Redlined BSCP504 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' text for CP1514 'Number of Register digits for Smart Meters'

This CP proposes changes to section 1.1, 1.2.1, 3.3.8.2, 4.2, 4.5.2. We have redlined these changes against Version 41.0, [which will go live as part of the January 2019 Release].

There is no impact on any other part of this document for this CP.

Amend section 1.1 as follows:

1.1 Scope and Purpose of the Procedure

This BSC Procedure defines the processes that the Non-Half Hourly Data Collector (NHHDC) shall use to carry out the collection and processing of Metered Data for Non-Half Hourly (NHH) SVA Metering Systems.

Trading shall be on the basis of SVA Metering Systems with each SVA Metering System being assigned a unique Metering System Identifier (MSID). Settlement of all NHH SVA Metering Systems shall be performed on the basis of profiled Annualised Advances (AAs) (excluding unmetered supplies) and Estimated Annual Consumptions (EACs).

Where there is to be a change in any NHH Supplier Agent (bulk change of agent) such that the number of SVA Metering Systems affected exceeds a threshold set by the BSC Panel, a bulk change of agent application will be submitted for approval in accordance with BSCP513. Following such approval and where the NHHDC is impacted, this BSC Procedure will be used to process the bulk change of agent.

There are two main areas of functionality:

(i) Data retrieval and data processing.

The data retrieval process involves retrieving Meter register readings[1] for NHH SVA Metering Systems and passing them on for use in data processing. The data processing involves validating Meter register readings which are used to derive Meter advances.

The NHHDC shall be responsible for collecting the Meter readings, either remotely or locally, of the Import and Export MSID(s) for which it is assigned. The NHHDC shall inform the Licensed Distribution System Operator (LDSO) of the collection rota that it maintains. The NHHDC shall inform the Supplier, Meter Operator Agent (MOA) and LDSO of suspected faults found during the collection.

Where the Supplier retrieves readings remotely from smart Meters, they should ensure that the number of register digits in the readings passed to the NHHDC is consistent with the number of register digits defined as part of the Meter Technical Details (MTD). Where necessary, the leading digits from the reading should be truncated to ensure this consistency. This requirement applies to SMETS 2 Version 3.1 or above (or for other Meter Types where there is known to be a difference between the number of digits held in the internal register and those displayed on the Meter).

The NHHDC shall treat Import and Export MSIDs the same except for the re-calculation of Load Factors and the identification of 100kW+ demand processes which apply to Import MSIDs only.

[1] Meter readings is a more generic requirement that includes Maximum Demand Indicators and other reading information that is not covered by the term Meter register reading. Only Meter register readings are required for Settlement purposes. Other readings may be required by Suppliers, LDSOs, NHHDCs and MOAs.

The Effective From Date for a Meter Advance Period shall be set to the date of the first meter reading and the Effective To Date for a meter advance period shall be set to the day before the date of the next meter reading.

Meter advances are used to calculate AAs and EACs and are also stored for audit purposes. For each Meter advance, values are calculated for each Settlement register from the associated Meter registers. In most cases, the Settlement register shall take the advance of the corresponding Meter register. The exception to this is where single phase Meters are being used to measure a polyphase supply and registers on those Meters have the same register periods; this can be treated as a single SVA Metering System (MS). All registers for concurrent periods shall be summed and treated as a single register for the polyphase supply. Another exception is a Meter which has one or more switched registers which collectively are not active all the time. A Settlement register is required for the periods of time in which the individual switched registers are not active. The value for this register is derived by differencing.

The NHHDC shall be responsible for taking action to correct incorrectly mapped registers on SVA multi-rate Meters.

Each year in May for all non-domestic MSIDs where a Maximum Demand is recorded, the NHHDC shall in accordance with BSCP516, identify and calculate the annual Load Factor, and the Profile Class applicable to that Load Factor. The NHHDC shall then inform the Supplier of the required Profile Class change where the calculation shows that the Profile Class has changed.

(ii) Calculation of AAs and EACs.[2]

The NHHDC passes:

(a) the MAPs for each SVA MS

(b) the active registration details during the MAP and

(c) a Meter advance and previous EAC for each Settlement register

to the AA/EAC calculation process. The registration details include MSID, GSP Group, Profile Class, Standard Settlement Configuration (SSC), the effective from and to Settlement dates and also the Time Pattern Regime (TPR) details for each Settlement register.

The Supplier Volume Allocation System (SVAS) provides a Daily Profile Coefficient for each valid combination of GSP Group, Profile Class, SSC and TPR. Two values are then calculated from this data, the AA and EAC.

[2] The NHHDC system will manage both positive and negative AA/EAC values.

This BSC Procedure focuses on the interfaces between the NHHDC and other Agencies seen from the perspective of the NHHDC.

This BSC Procedure, in respect of Unmetered Supplies, only covers the obligations of the NHHDC and the Non-Half Hourly Data Aggregator (NHHDA) regarding Unmetered Supplies Operator (UMSO) provided EACs; all other Unmetered Supplies requirements are covered in BSCP520.

