DCP0001 Attachment A

Changes to PSL170 'Meter Administration'

Insert new bullet into section 1.3.1.1:

1.3.1.1 The Meter Administrator shall record sufficient details received from its Associated Supplier of its appointed in respect of a SVA Metering System to enable the Meter Administrator to perform its functions and operate the Equivalent Meter permitted for use within the GSP Group by the LDSO. These details shall include:

- the indicator defined by the LDSO as to whether a Central Management System is required for that SVA Metering System Number or for related subdivisions of the Summary Inventory where these subdivisions are defined by the LDSO.

Insert new paragraphs into section 1.4.1 'Operation of Equivalent Meters'

1.4.1.x Where the LDSO has indicated, pursuant to paragraph 1.3.1.1, that a SVA Metering System to which the Meter Administrator has been appointed requires data from a Central Management System, the Meter Administrator shall provide operational event data received from such system to the LDSO on request.

1.4.1.y The hardware and software associated with any Central Management System shall be installed, maintained and operated in accordance with Good Industry Practice, with clocks synchronised to UTC and accurate to within ± 20 seconds.

Changes to BSCP520 'Unmetered Supplies Registered in SMS

1.2.1 UMSO Responsibilities

Where a UMS has been agreed, each UMSO shall be responsible for the following:-

c) requesting additional MSIDs from the SMRA where additional inventory items need to be allocated to alternative SSCs and associated Profile Class or different Equivalent Meter types and passing details of all MSIDs and any ~~the~~ associated Meter Timeswitch Code and Profile Class to the Supplier for registration;

e) ~~nominating~~ agreeing the type of EM to be used in the LDSO's area with the Supplier, and agreeing the location of any associated photo-electric cell unit (PECU) arrays ~~with the Supplier~~;

1.3.2 Allocation of MSIDs

Where a UMS is to be traded on a HH basis, the UMSO will obtain a unique MSID per Equivalent Meter type and UMS Certificate from SMRA.

1.3.8 Half Hourly Trading

The Supplier shall confirm with the UMSO the type of EM that is to be used in the LDSO's area associated with the MSID and whether this requires photo-electric cell units (PECU) arrays or a Central Management System (CMS) to be used.

The Supplier shall advise the UMSO of the appointed MA. The UMSO shall send a copy

of the current summary inventory to the MA of an EM appointed for an MSID. Where the UMSO requires more than one PECU array to be installed for an MSID, the summary inventory shall identify the Apparatus, suitably codified, to be assigned to each PECU array. Similarly, where a CMS is required, the summary inventory shall identify the Apparatus, suitably codified, assigned to each CMS.

In addition, any agreed updates to the summary inventory shall be advised to the appointed MA.

1.7.1 Acronyms

The terms used in this BSCP are defined as follows:

CMS Central Management System

Changes to BSCP520 'Unmetered Supplies Registered in SMRS'

Introduce new process to describe the testing and approval of Equivalent Meters.

3.x Approval of Equivalent Meter

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.x.1	At any time	Submit request for Equivalent Meter approval.	Applicant	BSCCo	Details of Equivalent Meter type, including software and hardware versions	Email, fax, post
3.x.2	Within 2 WD of 3.x.1	Confirm receipt and request any further details as necessary.	BSCCo	Applicant		Email, fax, post
3.x.3	Within 5 WD of 3.x.2.	Provide example of test schedule and details of EM Test Agents.	BSCCo	Applicant	EM test schedule, EM Test Agents	Email, fax, post

