC_{H\text{ZLPR}} = NMME_{H\text{ZLPR}} + NMMDE_{H\text{ZLPR}};$$

$$TUE_{H\text{ZLPR}} = (UE_{H\text{ZLPR}} + (NMUDE_{H\text{ZLPR}} * DEU_{H\text{ZLPR}})) / 1000; \text{ and}$$

$$TMUEC_{H\text{ZLPR}} = NMUE_{H\text{ZLPR}} + NMUDE_{H\text{ZLPR}}$$

- 4.4.18 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine a Supplier Purchase Matrix ( $SPM_{H\text{ZaLPR}}$ ) consisting of the following data for such Supplier's Metering Systems for which such Non Half Hourly Data Aggregator is responsible in respect of each Settlement Class "HLPR" within such Supplier "Z":

- (a) Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance ( $NMA_{H\text{ZLPR}}$ );
- (b) Number Of Non Half Hourly Metered Metering Systems Requiring A Default Estimated Annual Consumption ( $NMMDE_{H\text{ZLPR}}$ );
- (c) Number Of Non Half Hourly Unmetered Metering Systems Requiring A Default Estimated Annual Consumption ( $NMUDE_{H\text{ZLPR}}$ );
- (d) Total Number Of Metered Non Half Hourly Metering Systems Contributing To Total Metered Estimated Annual Consumption ( $TMEACC_{H\text{ZLPR}}$ );
- (e) Total Number Of Non Half Hourly Unmetered Metering Systems Contributing To Total Unmetered Consumption ( $TMUEC_{H\text{ZLPR}}$ );
- (f) Total Annualised Advance ( $TAA_{H\text{ZLPR}}$ );
- (g) Total Metered Estimated Annual Consumption ( $TMEAC_{H\text{ZLPR}}$ ); and
- (h) Total Unmetered Consumption ( $TUE_{H\text{ZLPR}}$ ).

- 4.4.19 If a Supplier is notified in writing by a Licensed Distribution System Operator that it requires the relevant Non Half Hourly Data Aggregator to provide it with Estimated Annual Consumption data and Metering System details, each Supplier shall ensure that its relevant Non Half Hourly Data Aggregator shall in accordance with BSCP505, provide the Estimated Annual Consumption data and Metering System details to each relevant Licensed Distribution System Operator in respect of Metering Systems located at Boundary Points on that Licensed Distribution System Operator's Distribution System(s) and Associated Distribution System(s).

## 4.5 Non Half Hourly Data Aggregation of Demand Disconnection Events

- 4.5.1 Each Supplier shall ensure that in respect of each Settlement Day that was affected by a Demand Disconnection Event for which an Interim Information Volume Allocation Run, Initial Volume Allocation Run or a Reconciliation Volume Allocation Run is being undertaken, each of its Non Half Hourly Data Aggregators shall in respect of each of the Settlement Registers within such Supplier's Metering Systems affected by a Demand Disconnection Event, including those Settlement Registers within Unmetered Supplies, for which such Non Half Hourly Data Aggregator is responsible and which are not subject to Equivalent Metering:
- (a) aggregate annualised Consumption Data related to Metering Systems affected by a Demand Disconnection Event in MWh; and
  - (b) provide the aggregated annualised Consumption Data to the SVAA in the form of Supplier Disconnection Matrices.
- 4.5.2 Each Supplier shall ensure that the relevant Non Half Hourly Data Aggregator excludes any MSIDs notified under Section S9.3.1 from the processes under this paragraph 4.5 for each relevant Settlement Period, as though that MSID was not affected by the Demand Disconnection Event in that Settlement Period.
- 4.5.3 Such Supplier shall ensure that the relevant Non Half Hourly Data Aggregator shall in respect of each relevant Metering System and Settlement Day that is affected by a Demand Disconnection Event pursuant to Section S9.1.2, employing the Annualised Advance or, as the case may be, Estimated Annual Consumption in respect of such Metering System and Settlement Day identified pursuant to paragraph 4.4.3:
- (a) if such metered Metering System "K" has a value of Annualised Advance with an Effective From Settlement Date and an Effective To Settlement Date between or, as the case may be, on which such Settlement Day falls, and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metering System as contributing towards the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance (Disconnected) (NMAD<sub>HZLPR</sub>) and the provisions of paragraphs 4.5.5 and 4.5.6 shall apply and the provisions of paragraphs 4.5.7 to 4.5.12 (inclusive) shall not apply to such Metering System;
  - (b) if such metered Metering System "K" has a value of Annualised Advance with an Effective From Settlement Date and an Effective To Settlement Date between or, as the case may be, on which such Settlement Day falls, and that value is not equal to zero for one or more Settlement Registers within the Metering System, and the Metering System energisation status is determined to be 'de-energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metering System as contributing towards the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance (Disconnected) (NMAD<sub>HZLPR</sub>) and the provisions of paragraphs 4.5.5 and 4.5.6 shall apply and the provisions of paragraphs 4.5.7 to 4.5.12 (inclusive) shall not apply to such Metering System;
  - (c) if such metered Metering System "K" does not have a value of Annualised Advance which is effective for such Settlement Day but does have an Estimated Annual Consumption which is effective for such Settlement Day and the Metering System energisation status is determined to be 'energised' by reference

to data provided by the relevant SMRA, count the number of Settlement Registers within such Metering System as contributing towards the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Estimated Annual Consumption (Disconnected) (NMMED<sub>HZLPR</sub>) and the provisions of paragraphs 4.5.7 and 4.5.8 shall apply and the provisions of paragraphs 4.5.5, 4.5.6 and 4.5.9 to 4.5.12 (inclusive) shall not apply to such Metering System;

- (d) if such metered Metering System "K" has no Annualised Advance or Estimated Annual Consumption effective for such Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Metered Metering System as contributing towards the value of Number Of Non Half Hourly Metered Metering Systems Requiring a Default Estimated Annual Consumption (Disconnected) (NMMDED<sub>HZLPR</sub>) and the provisions of paragraphs 4.5.9 and 4.4.15 shall apply and the provisions of paragraphs 4.5.5 to 4.5.8 (inclusive) and 4.5.10 to 4.5.12 (inclusive) shall not apply to such Metering System;
- (e) if such Metering System "K" is classified as an Unmetered Supply and has a valid Unmetered Supply Certificate effective on the Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, count the number of Settlement Registers within such Unmetered Supply as contributing towards the value of Number of Non Half Hourly Unmetered Metering Systems Contributing To The Total Estimated Annual Consumption (Disconnected) (NMUED<sub>HZLPR</sub>) and the provisions of paragraphs 4.5.10 and 4.5.11 shall apply and the provisions of paragraphs 4.5.5 to 4.5.9 (inclusive) and 4.5.12 shall not apply to such Unmetered Supply; or
- (f) if such Metering System "K" is classified as an Unmetered Supply and does not have a valid Unmetered Supply Certificate effective on the Settlement Day and the Metering System energisation status is determined to be 'energised' by reference to data provided by the relevant SMRA, or if such Metering System "K" is classified as an Unmetered Supply and has an Annualised Advance effective for such Settlement Day, count the number of Settlement Registers within such Unmetered Supply as contributing towards the value of Number Of Non Half Hourly Unmetered Metering Systems Requiring A Default Estimated Annual Consumption (Disconnected) (NMUDED<sub>HZLPR</sub>) and the provisions of paragraphs 4.5.12 and 4.4.16 shall apply and the provisions of paragraphs 4.5.5 to 4.5.11 shall not apply to such Unmetered Supply.

4.5.4 Each Supplier shall ensure that its Non Half Hourly Data Aggregators shall maintain the following data items for each Settlement Class within such Supplier for the Settlement Day for which an Initial Volume Allocation Run or Reconciliation Volume Allocation Run is being undertaken for which that Non Half Hourly Data Aggregator is responsible:

- (a) the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance (Disconnected) (NMAD<sub>HZLPR</sub>);
- (b) the value of Number Of Non Half Hourly Metering Systems Contributing To The Total Estimated Annual Consumption (Disconnected) (NMMED<sub>HZLPR</sub>);
- (c) the value of Number Of Non Half Hourly Metered Metering Systems Requiring A Default Estimated Annual Consumption (Disconnected) (NMMDED<sub>HZLPR</sub>);

- (d) the value of Number Of Non Half Hourly Unmetered Metering Systems Contributing To The Total Estimated Annual Consumption (Disconnected) ( $NMUED_{HZZLPR}$ ); and
- (e) the value of Number Of Non Half Hourly Unmetered Metering Systems Requiring A Default Estimated Annual Consumption (Disconnected) ( $NMUDED_{HZZLPR}$ ).

4.5.5 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the Initial Total Annualised Advance (Disconnected) ( $ITAAD_{HZZLPR}$ ) and the Total Annualised Advances (Disconnected) ( $TAAD_{HZZLPR}$ ) for such Supplier's non half hourly metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for each Settlement Class "HLPR" within such Supplier "Z" according to the following formulae:

$$ITAAD_{HZZLPR} = \sum^{HZZLPR}_K AA_{KR}$$

$$TAAD_{HZZLPR} = ITAAD_{HZZLPR} / 1000$$

where such metered Metering Systems have a value of Annualised Advance with an Effective From Settlement Date on or before and an Effective To Settlement Date on or after a Settlement Day or Settlement Days that included Settlement Periods affected by a Demand Disconnection Event.

4.5.6 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMAD_{HZZLPR}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which a value of Annualised Advance has contributed to the Total Annualised Advance (Disconnected) in accordance with paragraph 4.5.5.

4.5.7 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the Total Estimated Annual Consumption For Non Half Hourly Metered Metering Systems (Disconnected) ( $MED_{HZZLPR}$ ) for such Supplier's non half hourly metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for each Settlement Class "HLPR" within such Supplier "Z" according to the following formula:

$$MED_{HZZLPR} = \sum^{HZZLPR}_K EAC_{KR}$$

where such metered Metering Systems have a value of Estimated Annual Consumption with an Effective From Settlement Date before or, as the case may be, on a Settlement Day that included Settlement Periods affected by a Demand Disconnection Event.

4.5.8 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMMED_{HZZLPR}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which a value of Estimated Annual Consumption has contributed to the Total Estimated Annual Consumption (Disconnected) ( $MED_{HZZLPR}$ ) in accordance with paragraph 4.5.7.

4.5.9 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMDED_{HZZLPR}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's metered Metering Systems for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which there is no value of Estimated Annual Consumption and no value of Annualised

Advance, and which therefore require a value of Default Estimated Annual Consumption For Metered Metering Systems ( $DEM_{H\text{ZLPR}}$ ) to be determined pursuant to paragraph 4.4.15.

- 4.5.10 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the Value of Estimated Annual Consumption for Non Half Hourly Unmetered Metering Systems (Disconnected) ( $UED_{H\text{ZLPR}}$ ) for such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible for each Settlement Class "HLPR" within such Supplier "Z" according to the following formula:

$$UED_{H\text{ZLPR}} = \sum^{H\text{ZLPR}}_K EAC_{KR}$$

where such Metering Systems have a value of Estimated Annual Consumption with an Effective From Settlement Date on or before a Settlement Day that included Settlement Periods affected by a Demand Disconnection Event.

- 4.5.11 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMUED_{H\text{ZLPR}}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which there is a value of Estimated Annual Consumption.

- 4.5.12 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the value of  $NMUDED_{H\text{ZLPR}}$  for each Settlement Class "HLPR" within such Supplier "Z" as equal to the number of such Supplier's Unmetered Supplies for which such Non Half Hourly Data Aggregator is responsible for such Settlement Class for which there is no value of Estimated Annual Consumption, and which therefore require a value of Default Estimated Annual Consumption For Unmetered Metering Systems ( $DEU_{H\text{ZLPR}}$ ) to be determined pursuant to paragraph 4.4.16.

- 4.5.13 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine the values of Total Metered Estimated Annual Consumption (Disconnected) ( $TMEACD_{H\text{ZLPR}}$ ), Total Number Of Metered Non Half Hourly Metering Systems Contributing To Total Metered Estimated Annual Consumption (Disconnected) ( $TMEACCD_{H\text{ZLPR}}$ ), Total Unmetered Consumption (Disconnected) ( $TUED_{H\text{ZLPR}}$ ) and Total Number Of Non Half Hourly Unmetered Metering Systems Contributing To Total Unmetered Consumption (Disconnected) ( $TMUECD_{H\text{ZLPR}}$ ) for such Supplier's Metering Systems for which such Non Half Hourly Data Aggregator is responsible according to the following formulae:

$$TMEACD_{H\text{ZLPR}} = (MED_{H\text{ZLPR}} + (NMMDED_{H\text{ZLPR}} * DEM_{H\text{ZLPR}})) / 1000;$$

$$TMEACCD_{H\text{ZLPR}} = NMMED_{H\text{ZLPR}} + NMMDED_{H\text{ZLPR}};$$

$$TUED_{H\text{ZLPR}} = (UED_{H\text{ZLPR}} + (NMUDED_{H\text{ZLPR}} * DEU_{H\text{ZLPR}})) / 1000; \text{ and}$$

$$TMUECD_{H\text{ZLPR}} = NMUED_{H\text{ZLPR}} + NMUDED_{H\text{ZLPR}}$$

- 4.5.14 Each Supplier shall ensure that each of its Non Half Hourly Data Aggregators shall determine a Supplier Disconnection Matrix ( $SDM_{H\text{ZaLPR}}$ ) consisting of the following data for such Supplier's Metering Systems for which such Non Half Hourly Data Aggregator is responsible in respect of each Settlement Class "HLPR" within such Supplier "Z":

- (a) Number Of Non Half Hourly Metering Systems Contributing To The Total Annualised Advance (Disconnected) ( $NMAD_{H\text{ZLPR}}$ );

- (b) Number Of Non Half Hourly Metered Metering Systems Requiring A Default Estimated Annual Consumption (Disconnected) ( $NMMDED_{HZZLPR}$ );
- (c) Number Of Non Half Hourly Unmetered Metering Systems Requiring A Default Estimated Annual Consumption (Disconnected) ( $NMUDED_{HZZLPR}$ );
- (d) Total Number Of Metered Non Half Hourly Metering Systems Contributing To Total Metered Estimated Annual Consumption (Disconnected) ( $TMEACCD_{HZZLPR}$ );
- (e) Total Number Of Non Half Hourly Unmetered Metering Systems Contributing To Total Unmetered Consumption (Disconnected) ( $TMUECD_{HZZLPR}$ );
- (f) Total Annualised Advance (Disconnected) ( $TAAD_{HZZLPR}$ );
- (g) Total Metered Estimated Annual Consumption (Disconnected) ( $TMEACD_{HZZLPR}$ ); and
- (h) Total Unmetered Consumption (Disconnected) ( $TUED_{HZZLPR}$ ).

The Supplier Disconnection Matrix should only be sent in relation to Metering Systems and for Settlement Days affected by a Demand Disconnection Event.