In this BSCP, any reference to Meter Technical Details means all technical details (including Outstation channel mapping) of a Metering System required to enable metered data to be collected and correctly interpreted from that Metering System. For the avoidance of doubt this includes, but is not limited to, the items listed in the Data Interface flows D0150: Non Half Hourly Meter Technical Details, D0149: Notification of Mapping Details and (where appropriate) D0313: Auxiliary Meter Technical Details. For NHH advanced Meters, this also includes all appropriate information required by the NHHDC to retrieve data from the Metering System remotely. This may include, but is not limited to, the communications and security details of the Metering System and the Code of Practice of the Metering System installed.

- Determine EAC and AA data;

- Provide AA data including their Effective From and To Settlement dates, EAC data including their Effective From Settlement date and Metering system details to the NHHDA;

- Provide validated Metered Data and Metering System Reports to the Supplier and LDSO;

- Calculate a Meter Advance or Deemed Meter Advance values for each Settlement Register, in accordance with Annex S-2 of the BSC and this BSCP);

- For a change of Supplier, the old Supplier and old NHHDC shall provide historical data as required by the BSC Annex S-2 and this BSCP to the new Supplier and new NHHDC;

- For Unmetered Supplies which are not subject to Equivalent Metering, the NHHDC shall set values of EAC to be defined in the relevant UMS (Unmetered Supply) certificate, pass such values unadjusted to the NHHDA responsible for such Unmetered Supply, together with the Effective from Settlement Dates of the EAC; and

- When advised by a Supplier that a site is Long Term Vacant site, calculate a Metered Advance or Deemed Meter Advance and an EAC for each Settlement Register and thereafter replace the EAC with an EAC of zero value. When a site can no longer be treated as Long Term Vacant, calculate Metered Advance, a Deemed Meter Advance and an EAC for each Settlement Register and use these to replace the zero value EAC for future calculations.

- Where a Demand Disconnection occurs as part of a Demand Control Event, the NHHDC shall calculate values of Annualised Advances relating to each

impacted MSID so as to accurately reflect the effect of the disconnection, and shall pass these such values to the relevant NHHDA.

In the event of an inconsistency between the provisions of this BSCP and the Code, the provisions of the Code shall prevail.

Amend section 1.2.1 as follows:

1.2.1 Non-Half Hourly Data Collector Responsibilities

The appointment of a NHHDC in SMRS by the Associated Supplier to a SVA MS is effective from a specified calendar day. From that calendar day onwards the NHHDC is responsible for all Settlement Days (SDs) within the period of its Associated Supplier's registration, until superseded by a new NHHDC, providing there is no Change of Measurement Class (CoMC) from Non-Half Hourly (NHH) to Half Hourly (HH) metering or vice versa. If there is a CoMC, there will be no transfer in responsibility or historic data from the old NHHDC to the new HHDC or vice versa.

The NHHDC shall use systems and processes approved in accordance with BSCP537 which are capable of processing the following:

- Positive and negative Meter advances;
- Positive and negative EACs and AAs;
- Positive and negative Daily profile coefficients.

These systems and processes must comply with all other applicable requirements set out in the Code, the Supplier Volume Allocation Rules, the Party Service Line (PSL100) and the relevant BSCP.

The equipment/system communicating with any AMR Meter shall be set in accordance with the Co-ordinated Universal Time (UTC) at least once every day.

The NHHDC shall provide data for any adjustments to Volume Allocation Runs required in accordance with BSCP11.

The NHHDC shall record all meter readings collected or received for each SVA Metering System (relating to Import consumption and/or Export generation) for which it is responsible. Such meter readings may be:-

a. Collected as a regular schedule read;

b. Collected when a meter reading is obtained outside the collection schedule agreed by its Associated Supplier;

c. Collected by an outgoing Non-Half Hourly Data Collector and passed to the incoming Non-Half Hourly Data Collector as the change of Supplier meter reading;

d. Received when Customer own meter readings are provided by its Associated Supplier or Customer;

e. Received when prepayment meter readings are provided by its Associated Supplier;

f. Deemed readings established on appropriate occasions;

g. Received when initial or final readings are provided by the Associated Meter Operator Agent, Supplier or related LDSO;

h. Received when final readings are provided by the incoming NHHDC on a change of Supplier; and

i. Received when estimates of a change of Supplier read generated by the old Supplier are provided by its Associated Supplier.

The NHHDC shall ensure that, for each SVA Metering System for which it is responsible, the metering data for Settlement and for use by the LDSO is retrieved from the SVA Metering System, and is validated, processed and transmitted to its Associated NHHDA and the relevant LDSO, in each case using systems and processes so approved in accordance with BSCP537 and in time for the related Final Reconciliation Volume Allocation Run.

The NHHDC shall ensure:-

a. That the Metering System and register being read are the ones intended to be read.

b. The Settlement register reading shown on the display of the Metering System is consistent with the value that is entered into Settlement i.e. data integrity exists between the readings obtained remotely and readings obtained locally[3].

c. ~~That readings used for Settlement purposes are passed from the Metering System to the NHHDC, logically unchanged, and that suitable controls are in place such that the final format of the data and the manner in which it is interpreted are consistent and accurate[8].~~ Where the NHHDC is responsible for data retrieval, that readings used for settlement purposes are passed from the Metering System to the NHHDC, logically unchanged, and that suitable controls are in place such that the final format of the data and the manner in which it is interpreted are consistent and accurate. The NHHDC shall validate in accordance with section 4.2 (Validate Meter Data) and process all readings collected (or received) in accordance with paragraph 1.2.1 above. The process shall be followed except in the case of readings from pre-payment and/or remotely read Metering Systems where the provisions of sections 4.11 and 4.20 shall apply~~.~~

[3] This requirement is to be met through software and data transfer controls and not by performing individual checks on a per-Metering System basis

d. Where a reading is obtained from a compliant Meter of type SMETS 2 Version 3.1 or above and contains more register digits than specified in the MTD, leading digits from the reading are truncated such that the numbers of digits are consistent with the MTD and display of the Metering System.

Amend section 3.3.8.2 as follows:

3.3.8.2 Withdrawal of Meter Reading following Fault Rectification – Change of SVA Metering System.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.8.2.1	As soon as possible after installation of new SVA MS.	Send: • notification of fault and period**Error! Bookmark ot defined.**; • confirmation of rectification of fault following installation of new SVA MS; • final Meter register reading for removed SVA MS where obtained[4]; and • MTD, including Meter register reading for replacement SVA MS.	MOA.	NHHDC[5] **Error! ookmark not defined.**.	D0002 Fault Resolution Report or Request for Decision on Further Action. D0010 Meter Readings. D0149 Notification of Mapping Details. D0150 Non-Half Hourly Meter Technical Details. D0313 Auxiliary Meter Technical Details (in accordance with Appendix 4.20)	Electronic or other method, as agreed.
		If there is a change of SSC as a result of installing new SVA MS, send the revised SVA MS details and the initial (class average) EAC.	Supplier.	NHHDC SMRA	D0052 Affirmation of Metering System Settlement Details. D0205 Update Registration Details	
		Send final Meter register reading for removed smart SVA MS where obtained remotely.	Supplier	NHHDC	D0010 Meter Readings	

[4] If the NHHDC receives a final Meter register reading for the removed SVA MS the NHHDC will record but will not use this Meter register reading in Settlement as the NHHDC will deem an advance for the period of the fault.
[5] The NHHDC must ensure that there is no change to the original reading collected from the SVA MS as a result of SVA MS faults notified by the MOA. Invalidated readings must be retained for reference.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.3.8.2.2	If there is a change of SSC.	Validate D0052. Check for discrepancies between the Metering System Settlement Details provided by the Supplier and the Meter Technical Details provided by the MOA. Notify Supplier of any exceptions in accordance with 3.3.6.9 to 3.3.6.11.	NHHDC	Supplier	See Appendix 4.12 – Usage and Validation of Affirmation of Metering System Settlement Details (D0052) Flow. D0310 Notification of Failure to Load or Receive Metering System Settlement Details**Error! ookmark not defined.**.	Electronic or other method, as agreed.
3.3.8.2.3	By 1 WD after 3.3.8.2.1.	Process and validate Meter register reading(s) for replacement SVA MS.	NHHDC.		Appendix 4.2 - Validate Meter Data, Appendix 4.6 - Manual Adjustment of Meter Reading(s).	Internal Process.
3.3.8.2.4	By 1 WD after 3.3.8.2.~~2~~3. NHHDC.	If invalid Meter register reading, produce and send Invalid Data Report for replacement SVA MS. If invalid Meter register reading then obtain alternative Meter register reading and return to 3.3.8.2.2. Supplier, LDSO.	 D0010 Meter Readings.	 Electronic or other method, as agreed.		
3.3.8.2.5	By 1 WD after 3.3.8.2.~~2~~3.	If valid Meter register reading, produce and send Valid Data Report for replacement SVA MS.	NHHDC.	Supplier, LDSO.	D0010 Meter Readings.	Electronic or other method, as agreed.
3.3.8.2.6	By 1 WD after 3.3.8.2.~~4~~5.	For the removed SVA MS: • Determine which Meter register reading(s) / AA/EAC(s) affected by the period of the fault. • Withdraw the Meter register reading(s) (back to last valid Meter register reading which was obtained prior to the period of the fault) and the AA/EAC(s) (relating to the period of the fault). Complete a Site Visit Report (if applicable)..	NHHDC.		Appendix 4.1 - Site Checks of SVA Metering System - Site Visit Report. Appendix 4.3 - Withdrawing Meter Reading(s) / AA/EAC(s).	Internal Process.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
		For the replacement SVA MS: • If change of SVA MS requires change of SSC retrieve the initial class average EAC (because the TPR(s) will be different). • If change of SVA MS with no change of SSC retrieve the EAC calculated for the removed SVA MS together with the AA.				

Amend section 4.2 as follows:

4.2 Validate Meter Data.

The minimum validation rules contained within BSCP504 apply equally for whether the reading to be validated lies after other valid Meter readings, before other Meter readings or between other Meter readings.

The validation requirements described below are the minimum requirements that the NHHDC shall carry out for each Settlement Register. Where the Supplier retrieves readings from the Meter remotely, the Supplier may perform pre-validation checks according to any relevant rules below and is not required to pass any readings to the NHHDC that are demonstrably invalid.

1. Check that where data is collected at site the Meter serial number for the MSID is the same as the serial number provided by the MOA for that MSID.