## **5. SUPPLIER VOLUME ALLOCATION DATA INPUT**

### **5.1 Supplier Volume Allocation Standing Data**

- 5.1.1 Each Supplier shall from time to time notify such data items as are specified in BSCP509 as being provided by such Supplier to the SVAA, to the SVAA, and the SVAA shall ensure that processes are put in place which ensure that such data are input promptly into the Supplier Volume Allocation System.
- 5.1.2 Each Supplier shall supply such data as are specified in BSCP507 as being provided by such Supplier to the SVAA together with the dates of the first and, as the case may be, the last Settlement Days on which such data are to be effective to the SVAA, and the SVAA shall ensure that processes are put in place which ensure that such data are input promptly into the Supplier Volume Allocation System.
- 5.1.3 With the exception of Line Loss Factor data which shall be notified in accordance with BSCP128, each Distribution System Operator shall from time to time notify such data as are specified in BSCP507 and BSCP509 as being provided by such Distribution System Operator to the SVAA, to the SVAA, and the SVAA shall ensure that processes are put in place which ensure that such data are input promptly into the Supplier Volume Allocation System.
- 5.1.4 The SVAA shall procure the following data from the Profile Administrator (or from BSCCo where BSCCo provides the Profile Administration Services in accordance with paragraph C9) and the SVAA shall ensure that processes are put in place which ensure that such data are input promptly into the Supplier Volume Allocation System:
  - (a) Matrix Of Regression Coefficients -  $MRC_{Q(aa)(nn)j}$ ;
  - (b) Group Average Annual Consumption -  $GAAC_{HQ}$ ; and

- (c) The identity of the Analysis Class "(aa)" relevant to each GSP Group and Settlement Day.
- 5.1.5 The SVAA shall procure such data as are specified in BSCP509 as being required by the SVAA and which data do not form part of the data specified in paragraphs 5.1.1 to 5.1.4 (inclusive), from a source or sources from time to time agreed by the Panel.
- 5.1.6 The SVAA shall procure the data specified in BSCP508 as being required by the SVAA and which data do not form part of the data specified in paragraphs 5.1.1 to 5.1.5 (inclusive), from a source or sources from time to time agreed by the Panel.
- 5.1.7 The SVAA shall:
- (a) hold the Historical Daily Profile Coefficients provided to it in respect of each GSP Group and such Profile Classes, combinations of Time Pattern Regime and Standard Settlement Configuration and Settlement Days in each case as shall be specified by the Panel; and
- (b) notify such Historical Daily Profile Coefficients or, as the case may be, any subset of such Historical Daily Profile Coefficients, in each case as may from time to time be directed by the Panel, to each Non Half Hourly Data Collector.
- 5.1.8 The SVAA shall ensure the processes are put in place which ensure that details of:
- (a) the Base BM Unit "i"; and
- (b) any Additional BM Unit "i"
- for each Supplier "Z" within each GSP Group "H" received from time to time from the CRA are input into the Supplier Volume Allocation System in accordance with BSCP509.
- 5.1.9 In respect of all data referred to in this paragraph 5.1 which a Party and BSC Agents are required to notify to the SVAA or which the SVAA is required to procure, the relevant Party or BSC Agents or, as the case may be, the SVAA, shall ensure:
- (a) that all such data is complete and accurate in all material respects;
- (b) that any change to all or any of such data is notified promptly to the SVAA; and
- (c) any such changed data is consistent with all such data which has not been changed.
- and the SVAA shall amend the data input into the Supplier Volume Allocation System to reflect any such changes notified to it.
- 5.1.10 References in the Supplier Volume Allocation Rules to standing data are to such standing data notified in respect of Supplier Volume Allocation for the time being and from time to time pursuant to the Supplier Volume Allocation Rules.
- 5.1.11 The SVAA shall promptly notify all persons involved in Supplier Volume Allocation entitled to receive such data of amendments to standing data used in Supplier Volume Allocation.
- 5.1.12 The SVAA shall carry out, in accordance with BSCP508, the calculations set out in paragraphs 5.1.12 to 5.1.16 in respect of each GSP Group "H" and each valid combination of Profile Class "P" and Standard Settlement Configuration Class and Time Pattern Regime combination "R" except for combinations of GSP Group "H", Profile Class "P" and

Standard Settlement Configuration and Time Pattern Regime "R" for which values of Alternative Average Fraction of Yearly Consumption ( $AAFYC_{HPR}$ ) have been notified to the SVAA in accordance with BSCP509.

5.1.13 The SVAA shall carry out the calculations in respect of each GSP Group "H" and each valid combination of Profile Class "P" and Standard Settlement Configuration Class and Time Pattern Regime combination "R" using the Total Annualised Advance ( $TAA_{HZLPR}$ ) from the Supplier Purchase Matrix ( $SPM_{HZaLPR}$ ) for the latest Volume Allocation Run in respect of each Settlement Day over the Calculation Period, where the date range for the Calculation Period has been agreed by the Panel.

5.1.14 The SVAA shall calculate the GSP Group Profile Class Average Estimated Annual Consumption ( $GGPCAEAC_{HPC}$ ) in respect of each GSP Group "H" and each valid combination of Profile Class "P" and Standard Settlement Configuration "C" over the Calculation Period as follows:

- (a) determine the Time Pattern Regime Estimated Daily Consumption ( $TPREDC_{HPRT}$ ) for each Profile Class "P" and Standard Settlement Configuration and Time Pattern Regime combination "R" in each GSP Group "H" for each Settlement Day "T" in the Calculation Period as follows:

$$TPREDC_{HPRT} = (\sum^{HPR}_{ZL} TAA_{HZLPR}) * DPC_{HPRT} * 1000 / (\sum^{HPR}_{ZL} NMA_{HZLPR})$$

where  $\sum^{HPR}_{ZL}$  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";

- (b) determine the Time Pattern Regime Average Estimated Annual Consumption ( $TPREAC_{HPR}$ ) for each Profile Class "P", Standard Settlement Configuration and Time Pattern Regime combination "R" in each GSP Group "H" as follows:

$$TPREAC_{HPR} = \sum^{HPR}_T TPREDC_{HPRT}$$

where  $\sum^{HPR}_T$  is the summation over all Settlement Days "T" contained within the Calculation Period for which one or more values of  $TAA_{HZLPR}$  was determined for Standard Settlement Configuration and Time Pattern Regime combination "R" in Profile Class "P" within GSP Group "H"; and

- (c) determine the GSP Group Profile Class Average Estimated Annual Consumption ( $GGPCAEAC_{HPC}$ ) for each Profile Class "P" and Standard Settlement Configuration "C" in each GSP Group "H" as follows:

$$GGPCAEAC_{HPC} = (\sum^{HPC}_R TPREAC_{HPR}) * \text{Days in Year} / \text{Days}_{SHPC}$$

where Days in Year is 365 or, where 29<sup>th</sup> February appears in the Calculation Period, 366;

$\text{Days}_{SHPC}$  is the number of Settlement Days in the Calculation Period for which one or more values of  $TPREAC_{HPR}$  were determined for Profile Class "P" and Standard Settlement Configuration Class "C" within GSP Group "H"; and

$\sum^{HPC}_R$  is the summation over all Standard Settlement Configuration and Time Pattern Regime combinations "R" valid for Standard Settlement Configuration "C" and Profile Class "P" within GSP Group "H".



5.1.15 The SVAA shall calculate the GSP Group Profile Class Default Estimated Annual Consumption (GGPCDEAC) in respect of each Profile Class "P" within each GSP Group "H" for the Calculation Period as follows:

- (a) determine the Standard Settlement Configuration Estimated Daily Consumption (SSCEDC<sub>HPCT</sub>) for each Profile Class "P" and Standard Settlement Configuration "C" in each GSP Group "H" for each Settlement Day "T" in the Calculation Period as follows:

$$\text{SSCEDC}_{\text{HPCT}} = \sum^{\text{HPCT}}_{\text{R}} \text{TPREDC}_{\text{HPRT}}$$

where  $\sum^{\text{HPCT}}_{\text{R}}$  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";

- (b) determine the Number of Metering Systems Contributing to the Standard Settlement Configuration Estimated Daily Consumption (NMSSCEDC<sub>HPCT</sub>) for each Profile Class "P" and Standard Settlement Configuration "C" in each GSP Group "H" for each Settlement Day "T" in the Calculation Period as follows:

$$\text{NMSSCEDC}_{\text{HPCT}} = \sum^{\text{HPC}}_{\text{ZL}} \text{NMA}_{\text{HZLPR}}$$

where  $\sum^{\text{HPC}}_{\text{ZL}}$  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";

- (c) determine the Profile Class Estimated Daily Consumption (PCEDC<sub>HPT</sub>) for each Profile Class "P" within each GSP Group "H" for each Settlement Day "T" in the Calculation Period as follows:

$$\text{PCEDC}_{\text{HPT}} = \sum^{\text{HPT}}_{\text{C}} (\text{SSCEDC}_{\text{HPCT}} * \text{NMSSCEDC}_{\text{HPCT}}) / \sum^{\text{HPT}}_{\text{C}} (\text{NMSSCEDC}_{\text{HPCT}})$$

where  $\sum^{\text{HPT}}_{\text{C}}$  is the summation over all Standard Settlement Configurations "C" for Profile Class "P" within GSP Group "H" for Settlement Day "T"; and

- (d) determine the GSP Group Profile Class Default Estimated Annual Consumption (GGPCDEAC<sub>HP</sub>) for each Profile Class "P" within each GSP Group "H" as follows:

$$\text{GGPCDEAC}_{\text{HP}} = \sum^{\text{HP}}_{\text{T}} \text{PCEDC}_{\text{HPT}} * \text{Days in Year} / \text{Days}_{\text{SHP}}$$

where Days<sub>SHP</sub> is the number of Settlement Days in the Calculation Period for which one or more values of TAA<sub>HZLPR</sub> was determined for Profile Class "P" within GSP Group "H"; and

$\sum^{\text{HP}}_{\text{T}}$  is the summation over all Settlement Days "T" for Profile Class "P" within GSP Group "H".

5.1.16 The SVAA shall calculate the Annual Fraction of Yearly Consumption (AFYC<sub>HPR</sub>) in respect of each Profile Class "P" and Standard Settlement Configuration and Time Pattern Regime combination "R" within each GSP Group "H" as follows:

- (a) calculate the Unadjusted Annual Fraction of Consumption ( $UAFYC_{HPR}$ ) for each Profile Class "P" and Standard Settlement Configuration and Time Pattern Regime combination "R" within each GSP Group "H" in accordance with the following formula:

$$UAFYC_{HPR} = \max \left( (TPREAC_{HPR} / \sum_R^{HPC} TPREAC_{HPR}), 0.000001 \right);$$

- (b) calculate an Annual Fraction of Yearly Consumption Adjustment ( $AFYCA_{HPC}$ ) for each Profile Class "P" and Standard Settlement Configuration "C" within GSP Group "H" in accordance with the following formula:

$$AFYCA_{HPC} = 1 - \sum_R^{HPC} UAFYC_{HPR};$$

- (c) for the Time Pattern Regime and Standard Settlement Configuration combination "R" that has the largest value of Unadjusted Annual Fraction of Consumption ( $UAFYC_{HPR}$ ) for each Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H", calculate the Annual Fraction of Yearly Consumption ( $AFYC_{HPR}$ ) in accordance with the following formula:

$$AFYC_{HPR} = UAFYC_{HPR} + AFYCA_{HPC}; \text{ and}$$

- (d) for each Time Pattern Regime and Standard Settlement Configuration combination "R" for Profile Class "P" and Standard Settlement Configuration "C" within GSP Group "H" other than that to which paragraph (c) applies, calculate the Annual Fraction of Yearly Consumption ( $AFYC_{HPR}$ ) in accordance with the following formula:

$$AFYC_{HPR} = UAFYC_{HPR}.$$

## 5.2 Supplier Volume Allocation Periodic Data

- 5.2.1 The SVAA shall ensure that processes are put in place which ensure that the GSP Group Take ( $GSPGT_{Hj}$ ) data notified to it by the CDCA pursuant to Section R5.7 are promptly input into the Supplier Volume Allocation System.

- 5.2.2 The SVAA shall procure from the Temperature Provider the following data and the SVAA shall ensure that processes are put in place which ensure that such data are promptly input into the Supplier Volume Allocation System:

Grid Supply Point Group Measured Temperature -  $T_{HT}$  in degrees Fahrenheit;

where the set of  $T_{HT}$  in respect of GSP Group "H" and Settlement Day "D" are provided from weather stations at locations for the time being and from time to time agreed by the Panel.

- 5.2.2A In addition to the data to be procured by the SVAA in accordance with paragraph 5.2 the SVAA shall also procure from the Temperature Provider the following data in relation to Scotland and put in place processes so that such data is input into the Supplier Volume Allocation System in respect of the two days immediately preceding the BETTA Effective Date:

Grid Supply Point Group Measured Temperature -  $T_{HT}$  in degrees Fahrenheit;

Where the set of  $T_{HT}$  in respect of GSP Group "H" and Settlement Day "D" are provided from weather stations at locations for the time being and from time to time agreed by the Panel.

- 5.2.3 The SVAA shall procure from the Teleswitch Agent the following data and the SVAA shall ensure that processes are put in place which ensure that such data are promptly input into the Supplier Volume Allocation System:

Teleswitch Contact Interval Data in respect of each Teleswitch Contact within each Teleswitch Group and in respect of the UTC Day then being processed.

- 5.2.4 The SVAA shall ensure that processes are put in place which ensure that the following data from time to time supplied to it pursuant to paragraphs 3.5, 3.6 and 4.4 are promptly input into the Supplier Volume Allocation System:

- (a) Supplier's Metered Consumption -  $SMC_{HZaNLj}$ ;
- (b) Supplier's Metered Consumption (Losses) -  $SMCL_{HZaNLj}$ ;
- (c) BM Unit's Metered Consumption -  $BMMC_{iaNLj}$ ;
- (d) BM Unit's Metered Consumption (Losses) -  $BMMCL_{iaNLj}$ ; and
- (e) Supplier Purchase Matrix -  $SPM_{HZaLPR}$ .

### 5.3 Reconciliation Allocation Data Input

- 5.3.1 For any Reconciliation Volume Allocation Run for a Settlement Day, each Supplier shall ensure that, in respect of data which are then currently available but which were not previously available for use in the immediately preceding Initial Volume Allocation Run or Reconciliation Volume Allocation Run, as the case may be:

- (a) its Half Hourly Data Collectors for that Settlement Day shall provide Supplier's Metering System Metered Consumption data to the appropriate Half Hourly Data Aggregators in respect of the relevant Metering Systems;
- (b) its Non Half Hourly Data Collectors for that Settlement Day shall provide Estimated Annual Consumption and Annualised Advance data to the appropriate Non Half Hourly Data Aggregators in respect of the relevant Metering Systems, replacing the Estimated Annual Consumptions with Annualised Advances for Metering Systems for which Metered Data is then currently available which was not previously available;
- (c) its Half Hourly Data Aggregators for that Settlement Day shall provide the following data to the SVAA which data shall incorporate any revised data made available:
  - (i) in the case of a GSP Group "H" and a Half Hourly Data Aggregator where paragraph 3.6 applies (in accordance with paragraph 3.6.1), the BM Unit's Metered Consumption and BM Unit's Metered Consumption (Losses) data, pursuant to paragraph 3.6; and
  - (ii) in the case of a GSP Group "H" and a Half Hourly Data Aggregator where paragraph 3.6 does not apply, the Supplier's Metered Consumption and Supplier's Metered Consumption (Losses) data, pursuant to paragraph 3.5; and
- (d) its Non Half Hourly Data Aggregators for that Settlement Day shall provide Supplier Purchase Matrix data to the SVAA which data shall incorporate any revised data made available.

- 5.3.2 The SVAA shall ensure that processes are put in place which ensure that the data from time to time supplied to it pursuant to paragraph 5.3.1 are promptly input into the Supplier Volume Allocation System.

## **6. PROFILE COEFFICIENTS**

### **6.1 Making of determinations**

- 6.1.1 The determinations in this paragraph 6 shall be carried out by the SVAA in respect of Metering Systems and in respect of each Settlement Day for which it is required to make such determinations and which Settlement Day occurs on or after the Go-live Date.

- 6.1.2 The SVAA shall ensure that processes are put in place which ensure that values of Alternative Average Fraction of Yearly Consumption (AAFYC<sub>HPR</sub>) notified to the SVAA in accordance with BSCP509 are input promptly into the Supplier Volume Allocation System.

### **6.2 Derivation of Settlement Register switching times for each Teleswitch Time Pattern Regime**

- 6.2.1 The SVAA shall identify each Teleswitch Time Pattern Regime which is associated with one or more Standard Settlement Configurations of which at least one of such Standard Settlement Configurations:

- (a) defines a teleswitched metering configuration; and
- (b) is assigned to a Teleswitch Group.

- 6.2.2 For the purpose of carrying out the processes set out in this paragraph 6.2 which require the use of Teleswitch Contact Interval Data, the SVAA shall employ those Teleswitch Contact Interval Data which:

- (a) have been received by the SVAA pursuant to paragraph 5.2.3; and
- (b) are in respect of the UTC Days which start or end at spot times which fall within the Settlement Day then being processed.

- 6.2.3 If:

- (a) the SVAA has not received Teleswitch Contact Interval Data pursuant to paragraph 5.2.3 in respect of one or more of the UTC Days identified pursuant to paragraph 6.2.2 by the time specified in BSCP508; or
- (b) the SVAA has received the data specified in paragraph (a) by the time specified in BSCP508 but such data does not include Teleswitch Contact Interval Data in respect of each Teleswitch Group,

then the matters required to be determined under this paragraph 6.2 for the Settlement Day being processed shall be determined by reference to such default data as BSCP508 requires to be employed for such purpose.

- 6.2.4 In respect of each Teleswitch Time Pattern Regime identified pursuant to paragraph 6.2.1 within each Teleswitch Group, the SVAA shall employ the Teleswitch Register Rules and Teleswitch Contact Rules in respect of such Teleswitch Time Pattern Regime (which have been notified to the SVAA by each Supplier required to so notify pursuant to paragraph

5.1.1) to determine the set of Teleswitch Intervals associated with such Teleswitch Time Pattern Regime for the Settlement Day being processed as follows:

- (a) by reference to the Teleswitch Contact Interval Data in respect of the Teleswitch Group being processed and the UTC Days identified pursuant to paragraph 6.2.2, the SVAA shall:
  - (i) determine the state of each of the Teleswitch Contacts associated with any such Teleswitch Contact Rule at the start of such Settlement Day; and
  - (ii) identify each following spot time of the Settlement Day at which any of such Teleswitch Contacts associated with any such Teleswitch Contact Rule change state;
- (b) in respect of the spot time that is the start of Settlement Day and each spot time identified pursuant to paragraph (a), the SVAA shall, in chronological order of such spot times:
  - (i) determine whether each such Teleswitch Contact Rule is satisfied for the period (the "**contact period**") commencing with such spot time and ending at the earlier of the next following spot time identified pursuant to paragraph (a) and the end of such Settlement Day;
  - (ii) determine whether each such Teleswitch Register Rule is satisfied for the contact period commencing with such spot time by reference to the results of the determination pursuant to paragraph (i) for the associated Teleswitch Contact Rules;
  - (iii)
    - (A) if any of such Teleswitch Register Rules is satisfied, determine that the Settlement Register associated with such Teleswitch Time Pattern Regime is recording metered consumption for the contact period; or
    - (B) if none of such Teleswitch Register Rules is satisfied, determine that the Settlement Register associated with such Teleswitch Time Pattern Regime is not recording metered consumption for the contact period;
  - (iv) if:
    - (A) the associated Settlement Register commences to record metered consumption at such spot time; or
    - (B) such spot time is the start of the Settlement Day and such Settlement Register is determined pursuant to this paragraph as recording metered consumption for the contact period commencing at such spot time,

determine that such spot time is an Unadjusted Interval Start Time but, in any other case, such spot time shall not be an Unadjusted Interval Start Time; and
  - (v) if:
    - (A) the associated Settlement Register ceases to record metered consumption at such spot time; or

(B) such spot time is the end of the Settlement Day and such Settlement Register is determined pursuant to this paragraph as recording metered consumption for the contact period ending at such spot time;

determine that such spot time is an Unadjusted Interval End Time but, in any other case, such spot time shall not be an Unadjusted Interval End Time; and

(c) the SVAA shall determine each Teleswitch Interval in such Settlement Day as a period starting at an Unadjusted Interval Start Time and ending at the next following Unadjusted Interval End Time.

### **6.3 Derivation of time pattern data**

6.3.1 The SVAA shall carry out the process set out in this paragraph 6.3:

- (a) for each Teleswitch Time Pattern Regime in respect of which Teleswitch Intervals have been determined pursuant to paragraph 6.2 in respect of such Settlement Day; and
- (b) for each Time Pattern Regime in respect of which Clock Intervals have been received by the SVAA pursuant to paragraph 5.1.1 and which apply in respect of the Settlement Day then being processed.

6.3.2 The SVAA shall update each Time Pattern Regime identified pursuant to paragraph 6.3.1 to take account of the associated Teleswitch Intervals or, as the case may be, Clock Intervals that apply in respect of the Settlement Day then being processed.

### **6.4 Rounding of Time Pattern data**

6.4.1 In respect of each Standard Settlement Configuration, the SVAA shall calculate a set of Adjusted Intervals pursuant to this paragraph 6.4, where subscript "(ai)" refers to a particular Adjusted Interval, subscript "X" refers to a Time Pattern Regime and subscript "R" refers to the combination of such a Time Pattern Regime and such Standard Settlement Configuration. The determinations set out in paragraphs 6.4.2 to 6.4.11 (inclusive) shall be carried out by the SVAA in the sequential order set out in such paragraphs. The determinations set out in paragraphs 6.4.2 to 6.4.6 (inclusive) shall be carried out in respect of a Specimen Settlement Day related to the Settlement Day then being processed and, if required pursuant to such paragraphs, the next following Specimen Settlement Day related to the Settlement Day then being processed.

6.4.2 The SVAA shall:

- (a) identify all Time Pattern Regimes associated with the Standard Settlement Configuration being processed;
- (b) in respect of each such Time Pattern Regime determine each Unadjusted Interval Start Time ( $UIST_{X(ai)}$ ) as the time identified by reference to such Time Pattern Regime at which Settlement Registers associated with the Time Pattern Regime commence to record Metered Data and if such Settlement Registers are identified as recording Metered Data at the start of the Settlement Day, the start of the Settlement Day shall also be identified as an Unadjusted Interval Start Time;

- (c) for each Unadjusted Interval Start Time determined in respect of a Time Pattern Regime pursuant to paragraph (b) determine an associated Unadjusted Interval End Time ( $UIET_{X(ai)}$ ) as the earlier of:
- (i) the next following time, identified by reference to such Time Pattern Regime, at which the Settlement Registers associated with the Time Pattern Regime cease to record Metered Data; and
  - (ii) the end of the Settlement Day; and
- (d) each such period beginning at an Unadjusted Interval Start Time and ending at its associated Unadjusted Interval End Time shall be known as an "**Unadjusted Interval**".
- 6.4.3 The SVAA shall identify each spot time of the Settlement Day at which an Unadjusted Interval Start Time or an Unadjusted Interval End Time occurs for one or more of the Time Pattern Regimes associated with the Standard Settlement Configuration being processed.
- 6.4.4 The SVAA shall in respect of each spot time identified pursuant to paragraph 6.4.3 carry out the determinations set out in this paragraph 6.4.4 save in the case where such spot time occurs at the start of a Settlement Period or, as the case may be, at the end of the Settlement Day being processed, in which case the provisions of paragraph 6.4.6 shall apply. The determinations set out in this paragraph 6.4.4 or, as the case may require, paragraph 6.4.6 shall be carried out for each such spot time in turn in chronological order of the occurrence of all such spot times associated with the Standard Settlement Configuration being processed. For the purposes of this paragraph 6.4.4 the Settlement Period within which the spot time under consideration falls shall be denoted as Settlement Period "J":
- (a) the Rounded-Up Spot Time associated with the spot time under consideration shall be determined to be the spot time at the start of the next following Settlement Period "J+1";
  - (b) the Rounded-Down Spot Time associated with the spot time under consideration shall be determined as the start of the Settlement Period "J";
  - (c) the Unrounded Duration ( $UD_{X(ai)}$ ) of each Unadjusted Interval starting or ending at the spot time under consideration shall be determined as the time duration in minutes between its Unadjusted Interval Start Time and its associated Unadjusted Interval End Time. For the avoidance of doubt, the Unadjusted Interval End Time shall be later than the Unadjusted Interval Start Time, and this determination shall therefore result in a value of the Unrounded Duration which is a positive number of minutes;
  - (d) the Rounded-Up Duration ( $RUD_{R(ai)}$ ) of each Unadjusted Interval starting or ending at the spot time under consideration shall be determined as follows:
    - (i) if the Unadjusted Interval ends at such spot time, the Rounded-Up Duration of such Unadjusted Interval shall be the time duration in minutes between its associated Adjusted Interval Start Time as previously determined pursuant to this paragraph 6.4.4 and the Rounded-Up Spot Time associated with such spot time. In the case in which such Adjusted Interval Start Time is later in time than such Rounded-Up Spot Time the Rounded-Up Duration shall be a negative number of minutes and, in any other case, the Rounded-Up Duration shall be a positive number of minutes; or

- (ii) if the Unadjusted Interval starts at such spot time, the Rounded-Up Duration of such Unadjusted Interval shall be the time duration in minutes between the Rounded-Up Spot Time associated with the spot time under consideration and the Interim Adjusted Interval End Time determined pursuant to paragraph 6.4.5. In the case in which such Rounded-Up Spot Time is later in time than such Interim Adjusted Interval End Time the Rounded-Up Duration shall be a negative number of minutes and, in any other case, the Rounded-Up Duration shall be a positive number of minutes;
- (e) the Rounded-Down Duration ( $RDD_{R(ai)}$ ) of each Unadjusted Interval starting or ending at the spot time under consideration shall be determined as follows:
- (i) if the Unadjusted Interval ends at such spot time, the Rounded-Down Duration of such Unadjusted Interval shall be the time duration in minutes between its associated Adjusted Interval Start Time as previously determined pursuant to this paragraph and the Rounded-Down Spot Time associated with such spot time. In the case in which such Adjusted Interval Start Time is later in time than such Rounded-Down Spot Time the Rounded-Down Duration shall be a negative number of minutes and, in any other case, the Rounded-Down Duration shall be a positive number of minutes; or
  - (ii) if the Unadjusted Interval starts at such spot time, the Rounded-Down Duration of such Unadjusted Interval shall be the time duration in minutes between the Rounded-Down Spot Time associated with the spot time under consideration and the Interim Adjusted Interval End Time determined pursuant to paragraph 6.4.5. In the case in which such Rounded-Down Spot Time is later in time than such Interim Adjusted Interval End Time the Rounded-Down Duration shall be a negative number of minutes and, in any other case, the Rounded-Down Duration shall be a positive number of minutes;
- (f) for every Unadjusted Interval with an Unadjusted Interval Start Time or an Unadjusted Interval End Time which falls at such spot time, a corresponding Adjusted Interval Start Time or, as the case may be, Adjusted Interval End Time shall be determined as follows. For the purpose of making such determinations each of the following paragraphs (i) to (vii) (inclusive) shall be considered in the order set out below. In considering such paragraphs the first such paragraph encountered where the condition specified in such paragraph is satisfied for such spot time shall be employed in the determination of the Adjusted Interval Start Time or, as the case may be, Adjusted Interval End Time and all of the following such paragraphs shall be ignored:
- (i) if the number of such Unadjusted Intervals for which  $RUD_{R(ai)} < 0$  is less than the number of such Unadjusted Intervals for which  $RDD_{R(ai)} < 0$ , then each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of the next following Settlement Period "J+1";
  - (ii) if the number of such Unadjusted Intervals for which  $RUD_{R(ai)} < 0$  is greater than the number of such Unadjusted Intervals for which  $RDD_{R(ai)} < 0$ , then each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of Settlement Period "J";



- (iii) if the number of such Unadjusted Intervals for which  $RUD_{R(ai)} = 0$  is less than the number of such Unadjusted Intervals for which  $RDD_{R(ai)} = 0$ , then each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of the next following Settlement Period "J+1";
- (iv) if the number of such Unadjusted Intervals for which  $RUD_{R(ai)} = 0$  is greater than the number of such Unadjusted Intervals for which  $RDD_{R(ai)} = 0$ , then each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of Settlement Period "J";
- (v) if  $\sum_{(ai)} (RUD_{R(ai)} - UD_{X(ai)})^2 < \sum_{(ai)} (RDD_{R(ai)} - UD_{X(ai)})^2$   
then each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of the next following Settlement Period "J+1";
- (vi) if  $\sum_{(ai)} (RUD_{R(ai)} - UD_{X(ai)})^2 > \sum_{(ai)} (RDD_{R(ai)} - UD_{X(ai)})^2$   
then each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of Settlement Period "J"; or
- (vii) in any other case, each corresponding Adjusted Interval Start Time and Adjusted Interval End Time shall be determined to be the start time of Settlement Period "J"; and
- (g) if a determination set out in paragraph (f) above in respect of a spot time results in an Adjusted Interval End Time which falls at the same spot time as the associated Adjusted Interval Start Time falls, then such Adjusted Interval End Time shall be re-determined such that it falls at the start time of the next following Settlement Period and such re-determination shall be made before the next spot time identified pursuant to paragraph 6.4.3 is processed pursuant to this paragraph.

6.4.5 Where the SVAA is required pursuant to paragraph 6.4.4 to determine an Interim Adjusted Interval End Time in respect of an Unadjusted Interval, such Interim Adjusted Interval End Time (AIET<sub>X(ai)</sub>) shall be determined as follows:

- (a) let the Settlement Period within which the relevant UIET<sub>X(ai)</sub> falls be identified as Settlement Period J1;
- (b) if the duration of the period which begins at the start of Settlement Period J1 and ends at UIET<sub>X(ai)</sub> is less than half the Settlement Period Duration then the Interim Adjusted Interval End Time shall be set as the start time of Settlement Period J1; and
- (c) if the duration of the period which begins at the start of Settlement Period J1 and ends at UIET<sub>X(ai)</sub> is equal to half the Settlement Period Duration and the start time of Settlement Period J1 is an exact hour then the Interim Adjusted Interval End Time shall be set as the start time of Settlement Period J1;

but in any other case the Interim Adjusted Interval End Time shall be set as the start time of the next following Settlement Period (J1+1).