2. Check that the date of Meter reading is after the date of the last valid Meter reading.

   In the Change of Supplier scenario, where no Meter reading history has been received:

   - In the case of validating a Meter reading, using subsequent Meter readings, the date of the reading to be validated against will be before the date of the reading used to validate;

   - In the case of validating a Meter reading, using Meter readings either side, the date of the reading to be validated against will be between the date of the readings used to validate; and

   - The reading(s) used in validation will not have passed BSC Validation as there would have been nothing to validate these readings against.

3. Check for zero consumption, where the zero consumption/generation on the Meter register is not necessitated by the Time Pattern Regime, and if so:

   3.1 check for previous zero consumptions/generations,

   3.2 check for zero MD,

   3.3 check Site Visit Report.

   3.4 check whether Metering System is being settled on a zero EAC, for example, the Supplier is treating the site as Long Term Vacant.

   3.5 for advanced meters (and for smart Meters where data has been provided by the Supplier), check whether the Metering System is remotely disabled.

   If zero explained by historical consumption, Site Visit Reports, Time Pattern Regime, remote disablement or Metering System being settled on a zero EAC, then valid, otherwise invalid.

4. Check for negative consumption/generation and if so:

   4.1 check for Meter rollover

   4.2 check if the previous Meter register reading is a deemed reading and that the reading prior to the deemed reading is an actual Meter register reading, and that the current Meter register reading advance creates a positive consumption/generation with respect to the last actual Meter register reading (i.e. obtained prior to the deemed reading), making allowance for any Meter register rollover (Appendix 4.1),

   if so then reading valid, otherwise invalid

5. Check consumption/generation does not exceed twice the expected advance.

   (using the EAC times the Profile Coefficient, or some other equivalent method.) Where the reading to be validated does not come after other validated readings the expected advance may be calculated using either:

   - the class average Estimated Annualised Consumption (EAC) times the profile coefficient or some other equivalent method, and the first Meter reading available; or

   - the Annualised Advance (AA), determined from two readings either side of the reading to be validated, times the Profile Coefficient.

   Note that where Profile Coefficients are not yet available they may be submitted by using the Profile Coefficients from the same period last year. If consumption/generation does exceed twice the expected advance, this Meter register reading will fail validation, except where it is caused by a seasonal register Time Pattern Regime. However, a facility to review all

Meter register readings which fail validation will be available. Based on this review, the NHHDC may choose to set it to valid and the status may be altered, where good reason exists. If not exceeded then the Meter register reading is valid.

6. Compare actual and expected Meter register readings and identify missing and overdue Meter register readings, in particular meters that have not been read by the Final Reconciliation Volume Allocation Run.

7. Check that the number of MD resets is not greater than one since the last time that the MD was reset by a person authorised by the NHHDC. Where the number of resets is unexplained, the Meter register reading(s) recording energy remain valid unless invalid for a separate reason.

8. For multi-register meters check that all registers have the same date of reading.

9. The NHHDC must inform the MOA of any error flags received from the Meter and record the reasons for accepting any error flagged data into Settlements. Where the Supplier receives error flags from the Meter, the Supplier should inform the MOA if relevant for the error flag in question.

10. The validation must retain the original value, the initial validation flag, the reason for failure where the flag is invalid and the reason for changing the status to valid.

11. If the NHHDC receives any reading(s) with more digits specified in the MTD, they should be treated as valid if the trailing digits (as specified in the MTD) are consistent with historical readings.

Amend section 4.5.2 as follows:

4.5.2 Deeming circumstances

A Deemed Meter Reading shall be calculated as set out below if a valid actual Meter register reading cannot be obtained in the following circumstances:

- Change of Supplier;
- Disputed change of Supplier Meter reading;
- Concurrent change of Supplier and Change of Measurement Class;
- Change of LDSO;
- At the RF to ensure that crystallised data is not changed post the RF; and
- To cleanse negative Estimates of Annual Consumption where requested by the Supplier.

In all other circumstances set out below, a Deemed Meter Reading may be calculated if required by the Supplier. In all cases, the NHHDC shall retain an audit trail to prove that all steps set out below have been completed before a reading is deemed.

Where a Deemed Meter Advance is calculated, it shall be calculated using a system or process so approved in accordance with BSCP537 using the formulae set out in Annex S-2 of the Code. The Deemed Meter Advance can then be used to calculate a Deemed Meter Reading.

Wherever the NHHDC has deemed a Meter reading, the NHHDC shall provide the Deemed Meter Reading and the date of the Deemed Meter Reading to its Supplier.

Where a Deemed Meter Advance has been calculated, this indicates that the process has broken down. The Supplier shall investigate the root cause of the problem and attempt to resolve the underlying issue in all cases where a reading has been deemed.

If a Deemed Meter Reading has been calculated but subsequently the actual Meter register reading for the same Settlement Day (or for a day between SSD-5 and SSD+5 for a change of Supplier), is provided and the actual Meter register reading passes validation, the Deemed Meter Reading should be replaced with the actual Meter register reading.

The NHHDC shall provide an exception and control report for each run of the EAC/AA and Deemed meter advance calculation processes. Such report shall include details of any SVA Metering System for which EAC/AA or Deemed meter advances have not been calculated including the reason therefor.

a) Change of Supplier

Note that for the purposes of this section, it is assumed that the change of Supplier is concurrent with a change of NHHDC, meaning that information must be passed between the old and new NHHDCs. Where there is no concurrent change of NHHDC, the NHHDC is required to obtain or deem a change of Supplier reading in the timescales below, pass the reading to the old and new Suppliers and pass subsequently calculated EACs / AAs to the appropriate NHHDA(s) in the same way as detailed for the old and new NHHDC below.