- 6.4.6 The provisions of this paragraph 6.4.6 apply in the case where a spot time identified pursuant to paragraph 6.4.4 occurs at the start of a Settlement Period or, as the case may be, the end of the Settlement Day being processed. In such case then:
- (a) for any Unadjusted Interval Start Time which occurs at such spot time its associated Adjusted Interval Start Time shall be determined to be that same spot time; and
  - (b) for any Unadjusted Interval End Time which occurs at such spot time its associated Adjusted Interval End Time shall be determined to be that same spot time.
- 6.4.7 If the Time Pattern Regime is classified as being in "local time" then the Adjusted Interval Start Times and Adjusted Interval End Times associated with such Time Pattern Regime and Standard Settlement Configuration determined pursuant to paragraphs 6.4.2 to 6.4.6 (inclusive) shall be construed as being in UK local time on such Settlement Day "D" or, as the case may be, the next following Settlement Day "D + 1". For the purposes of this paragraph 6.4.7 and paragraph 6.4.9 such next following Settlement Day "D + 1" is a Replica Settlement Day related to Settlement Day "D". The following provisions shall also apply if the Settlement Day "D" then being processed is a Settlement Day on which there is a Clock Change:
- (a) if there is an additional (repeated) hour or hours in such Settlement Day "D" as compared with a related Specimen Settlement Day, then any Adjusted Interval Start Time and Adjusted Interval End Time which would as a result of this operation occur at an hour spot time or, as the case may be, half hour spot time that occurs more than once in such Settlement Day shall be construed so that such Adjusted Interval Start Time or, as the case may be, Adjusted Interval End Time occurs at the first occurrence of the hour spot time or, as the case may be, half hour spot time in such Settlement Day "D"; or
  - (b) if there is an hour or hours fewer in such Settlement Day "D" as compared with a related Specimen Settlement Day, then each Adjusted Interval Start Time and Adjusted Interval End Time which would, if this operation were done in respect of such Specimen Settlement Day, occur at a spot time on such Specimen Settlement Day and which spot time does not exist on the Settlement Day "D", shall be adjusted so that it occurs at the first following spot time on such Settlement Day "D" which does exist.
- 6.4.8 If the Time Pattern Regime is classified as being in "GMT" as distinct from "local time" then the Adjusted Interval Start Times and Adjusted Interval End Times determined pursuant to paragraphs 6.4.2 to 6.4.6 (inclusive) shall be construed as being in Greenwich Mean Time. Such times shall then be converted to the corresponding UK local time on the Settlement Day "D" then being processed, taking due account of any Clock Change applying to UK local time on such Settlement Day "D". For the avoidance of doubt such adjustments may result in Adjusted Interval Start Times or Adjusted Interval End Times which fall in the next following Settlement Day "D + 1". For the purposes of this paragraph 6.4.8 and paragraph 6.4.9 such Settlement Day "D + 1" is a Replica Settlement Day related to Settlement Day "D".
- 6.4.9 If any Adjusted Interval Start Time or Adjusted Interval End Time determined pursuant to paragraphs 6.4.2 to 6.4.8 (inclusive) occurs at a spot time in Settlement Day "D+1", such Settlement Day being that next following the Settlement Day, "D", on which the associated Unadjusted Interval Start Time or, as the case may be, Unadjusted Interval End Time falls, such Adjusted Interval Start Time or, as the case may be, Adjusted Interval End Time shall

be modified so that it occurs on Settlement Day "D" at the same spot time as it had, before such modification, occurred on Settlement Day "D+1".

6.4.10 An Adjusted Interval shall be determined as a period of time starting at and including an Adjusted Interval Start Time and ending on but not including the associated Adjusted Interval End Time save in the case where a modification has been made pursuant to paragraph 6.4.9. In such case there shall be two Adjusted Intervals as follows:

- (a) a period of time starting at and including the Adjusted Interval Start Time and ending on but not including the end of the Settlement Day "D"; and
- (b) a period of time starting at and including the start time of Settlement Day "D" and ending on but not including the Adjusted Interval End Time associated with such Adjusted Interval Start Time.

6.4.11 In respect of each combination of Time Pattern Regime and Standard Settlement Configuration "R", the SVAA shall determine a Period Time Pattern State Indicator ( $Q_{Rj}$ ) for each Settlement Period as follows:

- (a) if the start time of such Settlement Period falls at an Adjusted Interval Start Time or any time within an Adjusted Interval associated with such Time Pattern Regime determined pursuant to this paragraph 6.4 then:

$$Q_{Rj} = 1; \text{ and}$$

- (b) in any other case  $Q_{Rj} = 0$ .

## 6.5 Evaluation of Basic Period Profile Coefficients for each Time Pattern Regime

6.5.1 In respect of each GSP Group for each Settlement Day, the SVAA shall determine the Noon Effective Temperature ( $NET_H$ ) as:

$$NET_H = 0.57T_{HT} + 0.28T_{HT-1} + 0.15T_{HT-2}$$

where  $T_{HT}$ ,  $T_{HT-1}$  and  $T_{HT-2}$  are the Grid Supply Point Group Measured Temperatures procured from the Temperature Provider pursuant to paragraph 5.2.2 for GSP Group "H" in respect of Settlement Day "D", "D-1" and "D-2" respectively and where Settlement Day "D" is the then current Settlement Day, Settlement Day "D-1" is the immediately preceding Settlement Day and Settlement Day "D-2" is the Settlement Day immediately preceding that designated as "D-1".

6.5.2 In respect of each Settlement Day, the SVAA shall determine the Sunset Variable (S) from the Time of Sunset data provided pursuant to paragraph 5.1.6 as follows:

- (a) the Sunset Time (SUNT) in respect of the Settlement Day is the time duration in minutes from the start of the Settlement Day to the time of sunset determined with reference to the Time of Sunset data;
- (b) SIX\_PM is the time duration in minutes from the start of the Settlement Day to 1800 hours Greenwich Mean Time on that Settlement Day; and
- (c) the Sunset Variable (S) shall be determined as:

$$S = SUNT - SIX\_PM.$$

6.5.3 In respect of each Profile "Q" of each Profile Class "P" within a GSP Group "H", the SVAA shall determine a set of Basic Period Profile Coefficients ( $P_{HQj}$ ) as set out in paragraphs (a) to (f) (inclusive):

- (a) for the purposes of this paragraph the values of  $MRC_{Q(aa)(nn)j}$  are the values of the Matrix of Regression Coefficients supplied for the time being and from time to time by the Profile Administrator (or by BSCCo where BSCCo provides the Profile Administration Services in accordance with paragraph C9) where the subscript "(nn)" represents individual values of  $MRC_{Q(aa)(nn)j}$  and such subscript takes values between 0 and 7 inclusive;
- (b) for the avoidance of doubt and for the purpose of this paragraph 6.5 the subscript "j" represents Settlement Periods of the Settlement Day. In both of the cases (i) and (ii), the number of Settlement Periods in respect of which values of  $MRC_{Q(aa)(nn)j}$  are supplied by the Profile Administrator (or BSCCo where BSCCo provides the Profile Administration Services in accordance with paragraph C9) may not correspond to the number of Settlement Periods in the Settlement Day under consideration. In such cases the values of  $MRC_{Q(aa)(nn)j}$  supplied shall be employed in the determination of values of Basic Period Profile Coefficient ( $P_{HQj}$ ) pursuant to this paragraph 6.5. Such values of Basic Period Profile Coefficient shall subsequently be allocated to specific Settlement Periods of the Settlement Day under consideration:
- (i) in the case of a Baseload Profile and when there is Clock Change on the Settlement Day under consideration only, such allocation shall be made pursuant to paragraph 6.5.4; or
- (ii) in the case of a Profile associated with switched load such allocation shall be made pursuant to paragraph 6.6. For the avoidance of doubt, in this case (ii) such allocation may not result in a value of Basic Period Profile Coefficient for every Settlement Period in the Settlement Day;
- (c) the Regression Coefficients ( $RC_{HQ(nn)j}$ ) shall be determined as equal to the value of those coefficients  $MRC_{Q(aa)(nn)j}$  which apply in respect of the relevant Profile "Q" and the Analysis Class "(aa)" which is identified by the data procured from the Profile Administrator pursuant to paragraph 5.1.4 as being relevant to the given Settlement Day and GSP Group;
- (d) for the avoidance of doubt, a value of  $RC_{HQ(nn)j}$  shall not be determined pursuant to paragraph (c) and shall not be set to zero in respect of any Settlement Period "j" for which a value of  $MRC_{Q(aa)(nn)j}$  is not defined. This paragraph (d) shall also apply *mutatis mutandis* in respect of the determinations of values of Estimated Regional Average Demand Per Customer ( $\bar{y}_{HQj}$ ) and Basic Period Profile Coefficient pursuant to paragraphs (e) and (f);
- (e) the Estimated Regional Average Demand Per Customer ( $\bar{y}_{HQj}$ ) shall be determined as:

$$\bar{y}_{HQj} = RC_{HQ0j} + (RC_{HQ1j} * Mon_T) + (RC_{HQ2j} * Wed_T) + (RC_{HQ3j} * Thu_T) + (RC_{HQ4j} * Fri_T) + (RC_{HQ5j} * NET_H) + (RC_{HQ6j} * S) + (RC_{HQ7j} * (S)^2);$$

where  $Mon_T = 1$  if Settlement Day "D" is a Monday or in any other case  $Mon_T = 0$ ; and

Wed<sub>T</sub>, Thu<sub>T</sub> and Fri<sub>T</sub> are determined *mutatis mutandis* to Mon<sub>T</sub> but as if references to Settlement Day "D" were to a Wednesday, a Thursday or, as the case may be, a Friday; and

- (f) in respect of each value of Estimated Regional Demand Per Customer determined pursuant to paragraph (e) a value of Basic Period Profile Coefficient ( $P_{HQj}$ ) shall be determined as:

$$P_{HQj} = \max(\bar{y}_{HQj} / (GAAC_{HQ} * 2000), 0)$$

where  $GAAC_{HQ}$  is the Group Average Annual Consumption procured, for the time being and from time to time, from the Profile Administrator (or from BSCCo where BSCCo the Profile Administration Services in accordance with paragraph C9) pursuant to paragraph 5.1.4.

6.5.4 If the Settlement Day "D" is a Settlement Day on which there is a Clock Change then each set of Basic Period Profile Coefficients corresponding to a Profile "Q" determined pursuant to paragraph 6.5.3 shall be modified as follows, save where the Profile "Q" is a switched load Profile in which case the relevant set of Basic Period Profile Coefficients shall not be modified. In the circumstances described in this paragraph, the value of subscript "j" for each value of Basic Period Profile Coefficient determined pursuant to paragraph 6.5.3 and which is to be modified pursuant to this paragraph shall, prior to such modification only, denote the Settlement Period "j" of the related Specimen Settlement Day to which such value corresponds. The terms "lost", "fewer" and "additional" when applied to hours in the Settlement Day "D" on which there is a Clock Change shall be construed as a comparison with such Specimen Settlement Day:

- (a) if there is an hour or hours fewer in the Settlement Day "D" then the relevant Basic Period Profile Coefficients in respect of the Settlement Periods corresponding to the hours lost on such Settlement Day "D" shall be deleted and each such value of the resulting reduced set of Basic Period Profile Coefficients shall be re-labelled with new values of subscript "j" in the same order as the original set so that each value of the set corresponds to a Settlement Period that exists on such Settlement Day "D" and each such Settlement Period is associated with one value of the Basic Period Profile Coefficient set;
- (b) if there is an additional (repeated) hour or hours in the Settlement Day "D" then the relevant Basic Period Profile Coefficients in respect of the second occurrence of any hour or hours shall be determined by linear interpolation pursuant to paragraph 3.6 of Annex X-2 save in the circumstances described in paragraph (c) in which case the determination described there shall be performed. The resulting increased set of Basic Period Profile Coefficients shall be re-labelled with new values of subscript "j" in the same order as the original set with the insertion of the additional values of Basic Period Profile Coefficient at the appropriate point in the sequence of values to correspond to the second occurrence of any hour or hours so that each value of the set corresponds to a Settlement Period that exists on such Settlement Day "D" and each such Settlement Period is associated with one value of the Basic Period Profile Coefficient set. For this purpose each Settlement Period (including those in respect of the second occurrence of any hour or hours) on such Settlement Day "D" starting from the Settlement Period immediately preceding the second occurrence of any hour or hours to the Settlement Period immediately following such second occurrence of any hour or hours shall be labelled in chronological order with ascending equally spaced values of  $z_n$ , starting from  $z_0$ . For the purposes of paragraph 3.6 of Annex X-2:

$x_0$  shall take the value of  $z_0$ ;

$x_1$  shall take the value of  $z_N$  where  $N$  is the highest value of  $n$ ;

each ascending value of  $x_i$  shall take the next ascending value of  $z_n$  starting with  $z_1$  and ending with  $z_{N-1}$ , each corresponding to one of the Settlement Periods for which a value of Basic Period Profile Coefficient is required to be determined, and the related spot value  $y_i$  shall be the required value of such Basic Period Profile Coefficient;

$y_0$  shall take the value of the Basic Period Profile Coefficient for the Settlement Period labelled  $z_0$ ; and

$y_1$  shall take the value of the Basic Period Profile Coefficient for the Settlement Period labelled  $z_N$ ; or

- (c) if there is an additional (repeated) hour or hours in the Settlement Day "D" and the Clock Change causing such additional hour(s) takes place at the end of the Settlement Day "D" then the relevant Basic Period Profile Coefficients in respect of the second occurrence of any hour or hours shall be determined as follows. The resulting increased set of Basic Period Profile Coefficients shall be re-labelled with new values of subscript "j" in the same manner as described in paragraph (b). For the purposes of this paragraph (c) each Settlement Period (including those in respect of the second occurrence of any hour or hours) on such Settlement Day "D" starting from the Settlement Period which immediately precedes the Settlement Period which itself immediately precedes the second occurrence of any hour or hours to the last Settlement Period of the Settlement Day "D" shall be labelled in chronological order with ascending equally spaced values of  $z_n$ ; starting from  $z_0$ . For the purposes of paragraph 3.6 of Annex X-2:

$x_0$  shall take the value of  $z_0$ ;

$x_1$  shall take the value of  $z_1$ ;

each ascending value of  $x_i$  shall take the next ascending value of  $z_n$  starting with  $z_2$  and ending with  $z_N$  where  $N$  is the highest value of  $n$ , each corresponding to one of the Settlement Periods for which a value of Basic Period Profile Coefficient is required to be determined, and the related spot value  $y_i$  shall be the required value of such Basic Period Profile Coefficient;

$y_0$  shall take the value of the Basic Period Profile Coefficient for the Settlement Period labelled  $z_0$ ;  $y_1$  shall take the value of the Basic Period Profile Coefficient for the Settlement Period labelled  $z_1$ ; and

$$y_i = \max(y_1 + (y_1 - y_0) * (i-1), 0).$$

## **6.6 Calculation of Normal Register Profile Coefficients and Low Register Profile Coefficients for Switched Load Metering Systems**

6.6.1 The SVAA shall carry out the determinations set out in this paragraph 6.6 in respect of each Settlement Day "D", each GSP Group "H" and each valid combination of Profile Class "P" and Standard Settlement Configuration "C" for Switched Load Metering Systems.

6.6.2 In respect of each Standard Settlement Configuration "C" identified pursuant to paragraph 6.6.1, the SVAA shall determine a Switched Load State Indicator (SQ<sub>C</sub>) as follows:

- (a) if for any Time Pattern Regime associated with the switched load within such Standard Settlement Configuration:
- $$Q_{Rj} = 1 \text{ then } SQ_{Cj} = 1; \text{ and}$$
- (b) in any other case  $SQ_{Cj} = 0$
- 6.6.3 In respect of each Standard Settlement Configuration "C" identified pursuant to paragraph 6.6.1 the SVAA shall determine a set of Modified Switched Load State Indicators ( $SQNEW_{Cj}$ ) pursuant to paragraphs 6.6.4 to 6.6.10 (inclusive). For the purposes of such paragraphs each Settlement Period in a Settlement Day shall be ordered in chronological order of such Settlement Periods and shall be labelled with ascending integer values of  $j$ , the first Settlement Period of such Settlement Day being labelled as  $j = 1$ .
- 6.6.4 If the set of Switched Load State Indicators ( $SQ_{Cj}$ ) associated with the Standard Settlement Configuration then being processed has a value of zero for each Settlement Period " $j$ " of the Settlement Day then being processed, then the SVAA shall determine a Modified Switched Load State Indicator for each such Settlement Period as follows:
- (a) for first two Settlement Periods of such Settlement Day, such Settlement Periods being labelled as  $j=1$  and  $j=2$  respectively, then:
- $$SQNEW_{C1} = 1 \text{ and } SQNEW_{C2} = 1; \text{ and}$$
- (b) for every other Settlement Period of such Settlement Day:
- $$SQNEW_{Cj} = SQ_{Cj}$$
- 6.6.5 Paragraph 6.6.6 shall apply in the case where the set of Switched Load State Indicators associated with the Standard Settlement Configuration and Settlement Day then being processed has:
- (a) a value of one for a single Settlement Period of such Settlement Day (for the purposes of paragraph 6.6.6 such Settlement Period being labelled "J1"); and
- (b) a value of zero for every other Settlement Period of the Settlement Day then being processed.
- 6.6.6 Where this paragraph applies then the SVAA shall determine a Modified Switched Load State Indicator ( $SQNEW_{Cj}$ ) for each Settlement Period of the Settlement Day then being processed as follows:
- (a) if the Settlement Period labelled as "J1" is the last Settlement Period of the Settlement Day then being processed then:
- (i) for the Settlement Period labelled as "J1-1" only, being the Settlement Period immediately preceding that Settlement Period labelled "J1" pursuant to paragraph 6.6.5 in the chronological order of Settlement Periods:
- $$SQNEW_{CJ1-1} = 1 ; \text{ and}$$
- (ii) for every other Settlement Period of such Settlement Day:
- $$SQNEW_{Cj} = SQ_{Cj} ; \text{ or}$$
- (b) in any other case:

- (i) for the Settlement Period labelled as "J1+1" only, being the Settlement Period next following that Settlement Period labelled "J1" pursuant to paragraph 6.6.5 in the chronological order of Settlement Periods:

$$SQNEW_{C_{J1+1}} = 1 ; \text{ and}$$

- (ii) for every other Settlement Period of such Settlement Day:

$$SQNEW_{C_j} = SQ_{C_j}$$

6.6.7 If the set of Switched Load State Indicators ( $SQ_{C_j}$ ) associated with the Standard Settlement Configuration and Settlement Day then being processed have values which satisfy the condition that:

$$\sum_j SQ_{C_j} > 47$$

then the SVAA shall determine a Modified Switched Load State Indicator ( $SQNEW_{C_j}$ ) for each Settlement Period of such Settlement Day as follows:

- (a) for the purposes of this paragraph the SVAA shall label each such Settlement Period in the chronological order of such Settlement Periods for which the condition that  $SQ_{C_j} = 1$  is true with ascending integer values of "J" commencing with a value of  $J = 1$  but shall not so label any Settlement Period for which such condition is not true;

- (b) for each Settlement Period "j" which is labelled with a value of "J" pursuant to paragraph (a) and where such value is greater than forty-seven, then:

$$SQNEW_{C_j} = 0 ; \text{ and}$$

- (c) for every other Settlement Period of such Settlement Day:

$$SQNEW_{C_j} = SQ_{C_j}$$

6.6.8 Paragraph 6.6.9 shall apply in the case where the set of Switched Load State Indicators associated with the Standard Settlement Configuration and Settlement Day then being processed has:

- (a) a value of one for each Settlement Period "j" of the Settlement Day then being processed; and

- (b) such Settlement Day is a Settlement Day on which there is a Clock Change and there are less than 48 Settlement Periods in such Settlement Day.

6.6.9 Where this paragraph applies then the SVAA shall determine a Modified Switched Load State Indicator ( $SQNEW_{C_j}$ ) for each Settlement Period of the Settlement Day then being processed as follows:

- (a) for the last Settlement Period "jlast" of such Settlement Day:

$$SQNEW_{C_{jlast}} = 0 ; \text{ and}$$

- (b) for every other Settlement Period of such Settlement Day:

$$SQNEW_{C_j} = SQ_{C_j}$$



- 6.6.10 In the case where the provisions of paragraphs 6.6.4, 6.6.6, 6.6.7 or, as the case may be, 6.6.9 do not apply, the SVAA shall determine values of Modified Switched Load State Indicator ( $SQNEW_{Cj}$ ) for each Settlement Period of the Settlement Day then being processed as follows:

$$SQNEW_{Cj} = SQ_{Cj}$$

- 6.6.11 The SVAA shall determine the On Period Duration ( $OD_C$ ) as:

$$OD_C = \sum_j SQNEW_{Cj}$$

- 6.6.12 The SVAA shall identify the Longest Off Period as the longest period of contiguous Settlement Periods in the Settlement Day being processed for which the condition that  $SQNEW_{Cj} = 0$  for each such Settlement Period "j" is true, provided that:

- (a) if for both the first Settlement Period and the last Settlement Period of the Settlement Day being processed the condition  $SQNEW_{Cj} = 0$  is true for both such Settlement Periods, then:
- (i) if for every Settlement Period of such Settlement Day the condition  $SQNEW_{Cj} = 0$  is true the SVAA shall not determine Normal Register Profile Coefficients or Low Register Coefficients pursuant to this paragraph for the combination of Profile Class, Standard Settlement Configuration, GSP Group and Settlement Day then being processed; or
- (ii) in any other case, for the purposes of identifying the Longest Off Period, the two periods identified as follows shall be considered as a single period of contiguous Settlement Periods in such Settlement Day for which the condition that  $SQNEW_{Cj} = 0$  for each such Settlement Period "j" is true:
- (A) the period commencing at the start of the first Settlement Period of such Settlement Day and ending at the start time of the next following Settlement Period in chronological order of Settlement Periods for which  $SQNEW_{Cj} = 1$ ; and
- (B) the period commencing at the start of the last Settlement Period "j" of such Settlement Day for which  $SQNEW_{Cj} = 0$  and  $SQNEW_{Cj-1} = 1$  and ending at the end of such Settlement Day;
- (b) if there is no Settlement Period "j" of such Settlement Day for which  $SQNEW_{Cj} = 0$ , the SVAA shall identify that there is no Longest Off Period and shall perform the actions specified in paragraph 6.6.14 (a); and
- (c) if there are two or more separate periods of equal duration each of which would, if that other period or, as the case may be, those other periods of equal duration did not exist, satisfy the condition to be the Longest Off Period pursuant to this paragraph, the SVAA shall identify that there is no unique Longest Off Period and shall identify the Longest On Period pursuant to paragraph 6.6.13.

- 6.6.13 In the case in which paragraph 6.6.12(c) applies, the SVAA shall identify the Longest On Period as the longest period of contiguous Settlement Periods in the Settlement Day being processed for which the condition that  $SQNEW_{Cj} = 1$  for each such Settlement Period "j" is

true, provided that if there are two or more separate periods of equal duration each of which would, if that other period or, as the case may be, those other periods of equal duration did not exist, satisfy the condition to be the Longest On Period pursuant to this paragraph, the SVAA shall identify the last such period in chronological order of such periods as the Longest On Period.

6.6.14 In respect of each Standard Settlement Configuration "C" identified pursuant to paragraph 6.6.1, the SVAA shall label those Settlement Periods of the Settlement Day for which  $SQNEW_{Cj}$  has a value of 1 as follows:

- (a) if the SVAA has identified pursuant to paragraph 6.6.12(b) that there is no Longest Off Period, the SVAA shall label the first Settlement Period of such Settlement Day as  $J=1$  and then shall label the subsequent Settlement Periods in that Settlement Day in ascending chronological order with ascending integer values of  $J$  so that each Settlement Period of the Settlement Day for which  $SQNEW_{Cj} = 1$  is labelled with a unique value  $J$ ;
- (b) if the Longest Off Period identified pursuant to paragraph 6.6.12 comprises the two periods specified in paragraph 6.6.12(a)(ii), the SVAA shall label the first Settlement Period of the Settlement Day for which  $SQNEW_{Cj} = 1$  as  $J=1$  and then shall label the subsequent Settlement Periods in that Settlement Day for which  $SQNEW_{Cj} = 1$  in ascending chronological order with ascending integer values of  $J$  so that each Settlement Period of the Settlement Day for which  $SQNEW_{Cj} = 1$  is labelled with a unique value  $J$ ;
- (c) if the SVAA identifies that there is no unique Longest Off Period pursuant to paragraph 6.6.12(c) and therefore identifies a Longest On Period pursuant to paragraph 6.6.13, the SVAA shall label the first Settlement Period of such Longest On Period in the chronological order of Settlement Periods as  $J=1$  and then shall label the other Settlement Periods of such Settlement Day for which  $SQNEW_{Cj} = 1$  pursuant to paragraph 6.6.15; or
- (d) in any other case, the SVAA shall label the Settlement Period immediately following the last Settlement Period of the Longest Off Period in chronological order of Settlement Periods as  $J=1$  and then shall label the other Settlement Periods of such Settlement Day for which  $SQNEW_{Cj} = 1$  pursuant to paragraph 6.6.15.

6.6.15 In the circumstances when this paragraph 6.6.15 applies pursuant to paragraph 6.6.14(c) or paragraph 6.6.14(d) the SVAA shall:

- (a) label with ascending integer values of  $J$  each Settlement Period subsequent to that labelled as  $J=1$  pursuant to paragraph 6.6.14(c) or 6.6.14(d), as the case may be, in the Settlement Day being processed for which  $SQNEW_{Cj} = 1$  counting forwards in time up to and including the last such Settlement Period of such Settlement Day and for the purposes of this paragraph the value of  $J$  for this last such Settlement Period is referred to as "End\_J";
- (b) label the first Settlement Period of the Settlement Day for which  $SQNEW_{Cj} = 1$  and which has not been labelled with a value of  $J$  pursuant to paragraph (a) with the value  $J = \text{End\_J} + 1$ ; and
- (c) then label the subsequent Settlement Periods in the Settlement Day for which  $SQNEW_{Cj} = 1$  and which have not been labelled with a value of  $J$  pursuant to paragraph (a) or (b) in ascending chronological order with ascending integer

values of J so that each Settlement Period in the Settlement Day for which  $SQNEW_{Cj} = 1$  is labelled with a unique value J.

6.6.16 In respect of each Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" identified pursuant to paragraph 6.6.1, the SVAA shall:

- (a) identify the set of Basic Period Profile Coefficients ( $P_{HQj}$ ) which correspond to the particular switched load profile "Q" of such Profile Class and for which the number of values of  $P_{HQj}$  is equal to the On Period Duration; and
- (b) determine the set of values of Switched Load Profile Coefficient ( $SLP_{HPCj}$ ) as follows:
  - (i) for the Settlement Period identified by  $J=1$  pursuant to paragraph 6.6.14 the Switched Load Profile Coefficient ( $SLP_{HPCj}$ ) shall take the first value of  $P_{HQj}$  from the set of  $P_{HQj}$  determined pursuant to paragraph (a) counting in ascending order of j values of  $P_{HQj}$ ; and
  - (ii) for each Settlement Period identified by the next ascending value of J pursuant to paragraph 6.6.14 or, as the case may be, paragraph 6.6.15 the Switched Load Profile Coefficient  $SLP_{HPCj}$  shall take the next value of  $P_{HQj}$  from the set of  $P_{HQj}$  determined pursuant to paragraph (a) counting in ascending order of j values of  $P_{HQj}$  which have not already been used in the determination of a value of  $SLP_{HPCj}$  pursuant to this paragraph (b) until there has been determined a value of  $SLP_{HPCj}$  for each Settlement Period identified by a value J.

6.6.17 In respect of each Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" identified pursuant to paragraph 6.6.1 using the set of values of Basic Period Profile Coefficient ( $P_{HQj}$ ) which correspond to the Baseload Profile of the associated Profile Class "P" (such values being the "Baseload Profile Coefficients ( $BAP_{HQj}$ )"), the SVAA shall:

- (a) determine the Low Fraction Consumption ( $H_{HPC}$ ) as follows:

$$K1_{HPC} = \sum_{ON} BAP_{HQj};$$

$$K2_{HPC} = \sum_{OFF} BAP_{HQj}; \text{ and}$$

$$H_{HPC} = K1_{HPC} / K2_{HPC}$$

where  $\sum_{ON}$  is the summation over all Settlement Periods in the Settlement Day for which  $SQNEW_{Cj} = 1$ ; and

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

- (b) determine the Low Fraction ( $LOWF_{HPC}$ ) as the sum of the Average Fraction Of Yearly Consumption ( $AFYC_{HPR}$ ) for all Time Pattern Regimes "X" associated with the Standard Settlement Configuration "C" which are associated with switched load, save in the case where values of Alternate Average Fraction of Yearly Consumption ( $AAFYC_{HPR}$ ) have been notified to the SVAA for Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" in accordance with paragraph 6.1.2, in which case determine the Low Fraction ( $LOWF_{HPC}$ ) as the sum of the Alternate Average Fraction Of Yearly

Consumption ( $AAFYC_{HPR}$ ) for all Time Pattern Regimes "X" associated with the Standard Settlement Configuration "C" which are associated with switched load;

- (c) determine the Normal Fraction ( $NF_{HPC}$ ) as the sum of the Average Fraction Of Yearly Consumption ( $AFYC_{HPR}$ ) for all Time Pattern Regimes "X" associated with the Standard Settlement Configuration "C" which are not associated with switched load, save in the case where values of Alternate Average Fraction of Yearly Consumption ( $AAFYC_{HPR}$ ) have been notified to the SVAA for Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" in accordance with paragraph 6.1.2, in which case determine the Normal Fraction ( $NF_{HPC}$ ) as the sum of the Alternate Average Fraction Of Yearly Consumption ( $AAFYC_{HPR}$ ) for all Time Pattern Regimes "X" associated with the Standard Settlement Configuration "C" which are not associated with switched load;

- (d) determine the Base Fraction ( $BF_{HPC}$ ) and the Switched Fraction ( $SW_{HPC}$ ) as follows:

$$BF_{HPC} = (1 + H_{HPC}) * NF_{HPC}; \text{ and}$$

$$SWF_{HPC} = LOWF_{HPC} - (H_{HPC} * NF_{HPC}); \text{ and}$$

- (e) in respect of each Settlement Period of the Settlement Day determine the Normal Register Profile Coefficients ( $NRPC_{HPCj}$ ) and the Low Register Profile Coefficients ( $LRPC_{HPCj}$ ) as follows:

- (i) if for such Settlement Period "j",  $SQ_{Cj} = 1$ , then:

$$LRPC_{HPCj} = \max(((BAP_{HQj} * BF_{HPC}) + (SLP_{HPCj} * SWF_{HPC})), 0); \text{ and}$$

$$NRPC_{HPCj} = 0; \text{ or}$$

- (ii) if for such Settlement Period "j",  $SQ_{Cj} = 0$ , then:

$$LRPC_{HPCj} = 0; \text{ and}$$

$$NRPC_{HPCj} = \max((BAP_{HQj} * BF_{HPC}), 0)$$

## 6.7 Calculation of Period Profile Class Coefficients for each Time Pattern Regime

6.7.1 In respect of each Settlement Day, each GSP Group "H" and each valid combination of Profile Class "P" and Standard Settlement Configuration "C", the SVAA shall determine the Period Profile Class Coefficients ( $PPCC_{HPRj}$ ) for each combination of Time Pattern Regime associated with such Standard Settlement Configuration and such Standard Settlement Configuration "R" as follows:

- (a) if the Profile Class "P" represents Switched Load Metering Systems then:

- (i) if the combination of Standard Settlement Configuration and Time Pattern Regime "R" is associated with meter registers which measure switched load within such Switched Load Metering Systems, then:

$$PPCC_{HPRj} = LRPC_{HPCj} * Q_{Rj} / AFYC_{HPR}$$

save in the case where values of Alternate Average Fraction of Yearly Consumption ( $AAFYC_{HPR}$ ) have been notified to the SVAA

for Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" in accordance with paragraph 6.1.2, in which case:

$$PPCC_{HPRj} = LRPC_{HPCj} * Q_{Rj}/AAFYC_{HPR}; \text{ or}$$

- (ii) if the combination of Standard Settlement Configuration and Time Pattern Regime "R" is associated with meter registers within such Switched Load Metering Systems which measure loads other than the switched loads, then:

$$PPCC_{HPRj} = NRPC_{HPCj} * Q_{Rj}/AFYC_{HPR}$$

save in the case where values of Alternate Average Fraction of Yearly Consumption (AAFYC<sub>HPR</sub>) have been notified to the SVAA for Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" in accordance with paragraph 6.1.2, in which case:

$$PPCC_{HPRj} = NRPC_{HPCj} * Q_{Rj}/AAFYC_{HPR}; \text{ or}$$

- (b) in any other case,

$$PPCC_{HPRj} = P_{HQj} * Q_{Rj}/AFYC_{HPR}$$

save in the case where values of Alternate Average Fraction of Yearly Consumption (AAFYC<sub>HPR</sub>) have been notified to the SVAA for Profile Class "P" and Standard Settlement Configuration "C" within a GSP Group "H" in accordance with paragraph 6.1.2, in which case

$$PPCC_{HPRj} = P_{HQj} * Q_{Rj}/AAFYC_{HPR};$$

where P<sub>HQj</sub> are the Basic Period Profile Coefficients determined pursuant to paragraph 6.5 for the profile "Q" associated with the Profile Class "P".