On a change of Supplier, if no valid actual Meter register reading is obtained by the new NHHDC in the SSD-5 and SSD+5 window, the new NHHDC is required to calculate a deemed change of Supplier reading for the change of Supplier date.

The new NHHDC shall request the current EAC and Meter reading history from the old NHHDC and the old NHHDC shall provide this to the new NHHDC.

If a valid actual Meter register reading is received between SSD+5 and SSD+8, this reading is used by the NHHDC for the calculation of a Deemed Meter Reading for the date of the change of Supplier. The NHHDC shall calculate an AA from the Meter register reading obtained between SSD+5 and SSD+8 and the last valid Meter register reading.

The NHHDC shall then calculate a Deemed Meter Reading for the date of the change of Supplier using a Deemed Meter Advance calculated using this AA over the

Deemed Meter Advance Period starting from the date of the last valid Meter register reading and ending on the day before the date of the change of Supplier.

If a valid actual Meter register reading is not obtained between SSD+5 and SSD+8, the new NHHDC should use the EAC and Meter reading history provided by the old NHHDC to deem a reading for the date of the change of Supplier using the last actual valid read taken[6] (providing one is available) and a Deemed Meter Advance calculated using the Last Valid EAC, over the Deemed Meter Advance Period starting from the date of the last valid read and ending on the day before the date of the change of Supplier.

If the New NHHDC has not received the EAC and Meter reading history from the old NHHDC by SSD+8, the new NHHDC will request this information again from the old NHHDC. Where Meter reading history is subsequently provided, the NHHDC should use this to validate any change of Supplier reading that they have, or if no actual change of Supplier reading is available, use the Meter reading history to deem a change of Supplier reading.

If that process fails, the new NHHDC may request the Meter register reading history from the new Supplier (if the old NHHDC fails to provide this within 10 WD of a second request) and may use the Meter reading history received from the new Supplier to deem a change of Supplier reading in accordance with section 3.2.6.

If the new NHHDC does not receive, obtain or collect a valid CoS reading, then the new NHHDC should deem a CoS reading. The PoS reading can be used in this process providing that it is the most recent valid Meter reading prior to the CoS. Where this is the case, the new NHHDC should use the EAC provided as part of the reading history in the deeming calculation over the Deemed Meter Advance Period starting on the date of the PoS reading and ending on the date prior to the day of the CoS reading and the actual PoS reading to calculate the deemed CoS.

The EAC going forwards should be calculated using the Meter reading history obtained from the old NHHDC or sent by the new Supplier, i.e. using the deemed CoS reading, the last Meter register reading obtained from the old NHHDC or New Supplier and the previous EAC from the old NHHDC or New Supplier.

If a Meter register reading has been taken in the SSD+6 to SSD+8 window, meaning that a CoS reading should be deemed using an AA as opposed to an EAC, the PoS reading can also be used in this calculation.

If there is a CoS reading which at the time of the CoS was unable to be validated, once more readings become available, the actual CoS reading should be validated in accordance with section 4.2, in preference to deeming a CoS reading using the subsequent Meter readings.

If the Meter reading history is not provided and any existing CoS reading has failed validation, the new NHHDC shall deem a change of Supplier reading (unless Suppliers are using the SAR process, in which case the SAR will need to be validated by the next reading. See Appendix 4.4.2 Supplier Agreed Readings), when

[6] If no valid actual readings are available but a valid Deemed reading is available, this reading can be used instead.

either one or two new actual Meter register readings are obtained either in line with the reading cycle for that Metering System or obtained as special readings, provided that the first Meter reading is at least 10 Working Days after the new NHHDC requested the EAC and Meter reading history from the old NHHDC and both Meter register readings must be within 12 months of the change of Supplier. The initial Deemed Meter Reading shall be calculated either using the first actual Meter register reading obtained and Deemed Meter Advance calculated using an initial (class average) EAC or using the first two actual Meter register readings obtained and the Deemed Meter Advance calculated using the AA calculated using these Meter register readings over the Meter Advance Period starting on the date of the change of Supplier and ending on the day before the date that the first (in the case of only one Meter register reading being taken) or second (in the case of two Meter register readings being taken) actual Meter register reading was obtained.

Once the change of Supplier reading has been deemed, the new NHHDC shall provide this reading to the new Supplier and the old NHHDC shall pass this reading onto the old Supplier.

The new NHHDC shall determine the EAC from the date of the change of Supplier reading in accordance with 3.3.11 (or AA if this reading was calculated by deeming backwards from the first actual reading taken by the new NHHDC) and shall provide this with corresponding Effective From Settlement Date to the new NHHDA.

The old NHHDC shall determine the AA from the last valid Meter register reading to the date of the change of Supplier reading in accordance with 3.3.11 and send this with corresponding Effective From Settlement Date and Effective To Settlement date to the new NHHDA.

b) Disputed Change of Supplier Reading

The new Supplier can dispute the change of Supplier reading at any point up to twelve months after the change of Supplier, where in the Supplier's view there is difference of more than 250kWh from the original change of Supplier reading. At this point, the old and new Suppliers will attempt to agree a change of Supplier reading for the Metering System, which will be processed in accordance with section 3.2.6.