- 6.7.2 For all Settlement Days that include at least one Demand Control Impacted Settlement Period, the SVAA shall send the relevant Period Profile Class Coefficients (PPCC<sub>HPRj</sub>) calculated under paragraph 6.7.1 to all Non Half Hourly Data Collectors.

## 6.8 Calculation of Daily Profile Coefficients

- 6.8.1 In respect of each Settlement Day "T", each GSP Group "H" and each valid combination of Profile Class "P" and Time Pattern Regime within Standard Settlement Configuration "R", the SVAA shall determine a Daily Profile Coefficient (DPC<sub>HPRjT</sub>) as:

$$DPC_{HPRjT} = \sum_j PPCC_{HPRj}$$

and the SVAA shall notify the values of Daily Profile Coefficient so determined to each Non Half Hourly Data Collector.

## 7. HALF HOURLY METERING SYSTEM CONSUMPTION

### 7.1 Determination of Half Hourly Consumption (Non Losses)

- 7.1.1 For each Supplier's Metered Consumption ( $SMC_{HZaNLj}$ ) value provided pursuant to paragraph 3.5.11, the SVAA shall determine the BM Unit's Metered Consumption ( $BMMC_{iaNLj}$ ) by assigning the Supplier's Metered Consumption value to the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H" to which the value of Supplier's Metered Consumption applies.
- 7.1.1A For each Supplier's Demand Disconnection Volume ( $SDD_{HZaNLj}$ ) value provided pursuant to paragraph 3.7.6, the SVAA shall determine the BM Unit's Demand Disconnection Volume ( $BMDD_{iaNLj}$ ) by assigning the Supplier's Demand Disconnection Volume value to the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H" to which the value of Supplier's Demand Disconnection Volume applies.
- 7.1.1B For each Allocated Metering System Metered Consumption ( $AVMMC_{HZaNLKji}$ ) value provided pursuant to paragraph 3.9.2, the SVAA shall determine the Metering System Metered Consumption ( $VMMC_{HZaNLKji}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) within Supplier BM Unit "i" for such Supplier "Z" for a particular GSP Group "H", Metering System "K" and Half Hourly Data Aggregator "a" according to the following formula:

$$VMMC_{HZaNLKji} = AVMMC_{HZaNLKji} / 1000$$

- 7.1.1C For each Metering System Metered Consumption ( $VMMC_{HZaNLKji}$ ) value associated with a Secondary BM Unit in the SVA Metering System Register, determined pursuant to paragraph 7.1.1B, the SVAA shall determine the Secondary BM Unit Metered Consumption ( $VBMMC_{i2aNLKji}$ ) by assigning the Metering System Metered Consumption value to the relevant Secondary BM Unit "i2" as allocated by the Virtual Lead Party and recorded in the SVA Metering System Register in accordance with Sections S10.2 and BSCP602.
- 7.1.1D For each Metering System Delivered Volume ( $QVMD_{Kj}$ ) value associated with a Secondary BM Unit in the SVA Metering System Register, determined pursuant to paragraph 3.10, the SVAA shall determine the Secondary BM Unit Delivered Volume ( $QVBMD_{i2NLKji}$ ) by assigning the Metering System Delivered Volume value to the relevant Secondary BM Unit "i2" as allocated by the Virtual Lead Party in accordance with Section S10.2 and BSCP602, Supplier BM Unit "i", Line Loss Factor Class "L" and Consumption Component Class "N".
- 7.1.1E For each Metering System Delivered Volume ( $QVMD_{Kj}$ ) value for a Metering System associated with the NETSO in the SVA Metering System Register and determined pursuant to paragraph 3.10, the SVAA shall determine the ABSVD BM Unit Delivered Volume ( $AQVMD_{iNLKj}$ ) by assigning the Metering System Delivered Volume value to the relevant Supplier BM Unit "i" as recorded in the SVA Metering System Register, Line Loss Factor Class "L" and Consumption Component Class "N".
- 7.1.1E Pursuant to paragraph 3.9.2, for each Allocated Metering System Metered Consumption ( $AVMMC_{HZaNLKji}$ ) value for a Metering System in the SVA Storage Facilities Register, the SVAA shall determine the Storage Metering System Metered Consumption ( $SVMMC_{HZaNLKji}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) within Supplier BM Unit "i" for such Supplier "Z" for a particular GSP Group "H", Metering System "K" and Half Hourly Data Aggregator "a" according to the following formula:

$$SVMMC_{HZaNLKji} = AVMMC_{HZaNLKji} / 1000$$

- 7.1.2 The SVAA shall determine the Half Hourly Consumption (Non Losses) ( $C_{iNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Supplier BM Unit "i" according to the following formula:

$$C_{iNj} = \sum_{aL} BMMC_{iaNLj}$$

where BM Unit's Metered Consumption ( $BMMC_{iaNLj}$ ) are determined pursuant to paragraphs 3.6.4 and 7.1.1.

- 7.1.3 For each Demand Control Impacted Settlement Period the SVAA shall determine the Half Hourly Disconnection (Non Losses) ( $D_{iNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Supplier BM Unit "i" according to the following formula:

$$D_{iNj} = \sum_a BMDD_{iaNj}$$

where BM Unit's Demand Disconnection Volume ( $BMDD_{iaNj}$ ) are determined pursuant to paragraphs 3.8.4 and 7.1.1A.

- 7.1.4 The SVAA shall determine the Secondary Half Hourly Consumption (Non Losses) ( $V_{i2Nj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Secondary BM Unit "i2" according to the following formula:

$$V_{i2Nj} = \sum_{aK} VBMMC_{i2aNLKji}$$

where Secondary BM Unit Metered Consumption ( $VBMMC_{i2aNLKji}$ ) is determined pursuant to paragraph 7.1.1B.

The SVAA shall provide the relevant Virtual Lead Party, as recorded in the SVA Metering System Register, with the Secondary Half Hourly Consumption (Non Losses) ( $V_{i2Nj}$ ) for each Metering System "K" in the relevant Secondary BM Unit "i2" for each Settlement Period "j" for each Volume Allocation Run, where received.

- 7.1.5 The SVAA shall determine the Secondary Half Hourly Delivered (Non Losses) ( $VD_{i2NKji}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Metering System "K" for each Secondary BM Unit "i2" and Supplier BM unit "i" according to the following formula:

$$VD_{i2NKji} = QVBMD_{i2NLKji}$$

where Secondary BM Unit Metered Consumption ( $QVBMD_{i2NLKji}$ ) is determined pursuant to paragraph 7.1.1C.

- 7.1.6 The SVAA shall determine the MSID ABSVD (Non Losses) ( $MSABSVD_{iNKj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Metering System "K" for each Supplier BM unit "i" according to the following formula:

$$MSABSVD_{iNKj} = AQVMD_{iNLKj}$$

where ABSVD BM Unit Metered Consumption ( $AQVMD_{iNLKj}$ ) is determined pursuant to paragraph 7.1.1C.

- 7.1.7 The SVAA shall provide the relevant Supplier, as recorded in the SVA Metering System Register, with the Secondary Half Hourly Delivered (Non Losses) ( $VD_{i2NKji}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Metering System "K" for each Secondary BM Unit "i2" and Supplier BM unit "i" for each Volume Allocation Run where Customer Consent Flag status, as recorded in the SVA Metering System Register, has been marked as TRUE.
- 7.1.8 The SVAA shall provide the relevant Supplier, as recorded in the SVA Metering System Register, with the MSID ABSVD (Non Losses) ( $MSABSVD_{iNKj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Metering System "K" for each Supplier BM unit "i" for each Volume Allocation Run where Customer Consent Flag status, as recorded in the SVA Metering System Register, has been marked as TRUE.

## 7.2 Determination of Half Hourly Consumption (Losses) by Supplier

- 7.2.1 For each Supplier's Metered Consumption (Losses) ( $SMCL_{HZaNLj}$ ) value provided pursuant to paragraph 3.5.12, the SVAA shall determine the BM Unit's Metered Consumption (Losses) ( $BMMCL_{iaNLj}$ ) by assigning the Supplier's Metered Consumption (Losses) value to the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H" to which the value of Supplier's Metered Consumption (Losses) applies.
- 7.2.1A For each Supplier's Demand Disconnection Volume (Losses) ( $SDDL_{HZaNj}$ ) value provided pursuant to paragraph 3.7.7, the SVAA shall determine the BM Unit's Demand Disconnection Volume (Losses) ( $BMDDL_{iaNj}$ ) by assigning the Supplier's Demand Disconnection Volume (Losses) value to the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H" to which the value of Supplier's Demand Disconnection Volume applies.
- 7.2.2 The SVAA shall determine the Half Hourly Consumption (Losses) ( $CLOSS_{iNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) for each Supplier BM Unit "i" according to the following formula:

$$CLOSS_{iNj} = \sum_{aL} BMMCL_{iaNLj}$$

where BM Unit's Metered Consumption (Losses) ( $BMMCL_{iaNLj}$ ) are determined pursuant to paragraphs 3.6.5 and 7.2.1.

- 7.2.3 For each Demand Control Impacted Settlement Period the SVAA shall determine the Half Hourly Disconnection (Losses) ( $DLOSS_{iNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Supplier BM Unit "i" according to the following formula:

$$DLOSS_{iNj} = \sum_a BMDDL_{iaNj}$$

where BM Unit's Demand Disconnection Volume (Losses) ( $BMDDL_{iaNj}$ ) are determined pursuant to paragraphs 3.8.5 and 7.2.1A.

- 7.2.4 The SVAA shall determine the Secondary Half Hourly Consumption (Losses) ( $VLOSS_{i2Nj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) for each Secondary BM Unit "i2" according to the following formula:

$$VLOSS_{i2Nj} = \sum^{(vv)}_{LK} ((LLF_{Lj} - 1) * VBMMC_{i2aNLKji})$$



where Secondary BM Unit Metered Consumption ( $VBMMC_{i2aNLKji}$ ) is determined pursuant to paragraph 7.1.1B and "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $VLOSS_{i2Nj}$  is to be determined.

The SVAA shall provide the relevant Virtual Lead Party, as recorded in the SVA Metering System Register, with the Secondary Half Hourly Consumption (Losses) ( $VLOSS_{i2Nj}$ ) for each Metering System "K" in the relevant Secondary BM Unit "i2" for each Settlement Period "j" for each Volume Allocation Run, where received.

- 7.2.5 The SVAA shall determine the Secondary Half Hourly Delivered (Losses) ( $VDLOSS_{i2NKji}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) for each Metering System "K" for each Secondary BM Unit "i2" and Supplier BM Unit "i" according to the following formula:

$$VDLOSS_{i2NKji} = \Sigma^{(vv)}_{LK} ((LLF_{Lj} - 1) * QVBMD_{i2NLKji})$$

where Secondary BM Unit Delivered Volume ( $QVBMD_{i2NLKji}$ ) is determined pursuant to paragraph 7.1.1C and "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $VDLOSS_{i2NKji}$  is to be determined.

- 7.2.6 The SVAA shall determine the MSID ABSVD (Losses) ( $MSABSVDL_{iNKj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) for each Metering System "K" for each Supplier BM Unit "i" according to the following formula:

$$MSABSVDL_{iNKj} = (\Sigma^{(vv)}_L ((LLF_{Lj} - 1) * \Sigma^{(vv)}_{PR} AQVMD_{iNLKj}))$$

where ABSVD BM Unit Delivered Volume ( $AQVMD_{iNLKj}$ ) is determined pursuant to paragraph 7.1.1C and "(vv)" is the Consumption Component Class (not for line losses) associated with the Consumption Component Class "N" for which the value of  $MSABSVDL_{iNKj}$  is to be determined.

- 7.2.7 The SVAA shall provide the relevant Supplier, as recorded in the SVA Metering System Register, with the Secondary Half Hourly Delivered (Losses) ( $VDLOSS_{i2NKji}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Metering System "K" for each Secondary BM Unit "i2" and Supplier BM unit "i" for each Volume Allocation Run where Customer Consent Flag status, as recorded in the SVA Metering System Register, has been marked as TRUE.
- 7.2.8 The SVAA shall provide the relevant Supplier, as recorded in the SVA Metering System Register, with the MSID ABSVD (Losses) ( $MSABSVDL_{iNKj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) for each Metering System "K" for each Supplier BM unit "i" for each Volume Allocation Run where Customer Consent Flag status, as recorded in the SVA Metering System Register, has been marked as TRUE.

## 8. NON HALF HOURLY METERING SYSTEM CONSUMPTION

### 8.1 Settlement Period consumption by Supplier

8.1.1 For each Supplier Purchase Matrix ( $SPM_{HZaLPR}$ ) value provided pursuant to paragraph 4.4, the SVAA shall determine the BM Unit Purchase Matrix ( $BMPM_{iaLPR}$ ) by assigning a BM Unit "i" to the Supplier Purchase Matrix value, where BM Unit "i" shall be:

- (a) the Additional BM Unit "i" notified by the Supplier "Z" to the SVAA in accordance with Section S6.3 for the GSP Group "H", Profile Class "P" and Standard Settlement Configuration "R", provided that the notification was determined by the SVAA in accordance with BSCP507 to be a valid notification; or
- (b) if no such notification has been made, the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H".

8.1.2 The SVAA shall determine BM Unit's Profiled Consumption ( $BMPC_{iLPRj}$ ) for each Supplier BM Unit "i" for the Consumption Data only according to the following formula:

$$BMPC_{iLPRj} = \sum_a (BMPM_{iaLPR} * PPCC_{HPRj})$$

where  $PPCC_{HPRj}$  is the Period Profile Class Coefficient for the GSP Group "H" associated with the Supplier BM Unit "i".

8.1.3 The SVAA shall determine Half Hourly Consumption (Non Losses) ( $C_{iNj}$ ) for each Supplier BM Unit "i" for Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) according to the following formula:

$$C_{iNj} = \sum_{LPR}^N BMPC_{iLPRj} - \sum_{LPR}^{N(n)} BMPD_{iLPRj}$$

where "N(n)" is a Consumption Component Class for which the data aggregation type is "N".

8.1.4 For each Half Hourly Consumption (Non Losses) ( $C_{iNj}$ ) value determined pursuant to paragraph 8.1.3, the SVAA shall determine the Half Hourly Consumption (Losses) ( $CLOSS_{iNj}$ ) for each Supplier BM Unit "i" for Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) according to the following formula:

$$CLOSS_{iNj} = \sum^{(vv)}_L ((LLF_{Lj} - 1) * \sum^{(vv)}_{PR} BMPC_{iLPRj}) - \sum^{(vvn)}_L ((LLF_{Lj} - 1) * \sum^{(vvn)}_{PR} BMPD_{iLPRj})$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with Consumption Component Class "N" for which a value of  $CLOSS_{iNj}$  is to be determined and where "(vvn)" is the Consumption Component Class (not for line losses) associated with Consumption Component Class "N(n)" for which a value of  $CLOSS_{iNj}$  is to be determined.

### 8.2 Settlement Period disconnection by Supplier

8.2.1 For each Supplier Disconnection Matrix ( $SDM_{HZaLPR}$ ) value provided pursuant to paragraph 4.5, the SVAA shall determine the BM Unit Disconnection Matrix ( $BMDM_{iaLPR}$ ) by assigning a BM Unit "i" to the Supplier Disconnection Matrix value, where BM Unit "i" shall be:

- (a) the Additional BM Unit "i" notified by the Supplier "Z" to the SVAA in accordance with Section S6.3 for the GSP Group "H", Profile Class "P" and Standard Settlement Configuration "R", provided that the notification was determined by the SVAA in accordance with BSCP507 to be a valid notification; or
- (b) if no such notification has been made, the BM Unit "i" which is the Base BM Unit for the Supplier "Z" and GSP Group "H".

- 8.2.2 The SVAA shall determine BM Unit's Profiled Disconnection ( $BMPD_{iLPRj}$ ) for each Supplier BM Unit "i" for the Consumption Data only according to the following formula:

$$BMPD_{iLPRj} = \sum_a (BMDM_{iaLPR} * PPCC_{HPRj} * (M_{Kj} / SPD))$$

where  $PPCC_{HPRj}$  is the Period Profile Class Coefficient for the GSP Group "H" associated with the Supplier BM Unit "i".

- 8.2.3 The SVAA shall determine Half Hourly Disconnection (Non Losses) ( $D_{iNj}$ ) for each Supplier BM Unit "i" for Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses) according to the following formula:

$$D_{iNj} = \sum_{LPR}^N BMPD_{iLPRj}$$

- 8.2.4 For each Half Hourly Disconnection (Non Losses) ( $D_{iNj}$ ) value determined pursuant to paragraph 8.2.3, the SVAA shall determine the Half Hourly Disconnection (Losses) ( $DLOSS_{iNj}$ ) for each Supplier BM Unit "i" for Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) according to the following formula:

$$DLOSS_{iNj} = \sum^{(vv)}_L ((LLF_{Lj} - 1) * \sum^{(vv)}_{PR} BMPD_{iLPRj})$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with Consumption Component Class "N" for which a value of  $DLOSS_{iNj}$  is to be determined.

## 9. GSP GROUP CORRECTION

### 9.1 Determination of GSP Group Half Hourly Consumption

- 9.1.1 The GSP Group Half Hourly Consumption ( $GC_{HNj}$ ) for each Consumption Component Class "N" within GSP Group "H" shall be determined by the SVAA according to the following formula:

$$GC_{HNj} = \sum^H_i C_{iNj} + \sum^H_i CLOSS_{iNj}$$

where Half Hourly Consumption (Non Losses) ( $C_{iNj}$ ) and Half Hourly Consumption (Losses) ( $CLOSS_{iNj}$ ) are calculated pursuant to paragraphs 7 and 8.

### 9.2 Determination of GSP Group Correction Factor

- 9.2.1 The GSP Group Correction Factor ( $CF_{Hj}$ ) shall be determined by the SVAA for each GSP Group "H" in accordance with the following formulae:

if for every Consumption Component Class "N", the GSP Group Correction Scaling Weight ( $WT_N$ ) is equal to zero or if  $\sum_N (GC_{HNj} * WT_N)$  is equal to zero, then:

$CF_{Hj} = 1$ ; or

in any other case:

$$CF_{Hj} = 1 + (GSPGT_{Hj} - \sum_N GC_{HNj}) / (\sum_N (GC_{HNj} * WT_N))$$

- 9.2.2 If for any GSP Group "H", the following condition applies, then the GSP Group Correction Factor shall be referred by the SVAA to the Panel:

$$CF_{Hj} = 1 \text{ and } GSPGT_{Hj} \neq \sum_N GC_{HNj}$$

and the Panel shall determine a replacement GSP Group Correction Factor to be applied in such case or shall determine such other course of action as it may decide is appropriate.

### 9.3 Determination of Corrected Component

- 9.3.1 The Corrected Component ( $CORC_{iNj}$ ) for each Consumption Component Class "N" within Supplier BM Unit "i" shall be determined by the SVAA according to the following formula:

$$CORC_{iNj} = (C_{iNj} + CLOSS_{iNj}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Supplier BM Unit "i".

- 9.3.2 The Corrected Disconnection Component ( $CORDC_{iNj}$ ) for each Consumption Component Class "N" within Supplier BM Unit "i" shall be determined by the SVAA according to the following formula:

$$CORDC_{iNj} = (D_{iNj} + DLOSS_{iNj}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Supplier BM Unit "i".

- 9.3.3 The SVAA shall provide the SAA with the Corrected Component ( $CORC_{iNj}$ ) for each Consumption Component Class "N" for each Supplier BM Unit "i" for each Settlement Period "j" for each Volume Allocation Run.

- 9.3.4 The Secondary Corrected Component ( $VCORC_{i2Nj}$ ) for each Consumption Component Class "N" within Secondary BM Unit "i2" shall be determined by the SVAA according to the following formula:

$$VCORC_{i2Nj} = (V_{i2Nj} + VLOSS_{i2Nj}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Secondary BM Unit "i2".

- 9.3.5 The Corrected MSID ABSVD Component ( $CORABSVD_{iNKj}$ ) for each Consumption Component Class "N" within Supplier BM Unit "i" shall be determined by the SVAA according to the following formula:

$$CORABSVD_{iNKj} = (MSABSVD_{iNKj} + MSABSVDL_{iNKj}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Supplier BM Unit "i".

- 9.3.6 The Secondary Corrected Delivered Component ( $VCORDC_{i2NKji}$ ) for each Consumption Component Class "N" within Metering System "K" within Secondary BM Unit "i2" and Supplier BM Unit "i" shall be determined by the SVAA according to the following formula:

$$VCORDC_{i2NKji} = (VD_{i2NKji} + VDLOSS_{i2NKji}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Secondary BM Unit "i2".

#### 9.4 Determination of Supplier Deemed Take

- 9.4.1 The Supplier Deemed Take ( $SDT_{HZj}$ ) shall be determined by the SVAA according to the following formula:

$$SDT_{HZj} = \Sigma^{HZ}_i (\Sigma_N CORC_{iNj})$$

#### 9.5 Determination of Non Half Hourly Supplier Deemed Take

- 9.5.1 The Non Half Hourly Supplier Deemed Take ( $NHHSDT_{HZj}$ ) within GSP Group "H" shall be determined by the SVAA according to the following formula:

$$NHHSDT_{HZj} = \Sigma^{HZ}_i (\Sigma_{N(n)} CORC_{iNj})$$

#### 9.6 Determination of BM Unit Allocated Demand Volume

- 9.6.1 In respect of each Supplier BM Unit "i", the SVAA shall determine the BM Unit Allocated Demand Volume ( $BMUADV_{ij}$ ) for each Settlement Period "j" according the following formula:

$$BMUADV_{ij} = \Sigma_N CORC_{iNj}$$

- 9.6.1A In respect of each Supplier BM Unit "i", the SVAA shall determine the BM Unit Allocated Demand Disconnection Volume ( $BMUADDV_{ij}$ ) for each Settlement Period "j" according the following formula:

$$BMUADDV_{ij} = \Sigma_N CORDC_{iNj}$$

- 9.6.1B In respect of each Secondary BM Unit "i2", the SVAA shall determine the Secondary BM Unit Demand Volume ( $VBMUDV_{i2j}$ ) for each Settlement Period "j" according the following formula:

$$VBMUDV_{i2j} = \Sigma_N VCORC_{i2Nj}$$

where  $\Sigma_N$  is the summation over all Consumption Component Classes for SVA Metering Systems in Secondary BM Units.9.6.1C In respect of each Secondary BM Unit "i2" and Supplier BM Unit "i", the SVAA shall determine the Secondary BM Unit Supplier Delivered Volume ( $VBMUSDV_{i2ji}$ ) for each Settlement Period "j" according the following formula:

$$VBMUSDV_{i2ji} = \Sigma_{i \in K} \Sigma_N VCORDC_{i2NKji}$$

where  $\Sigma_N$  is the summation over all Consumption Component Classes in a given Metering System and  $\Sigma_{i \in K}$  is the summation over all SVA Metering Systems allocated to Supplier BM Unit "i".

- 9.6.1C In respect of each Supplier BM Unit "i", the SVAA shall determine the Supplier BM Unit Non BM ABSVD ( $SNBABSVD_{ij}$ ) for each Settlement Period "j" according the following formula:

$$SNBABSVD_{ij} = \Sigma_N CORABSVD_{iNKj}$$

- 9.6.2 The SVAA shall provide the SAA with the BM Unit Allocated Demand Volume ( $BMUADV_{ij}$ ) and the BM Unit Allocated Demand Disconnection Volume ( $BMUADDV_{ij}$ ) for each Supplier BM Unit "i" for each Settlement Period "j" for each Volume Allocation Run.
- 9.6.3 The SVAA shall provide the SAA with the Secondary BM Unit Demand Volume ( $VBMUDV_{i2j}$ ) for each Secondary BM Unit "i2" for each Settlement Period "j" for each Volume Allocation Run.
- 9.6.4 The SVAA shall provide the SAA with the Secondary BM Unit Supplier Delivered Volume ( $VBMUSDV_{i2ji}$ ) for each Secondary BM Unit "i2" and Supplier BM Unit "I" for each Settlement Period "j" for each Volume Allocation Run.
- 9.6.5 Where the SVAA has determined non zero Supplier BM Unit Non BM ABSVD ( $SNBABSVD_{ij}$ ), the SVAA shall provide such data to the SAA for each BM Unit "i" for each Settlement Period "j" for each Volume Allocation Run.

## 9.7 Determination of Supplier Cap Take

- 9.7.1 The Supplier Cap Take ( $SCT_{HZj}$ ) shall be determined by the SVAA according to the following formula:

$$SCT_{HZj} = \max (\Sigma^{HZ}_i \Sigma_{N(AI)} CORC_{iNj}, 0)$$

## 9A Determination of the Supplier Quarterly Volume Report

- 9A.1 The SVAA shall determine Half Hourly Consumption (Non Losses) by Profile Class ( $C_{iN(c)Pj}$ ) for each Supplier BM Unit "i" for Profile Class "P" (for which the associated non half hourly active import Consumption Component Class "N(c)" shall not be a Consumption Component Class for line losses) according to the following formula:

$$C_{iN(c)Pj} = \Sigma_{LR}^N BMPC_{iLPRj}$$

- 9A.2 For each Half Hourly Consumption (Non Losses) by Profile Class ( $C_{iN(c)Pj}$ ) value determined pursuant to paragraph 9A.1 the SVAA shall determine the Half Hourly Consumption (Losses) by Profile Class ( $CLOSS_{iN(c)Pj}$ ) for each Supplier BM Unit "i" for Profile Class "P" (for which the associated non half hourly active import Consumption Component Class "N(c)" shall be a Consumption Component Class for line losses) according to the following formula:

$$CLOSS_{iN(c)Pj} = \Sigma^{(vv)}_L ((LLF_{Lj} - 1) * \Sigma^{(vv)}_R BMPC_{iLPRj})$$

where "(vv)" is the Consumption Component Class (not for line losses) associated with Profile Class "P" for which a value of  $CLOSS_{iN(c)Pj}$  is to be determined.

- 9A.3 The Corrected Component by Profile Class ( $CORC_{iN(c)Pj}$ ) for each Profile Class "P" within a non half hourly active import Consumption Component Class "N(c)" within Supplier BM Unit "i" shall be determined by the SVAA according to the following formula:

$$CORC_{iN(c)Pj} = (C_{iN(c)Pj} + CLOSS_{iN(c)Pj}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Supplier BM Unit "i".

- 9A.4 The Quarterly Supplier Energy Volume ( $CORC_{ZqG}$ ) for each Supplier Volume Reporting Group "G" in calendar quarter "q" shall be determined as:

- (a)  $\sum_{iN(c)Pj}^{ZqG} CORC_{iN(c)Pj}$  over the relevant Consumption Component Classes and Profile Classes for each of Supplier Volume Reporting Groups 1 to 3 for each Supplier "Z"; and
- (b)  $\sum_{iN(c)Pj}^{ZqG} CORC_{iN(c)Pj}$  over the relevant Consumption Component Classes for each of Supplier Volume Reporting Groups 4 to 8 for each Supplier "Z".

- 9A.5 The Quarterly Metering Systems by Supplier ( $NM_{ZqG}$ ) for each Supplier "Z" in Supplier Volume Reporting Group "G" in calendar quarter "q" shall be determined by the calculation:

$$\sum_{Hd}^{ZqG} NM_{ZHGd} / d(q)$$

where  $NM_{ZHGd}$  is the total number of Metering Systems registered to Supplier "Z" in Supplier Volume Reporting Group "G" on day "d", summed over all GSP Groups and all days in calendar quarter "q", and  $d(q)$  is the number of days in calendar quarter "q".

## 10. VOLUME ALLOCATION RUNS

### 10.1 Supplier Volume Allocation Runs

- 10.1.1 For each Settlement Period in any Settlement Day and for each Supplier BM Unit, the SVAA shall determine or re-determine the BM Unit Allocated Demand Volumes and provide the same to the SAA and to each other person entitled thereto in accordance with BSCP508:

- (a) on each occasion on which an Interim Information Volume Allocation Run, Initial Volume Allocation Run or a Timetabled Reconciliation Volume Allocation Run is required in relation to that Settlement Day, in accordance with the Settlement Calendar; and
- (b) on each occasion on which a Post Final Volume Allocation Run is required by the Panel in accordance with the timetable specified by the Panel in accordance with Section W4.2.3.