Where the Suppliers cannot agree on a change of Supplier reading, the new Supplier will request that its NHHDC obtains a current Meter register reading for the Metering System. The NHHDC will then calculate an AA from the current Meter register reading and the last valid Meter register reading obtained prior to the change of Supplier.

The NHHDC will then calculate a Deemed Meter Reading for the day of the change of Supplier using a Deemed Meter Advance calculated from this AA and the last valid Meter register reading taken prior to the change of Supplier over the Deemed Meter Advance Period starting from the date of the last actual valid read and ending on the day before the date of the change of Supplier.

If the difference between the revised change of Supplier reading and the original change of Supplier reading is less than 250kWh, the NHHDC will not amend the original change of Supplier reading for use in Settlements.

If a revised change of Supplier reading is entered into Settlement, the NHHDC will calculate a new Meter Advance from the new change of Supplier reading and the current Meter register reading, and from this calculate an EAC from the date of the revised change of Supplier reading in accordance with 3.3.11. The NHHDC will provide the EAC with corresponding Effective From Settlement Date to the NHHDA.

If a revised change of Supplier reading is entered into Settlements, the NHHDC will also provide the deemed change of Supplier Reading to the current Supplier and the Old Supplier's NHHDC, who shall determine an associated AA from the date of the last valid Meter register reading taken prior to the change of Supplier to the date of the revised change of Supplier reading in accordance with 3.3.11. The old NHHDC shall send this with corresponding Effective From Settlement Date and Effective to Settlement Date to the NHHDA who shall enter this into Settlements. The old NHHDC shall also provide the revised change of Supplier reading to the old Supplier.

After a meter reading value has been processed for Initial Settlement, Suppliers may agree with each other, following the resolution of a dispute, to process a new or different customer own reading or actual reading. The incoming NHHDC shall receive the reading to be used from its Associated Supplier and pass it to the outgoing NHHDC. The agreed reading shall be processed as occurring on the Supplier Start Date if it occurred or was agreed to have occurred not more than five WDs before or not more than five WDs after the Supplier Start Date.

If the agreed reading occurred or was agreed by the relevant Suppliers to have occurred more than five WDs before or more than five WDs after the Supplier Start Date, the agreed reading shall not be treated as occurring on the Supplier Start Date and a Deemed reading calculated from the agreed reading shall apply in respect of the Supplier Start Date.

c) Concurrent Change of Supplier and Measurement Class

Non-Half hourly to Half Hourly

Where a Concurrent change of Supplier and Change of Measurement Class from NHH to HH occurs, the NHHMOA (or Supplier, as applicable) should provide the NHHDC with the final Meter register reading prior to the NHH Metering System being replaced with a HH Metering System or having its HH functionality enabled. If no valid actual Meter register reading is received by the NHHDC in the SSD-5 and SSD+5 window, the NHHDC shall calculate a deemed concurrent change of Supplier and Change of Measurement Class reading.

Where it has been identified by the NHHDC that there has been a Change of Measurement Class and the NHHDC has not received a valid actual Meter register reading by SSD+5, the NHHDC shall deem a reading for the date of

the concurrent change of Supplier and Change of Measurement Class using the last valid read taken[6] for the NHH Metering System and a Deemed Meter Advance calculated using the Last Valid EAC over the Deemed Meter Advance Period starting on the date of the last valid read and ending on the day before the date of the concurrent change of Supplier and Change of Measurement Class.

The NHHDC shall provide the deemed concurrent change of Supplier and Change of Measurement Class reading to its Supplier.

The NHHDC shall determine the AA from the last valid reading to the date of the concurrent change of Supplier and Change of Measurement Class reading in accordance with 3.3.11 and shall provide this with corresponding Effective From Settlement Date and Effective To Settlement Date to the NHHDA.

Half Hourly to Non-Half Hourly

Where a Change of Measurement Class from HH to NHH occurs, the MOA (or Supplier, as applicable) should provide the NHHDC with the initial Meter register reading taken following the Change of Measurement Class.

Where it has been identified by the NHHDC that there has been a Change of Measurement Class, if the NHHDC does not receive an actual Meter register reading 10 Working Days after the concurrent change of Supplier and Change of Measurement Class, the NHHDC shall request this reading from the NHHMOA, the Supplier or the old HHDC as applicable.

If an actual reading is not received, an initial Deemed Meter Reading shall be calculated provided that the first Meter reading is at least 10 Working Days after the NHHDC requested the Meter register reading and both Meter register readings must be within 12 months of the change of Supplier, when either one or two new actual Meter register readings are obtained either in line with the reading cycle for that Metering System or obtained as special readings. The initial Deemed Meter Reading shall be calculated either using the first actual Meter register reading obtained and Deemed Meter Advance calculated using an initial EAC or using the first two actual Meter register readings obtained and the Deemed Meter Advance calculated using the AA calculated using these Meter register readings over the Meter Advance Period starting on the date of the change of Supplier and ending on the day before the date that the first (in the case of only one Meter register reading being taken) or second (in the case of two Meter register readings being taken) actual Meter register reading was obtained.

d) Change of LDSO

Note that for the purposes of this section, it is assumed that the change of LDSO is concurrent with a change of NHHDC, meaning that information must be passed between the old and new NHHDCs. Where there is no concurrent change of NHHDC, the NHHDC is required to obtain or deem a change of LDSO reading in the timescales below, pass the reading to the Supplier and pass subsequently

calculated EACs / AAs to the appropriate NHHDA(s) in the same way as detailed for the old and new NHHDC below.