- 10.1.2 For each Volume Allocation Run the SVAA shall use the relevant value of GSP Group Take ( $GSPGT_{Hj}$ ) which is derived from the corresponding Volume Allocation Run provided by the CDCA in accordance with Section R5.7.

### 10.2 Adjustment of BM Unit Allocated Demand Volumes

- 10.2.1 The SVAA shall carry out Reconciliation Volume Allocation Runs for each Settlement Day in accordance with the provisions of this paragraph 10.2.
- 10.2.2 The SVAA shall recalculate the Supplier Deemed Takes and Non Half Hourly Supplier Deemed Takes pursuant to the requirements of the Supplier Volume Allocation Rules but in each case using the then current values of the Supplier Volume Allocation variables required in respect of such Settlement Day.
- 10.2.3 The SVAA shall recalculate the BM Unit Allocated Demand Volumes pursuant to paragraph 9.6 employing the then current values of the data pursuant to the Supplier Volume Allocation Rules or re-determined pursuant to paragraph 10.2.2.

## **11. TRADING DISPUTES**

### **11.1 Provision of Information**

- 11.1.1 Subject to any obligations of confidentiality, the SVAA shall give BSCCo, any other Party or any other BSC Agent which raises a Trading Dispute pursuant to Section W all such explanations, documents, data and information relating to Supplier Volume Allocation as may be required for the purposes of resolving such Dispute.

### **11.2 Rectification of Errors**

- 11.2.1 The provisions of Section U2.5 and U2.6, and the provisions of Section W1.7, shall apply in relation to the rectification (or otherwise) of errors in relation to Supplier Volume Allocation.

## **12. DELAYS AND FAILURES**

### **12.1 Aggregated Half Hourly Consumption Data**

- 12.1.1 The provisions of paragraph 12.1.2 apply if, for any reason, on or before such time as may be specified in BSCP508 for this purpose any of the variables referred to in paragraphs 3.5 or 3.6 shall not have been determined in respect of the relevant Settlement Period by the operation of half hourly data aggregation in accordance with this Annex S-2.
- 12.1.2 Where this paragraph 12.1.2 applies:
- (a) the SVAA shall take such actions as are specified in BSCP508 to ascertain the values of the variables referred to in paragraphs 3.5 and 3.6 from the relevant Half Hourly Data Aggregator and/or Supplier;
  - (b) if all attempts to ascertain such values fail, the SVAA shall derive the missing variables from the data for the previous run in respect of that Settlement Day, provided that:
    - (i) if this is the Initial Volume Allocation Run or the data for the previous run is not available for any other reason, data for the Settlement Day that most nearly corresponds to the characteristics of the Settlement Day for which variables are to be determined shall be used; and



- (ii) in the case where there is no such identifiable Settlement Day, the SVAA shall carry out the Volume Allocation Run or, as the case may, the Reconciliation Volume Allocation Run without the missing half hourly data.

12.1.3 The provisions of paragraph 12.1.4 apply if, for any reason, on or before such time as may be specified in BSCP503 for this purpose any of the variables referred to in paragraph 3.9 shall not have been determined in respect of the relevant Settlement Period by the operation of half hourly data aggregation in accordance with this Annex S-2.

12.1.4 Where this paragraph 12.1.4 applies:

- (a) the SVAA shall take such actions as are specified in BSCP503 to ascertain the values of the variables referred to in paragraph 3.9 from the relevant Half Hourly Data Aggregator;
- (b) if all attempts to ascertain such values fail, the SVAA shall derive the missing variables from the data for the previous run in respect of that Settlement Day, provided that if this is the Initial Volume Allocation Run or the data for the previous run is not available for any other reason, the SVAA shall carry out the Volume Allocation Run or, as the case may, the Reconciliation Volume Allocation Run without the missing half hourly data.

12.1.5 The provisions of paragraph 12.1.6 apply if, for any reason, on or before such time as may be specified in BSCP602 for this purpose any of the variables referred to in paragraph 3.10 shall not have been determined in respect of the relevant Settlement Period by the operation of half hourly data aggregation in accordance with this Annex S-2.

12.1.6 Where this paragraph 12.1.6 applies:

- (a) the SVAA shall take such actions as are specified in BSCP602 to ascertain the values of the variables referred to in paragraph 3.10 from the relevant Virtual Lead Party;
- (b) if all attempts to ascertain such values fail, the SVAA shall carry out the Volume Allocation Run or, as the case may, the Reconciliation Volume Allocation Run without the missing half hourly data.

## **12.2 Aggregated Estimated Annual Consumptions and Annualised Advances**

12.2.1 The provisions of paragraph 12.2.2 apply if, for any reason, on or before such time as may be specified in BSCP508 for this purpose the SVAA becomes aware that any of the variables referred to in paragraph 4.4 shall not have been determined in respect of the relevant Settlement Day by the operation of non half hourly data aggregation in accordance with this Annex S-2.

12.2.2 Where this paragraph 12.2.2 apply, the SVAA shall take such actions as are specified in BSCP508 to ascertain the values of the variables referred to in paragraph 4.4 from the relevant Non Half Hourly Data Aggregator and/or Supplier, provided that:

- (i) if all attempts to ascertain such values fail, the SVAA shall derive the missing variables from the data for the previous run in respect of the relevant Settlement Day; and
- (ii) if this is the Initial Volume Allocation Run, the most recent data for the previous Settlement Day shall be used.

### **12.3 BM Unit Allocated Demand Volumes, DUoS Report and TUoS Report**

- 12.3.1 The provisions of paragraph 12.3.2 apply if, for any reason, the operation of the Supplier Volume Allocation System fails to determine BM Unit Allocated Demand Volumes, the DUoS Report or the TUoS Report in respect of any Settlement Period or, as the case may, Settlement Day before the expiry of such time as may be specified in BSCP508 for this purpose.
- 12.3.2 Where this paragraph 12.3.2 applies, unless the SVAA rectifies the failure so as to permit the operation of the Supplier Volume Allocation System to determine BM Unit Allocated Demand Volumes, the DUoS Report or, as the case may be, the TUoS Report on or before the Settlement Day immediately following the relevant Settlement Day specified for this purpose, BSCCo shall determine the Supplier Deemed Take and the BM Unit Allocated Demand Volumes for the relevant Settlement Periods, using where practicable any relevant data determined or supplied pursuant to this Annex S-2 that is available to enable calculation of the Supplier Deemed Take and the BM Unit Allocated Demand Volume amount in respect of any individual Supplier.
- 12.3.3 Where paragraph 12.3.2 applies the SVAA shall send the values of BM Unit Allocated Demand Volumes for each Settlement Period determined pursuant to paragraph 12.3.2 to the SAA in accordance with paragraph 9.6.2.

### **12.4 Obligation to assist**

- 12.4.1 Each Supplier shall provide all such advice and assistance as BSCCo or the SVAA may reasonably require to permit the determination of the variables in accordance with paragraphs 12.1.2 and 12.2.2.

## **13. DETERMINATION OF PERIOD BM UNIT GROSS STORAGE DEMAND FOR SVA STORAGE FACILITIES**

### **13.1 General**

- 13.1.1 This paragraph 13 describes the processes and calculations needed to provide certain data to the NETSO for the purpose of calculating Transmission Network Use of System Charges and Balancing Services Use of System Charges relating to the operation by the NETSO of the Transmission System. For the avoidance of doubt, such data are not used for the purposes of calculating Trading Charges.

### **13.2 Declarations**

- 13.2.1 Where a Supplier intends to register a Metering System on the SVA Storage Facilities Register, it shall submit a Declaration on behalf of the relevant SVA Storage Facility Operator to the SVAA in accordance with BSCP508, and shall keep the SVAA informed of any amendments or updates to that Declaration made by the SVA Storage Facility Operator.
- 13.2.2 Each SVA Storage Facility Operator who is a BSC Party acknowledges and agrees that:
- (a) the information contained in any Declaration submitted to the SVAA on their behalf is accurate and complete in all material respects; and
  - (b) they will promptly notify the Supplier(s) who is the Registrant of the Metering System(s) on the Declaration of any amendments or updates to the Declaration.

### **13.3 Suppliers' Responsibilities**

13.3.1 Subject to paragraph 13.3.2, each Supplier shall ensure that Metered Data for each Settlement Period of each Settlement Day are made available to the SVAA pursuant to this paragraph 13.2, in respect of all of such Supplier's Metering Systems which are listed on the SVA Storage Facilities Register and subject to half hourly metering.

13.3.2 If:

- (a) a SVA Generator provides Export Active Energy through a SVA Metering System and such Export Active Energy is allocated between two or more Suppliers; and/or
- (b) a SVA Customer consumes Import Active Energy through a SVA Metering System and such Import Active Energy is allocated between two or more Suppliers,

each such Supplier shall ensure that Metered Data for each Settlement Period of each Settlement Day shall be made available to the SVAA pursuant to this paragraph 13.3 in respect of all of such Supplier's Metering System Numbers associated with Metering Systems which are listed on the SVA Storage Facilities Register and subject to half hourly metering.

13.3.3 For the purposes of paragraph 13, Metered Data shall not include Unmetered Supplies subject to Equivalent Metering.

#### **13.4 Half Hourly Data Aggregator's Responsibilities**

13.4.1 Each Supplier shall ensure that each of its Half Hourly Data Aggregators shall in respect of that Supplier's Metering Systems listed on the SVA Storage Facilities Register for which that Half Hourly Data Aggregator is responsible and in respect of a particular Settlement Day:

- (a) receive half hourly Supplier's Metering System Metered Consumption from the relevant Half Hourly Data Collectors;
- (b) undertake checks and provide reports in accordance with BSCP503; and
- (c) provide to the SVAA the Supplier's Metering System Metered Consumption.

13.4.2 In respect of Metering Systems relating to SVA Storage Facilities, for any Reconciliation Volume Allocation Run for a Settlement Day, each Supplier shall ensure that:

- (a) in respect of data which are then currently available but which were not previously available for use in the immediately preceding Initial Volume Allocation Run or Reconciliation Volume Allocation Run, as the case may be;
- (b) its Half Hourly Data Aggregators shall, for that Settlement Day, provide to the SVAA in the case of a GSP Group "H" and a Half Hourly Data Aggregator, the Supplier's Metered Consumption and Supplier's Metered Consumption (Losses) data, pursuant to paragraph 13.4.1 which data shall incorporate any revised data made available.

### 13.5 SVAA Responsibilities

- 13.5.1 The SVAA shall determine the Half Hourly Storage Consumption (Non Losses) ( $SC_{iNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall not be a Consumption Component Class for line losses or for active export) for each Supplier BM Unit "i" according to the following formula:

$$SC_{iNj} = \sum_{aL} SVMMC_{HZaNLKji}$$

- 13.5.2 The SVAA shall determine the Half Hourly Storage Consumption (Losses) ( $SCLOSS_{iNj}$ ) within Consumption Component Class "N" (which Consumption Component Class shall be a Consumption Component Class for line losses) for each Supplier BM Unit "i" according to the following formula:

$$SCLOSS_{iNj} = \sum^{(vv)}_{LK} ((LLF_{ij} - 1) * SVMMC_{HaNLKji})$$

where Storage Metering System Metered Consumption ( $SVMMC_{HZaNLKji}$ ) is determined pursuant to paragraph 7.1.1E and "(vv)" is the Consumption Component Class (not for line losses or active export) associated with the Consumption Component Class "N" for which the value of  $VLOSS_{i2Nj}$  is to be determined.

- 13.5.3 The Storage Corrected Component ( $SCORC_{iNj}$ ) for each Consumption Component Class "N" within Supplier BM Unit "i" shall be determined by the SVAA according to the following formula:

$$SCORC_{iNj} = (SC^{iNj} + SCLOSS_{iNj}) * (1 + (CF_{Hj} - 1) * WT_N)$$

where  $WT_N$  is the associated GSP Group Correction Scaling Weight and  $CF_{Hj}$  is the value of GSP Group Correction Factor determined pursuant to paragraph 9.2 for the GSP Group "H" associated with the Supplier BM Unit "i".

- 13.5.4 The Period BM Unit Gross Storage Demand ( $SDBMU_{imj}$ ) shall be determined by the SVAA by aggregating the Storage Corrected Components ( $SCORC_{iNj}$ ) for each Supplier BM Unit "i", Measurement Class "m" and Settlement Period "j":

$$SDBMU_{imj} = \sum SCORC_{iNj}$$

### 13.6 Supplier Volume Allocation Runs

- 13.6.1 For each Settlement Period in any Settlement Day and for each Supplier BM Unit, the SVAA shall determine or re-determine the Period BM Unit Gross Storage Demand and provide the same to NETSO in accordance with BSCP508:

- (a) on each occasion on which an Interim Information Volume Allocation Run, Initial Volume Allocation Run or a Timetabled Reconciliation Volume Allocation Run is required in relation to that Settlement Day, in accordance with the Settlement Calendar; and
- (b) on each occasion on which a Post Final Volume Allocation Run is required by the Panel in accordance with the timetable specified by the Panel in accordance with Section W4.2.3.

### **13.7 General Responsibilities in respect of SVA Storage Facilities**

13.7.1 In respect of SVA Storage Facilities, and in each case in accordance with BSCP508, the SVAA shall:

- (a) validate Declarations submitted by Suppliers pursuant to paragraph 13.2.1;
- (b) register any SVA Storage Facilities that are subject to a valid Declaration;
- (c) undertake monthly validity checks of SVA Storage Facilities;
- (d) provide reports and information to BSCCo including submissions and validations made pursuant to this paragraph 13 and associated calculations and data; and
- (e) maintain and publish a record of all SVA Storage Facilities that have a current and valid Declaration.

13.7.2 In respect of SVA Storage Facilities, and in each case in accordance with BSCP508, BSCCo shall:

- (a) undertake analysis of the reports and data provided to it by the SVAA under paragraph 13.7.1(d) and investigate, including seeking representations from the relevant Supplier and SVA Storage Facility Operator, whether there is any evidence suggesting that a Declaration is no longer valid either in its entirety or in respect of any Metering System to which that Declaration relates;
- (b) having regard to any representations made under paragraph 13.7.2(a), report its findings from any analysis undertaken under paragraph 13.7.2(a) to the Panel; and
- (c) provide to NETSO such data as NETSO may request in relation to an SVA Storage Facility as is reasonably necessary to enable it to achieve assurance that TNUOS and/or BSUOS charges are calculated accurately.

13.7.3 BSCCo shall undertake the analysis and investigations referred to in paragraph 13.7.2(a) following receipt of a report from the SVAA pursuant to paragraph 13.7.1(c) or otherwise where notified by the Panel, a Party, SVA Storage Facility Operator or interested persons pursuant to BSCP508.

### **13.8 Powers of the Panel**

13.8.1 In order to provide assurance that the provisions of this paragraph 13 have been complied with including with respect to the validity of Declarations and the accuracy and completeness of data and information submitted pursuant to this paragraph 13, the Panel shall be entitled to:

- (a) receive such reports, information and data as it considers reasonably necessary; and
- (b) require BSCCo to undertake analysis or investigations of such reports, information and data pursuant to paragraph 13.7.2.

13.8.2 Following a report by BSCCo under paragraph 13.7.2(b), the Panel may require Metering System(s) to be excluded from a Declaration or a Declaration to be invalidated in its entirety in which case:

- (a) the SVAA shall amend the SVA Storage Facilities Register accordingly; and
- (b) for the purposes of the calculations undertaken by the SVAA under this paragraph 13, a reference to an SVA Storage Facility shall be deemed to exclude such Metering Systems as from such date determined by the Panel.