On a change of LDSO, if no final valid actual Meter register reading for the old MSID is obtained by the old NHHDC for the date of the change of LDSO then the old NHHDC is required to calculate a Deemed Meter Reading for the date of the change of LDSO. The old NHHDC should calculate a final Deemed Meter Reading for the old MSID using the last valid read taken[6] (providing one is available) and a Deemed Meter Advance calculated using the Last Valid EAC over the Deemed Meter Advance Period starting from the date of the last valid read and ending on the day before the date of the change of LDSO.

The old NHHDC shall provide the final Meter reading to the old LDSO and new NHHDC and the new NHHDC shall use this reading as the initial Meter reading for the new MSID. The new NHHDC shall also provide the reading to the new LDSO. This Deemed Meter Reading will be used as the final / initial Meter reading for old / new MSID.

If the New NHHDC has not received the Meter reading from the old NHHDC by 5 WD after the change of LDSO the new NHHDC will request this information from the old NHHDC and from the Supplier.

If no Meter reading is received, an initial Deemed Meter Reading shall be calculated when either one or two new actual Meter register readings are obtained either in line with the reading cycle for that Metering System or obtained as special readings, provided that the first Meter register reading is at least 10 Working Days after the NHHDC requested the Meter reading and both readings are within 12 months of the change of LDSO. The initial Deemed Meter Reading shall be calculated either using the first actual Meter register reading obtained and Deemed Meter Advance calculated using an initial (class average) EAC or using the first two actual Meter register readings obtained and the Deemed Meter Advance calculated using the AA calculated using these Meter register readings over the Deemed Meter Advance Period starting on the date of the change of LDSO and ending on the day before the date that the first (in the case of only one Meter register reading being taken) or second (in the case of two Meter register readings being taken) actual Meter register reading was obtained.

Once the change of LDSO reading has been deemed, the new NHHDC shall provide this reading to the new LDSO and the old NHHDC. The old NHHDC shall provide the reading to the old LDSO.

The new NHHDC shall determine the EAC from the date of the change of LDSO reading in accordance with 3.3.11 and shall provide this with corresponding Effective From Settlement Date to the new NHHDA.

The old NHHDC shall determine the AA from the date of the last Valid Meter register reading to the date of the change of LDSO reading in accordance with 3.3.11 and shall provide this with corresponding Effective From Settlement Date and Effective To Settlement date to the old NHHDA.

e) <u>At RF to ensure that crystallised data is not changed post the RF.</u>

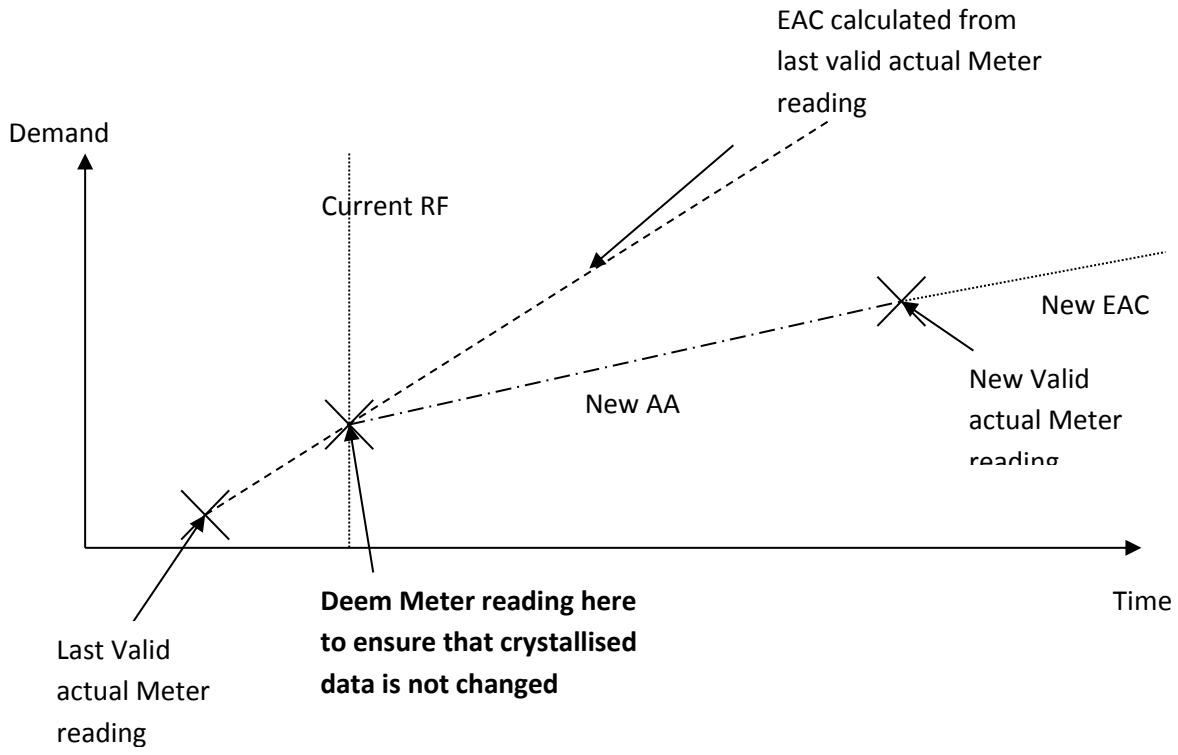
When a Meter has been read and the RF for the date of the previous Meter register reading has taken place, a Meter reading shall be deemed for the earliest practical Settlement Day for which the RF has not yet taken place over the Deemed Meter Advance Period starting from the date of the last crystallised valid actual Meter reading and ending on the earliest practical Settlement Day for which the RF has not yet taken place. The Deemed Meter Reading should be calculated using the last crystallised valid actual read taken and a Deemed Meter Advance calculated using the last EAC (i.e. the EAC used in the RF).

The NHHDC will then calculate a Meter Advance Period for the period after the Deemed Meter Reading. From this the NHHDC will calculate an associated AA and EAC for the period after the Deemed Meter Reading in accordance with 3.3.11 which will replace any previous EAC / AA values held by the NHHDC.

If the new EAC value is negative (which should only occur if the previous EAC was negative), calculate a replacement EAC by multiplying the GSP Group Profile Class Default EAC and the Average Fraction of Yearly Consumption.

Where it is possible to calculate an EAC that is more representative of the likely rate of generation or demand for the Metering System than the replacement EAC, the more representative EAC may be used as an alternative to the replacement EAC. In such circumstances, the NHHDC must document how the alternative replacement EAC was calculated as these values will be subject to audit.

This process is shown in the diagram below:



f) Reconfiguration or Replacement of a Metering System

When a Metering System is reconfigured or replaced, a final Meter register reading for the old Metering System and an initial Meter register reading for the new Metering System (or corresponding readings prior to and post the Metering System being reconfigured) should be taken by the MOA when on site and these should be provided to the NHHDC.

Where the NHHDC has been informed that the Metering System has been reconfigured or replaced, but no valid actual readings have been provided to the NHHDC within 10 Working Days of the Metering System being reconfigured or replaced and the NHHDC has not been informed that the readings are unavailable (i.e. the Meter is no longer in place or able to display a Meter register reading or the Meter is faulty and any reading displayed is known to be incorrect), and the NHHDC requires an initial / final Meter reading, the NHHDC shall request the reading from the MOA and also from the Supplier.

Where a valid actual reading is not received 10 Working Days after being requested, or the NHHDC has been informed by the MOA that the reading is unavailable, the NHHDC may deem the final Meter reading for the date of the reconfiguration or replacement of the old Metering System using the last valid read taken[6] for the old Metering System and a Deemed Meter Advance calculated using the Last Valid EAC over the Deemed Meter Advance Period starting on the date of the last valid read and ending on the day before the date of the reconfiguration or replacement of the Metering System.

Where applicable, this reading should be used as the corresponding initial reading for the date of the reconfiguration. If the final Deemed Meter Reading cannot be used as the initial reading (i.e. where the Metering System has been replaced or the Metering System has been reconfigured and the reading after the reconfiguration is unlikely to be the same as the reading before the reconfiguration), an initial Deemed Meter Reading may be calculated when either one or two new actual Meter register readings are obtained either in line with the reading cycle for that Metering System or obtained as special readings, provided that the first Meter reading is at least 10 Working Days after the NHHDC requested the actual Meter register reading from the Supplier and MOA and by 10 Working Days before the RF for the relevant Settlement Date. The initial Deemed Meter Reading shall be calculated either using the first actual Meter register reading obtained and Deemed Meter Advance calculated using an initial EAC or using the first two actual Meter register readings obtained and the Deemed Meter Advance calculated using the AA calculated using these Meter register readings over the Deemed Meter Advance Period starting on the date of the replacement or reconfiguration of the Metering System and ending on the day before the date of that the first (in the case of only one Meter register reading being taken) or second (in the case of two Meter register readings being taken) actual read was obtained.

The NHHDC shall determine the AA for the old Metering System (or Metering System prior to the reconfiguration) from the date of the last valid reading to the date of the Deemed Meter Reading in accordance with 3.3.11 and the EAC for the new Metering System (or Metering System after the reconfiguration) in accordance with

3.3.11 and shall provide these with corresponding Effective From Settlement Date and Effective To Settlement Date and to the NHHDA.

g) On rectification of a Metering System fault

Where a Metering System has become faulty, this may mean that the Metered Data recorded by that Metering System is erroneous, particularly meaning that a valid actual final Meter register reading will not be available for that Metering System. In many cases, a Metering System fault will require the Metering System to be replaced, in which case section 4.~~4~~5.2(f) should be followed before and if Meter readings are deemed. If the Metering System can be repaired, the MOA should provide the NHHDC with an initial Meter register reading once the Metering System is repaired.

When the NHHDC is informed that the fault has been rectified, the NHHDC may deem the final Meter reading for the Metering System for the day that the fault was rectified using the last valid read taken[6] for the old Metering System and a Deemed Meter Advance calculated using the Last Valid EAC over the Deemed Meter Advance Period starting on the date of the last valid read and ending on the day before the date of the rectification of the fault.