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.x.4	Within 10WD of receipt of 3.x.3.	Agree test schedule.	Applicant	BSCCo	Re-drafted schedule (if required).	As agreed
3.x.5	Within 10 WD of 3.x.4.	Agree EM Test Agent with BSCCo. Liaise with EM Test Agent to undertake EM testing.	Applicant	BSCCo EM Test Agent	Notification of EM Test Agent.	As agreed
3.x.6	As agreed with Applicant.	Undertake testing and submit report to Applicant.	EM Test Agent	Applicant	EM Test Report.	Email, fax, post
3.x.7	Following completion of testing	Submit EM approval request to BSCCo	Applicant	BSCCo	Approval request, EM Test Report and any other supporting information.	Email, fax, post
3.x.8	At next opportune UMSUG meeting	Prepare and present report to UMSUG requesting recommendation for approval of EM.	BSCCo	UMSUG	UMSUG Paper.	Internal process
3.x.9	Within 5WD of 3.x.8.	Notify Applicant of UMSUG decision. If EM approval is not recommended, liaise with Applicant and provide details of additional information or testing required. Return to 3.x.6 or 3.x.7 as necessary. If EM approval is recommended proceed to 3.x.10.	BSCCo	Applicant	UMSUG decision and any supporting information.	Email, fax, post

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.x.10	At next opportune Panel meeting	Prepare and present report to Panel recommending EM for approval.	BSCCo	Panel	Panel Paper.	Internal process
3.x.11	Within 5WD of 3.x.10	Notify Applicant of Panel decision. If EM not approved, liaise with Applicant and recommend next steps. If EM approved, proceed to 3.x.12.	BSCCo	Applicant	Panel decision and any supporting information.	Email, fax, post
3.x.12	Within 5WD of 3.x.10	Update Approved Equivalent Meters list on BSC Website with details of approved EM Communicate update to Parties and Party Agents	BSCCo BSCCo	 Parties Party Agents	EM Approval Details EM Approval Details	Internal Process Email, fax, post

Change to BSCP520 Appendix 4.5 Equivalent Meter Specification

Modify paragraph 4.5:

4.5 Equivalent Meter Specification

The specification below ~~is insufficient for a Code of Practice but~~ describes the required functionality of Equivalent Meters used to provide Settlement consumption data for Unmetered Supplies. ~~This is an interim measure until a full specification can be produced at a later stage under the auspices of the Panel.~~

New hardware and software systems complying with this Appendix 4.5 may be developed and submitted to the UMSUG and the Panel for approval in accordance with Section 3.x Approval of New Equivalent Meter. Any material changes to existing software systems and hardware that may affect an Equivalent Meter's approval against this specification must also be submitted for approval.

A list of approved Equivalent Meter types can be found on the BSC Website.

~~Currently, the only types of EMs approved for providing Settlement consumption data are those systems operating with Lailoken, LAMP and FLARE software, but new hardware and software systems, complying with Appendix 4.5 may be developed in consultation with the UMSUG and submitted to the Panel for approval.~~

Insert new paragraph in section 4.5.2:

4.5.2 Equivalent Meter Functionality

Equivalent Meters are of three types:-

a) Passive Meters (e.g. Flare) which allocate the Unmetered consumption across the half hourly periods by a mathematical relationship of annual burning hours to the daily time of Sunrise and Sunset;

b) Dynamic Meters (e.g. Lamp, Lailoken) which allocate the Unmetered consumption across the half hourly periods by reference to the operation of a number of actual photoelectric cells. The Equivalent Meter defaults to a Passive mode using calculated times of switch operation in the event of the actual switching times not being available; and

c) Centrally-managed Meters which allocate the Unmetered consumption across the half hourly periods by making use of actual switching times logged and reported by a Central Management System rather than directly from PECU arrays. The Equivalent Meter defaults to a Passive mode using calculated times of switch operation in the event of the actual switching times not being available.

Delete first paragraph in section 4.5.2.2:

4.5.2.2 Functions of a Dynamic Meter

~~Currently, since the only approved dynamic EMs use PECU arrays, this functional specification refers to PECU arrays. However other dynamic systems may be developed in the future using different dynamic switching data, for example, by telemetry from actual apparatus.~~

In addition to the functions of a Passive Meter listed above, the following are required:

The rest of section 4.5.2.2 would remain and would be specific to dynamic meters using PECU arrays.
Insert new section 4.5.2.3:

4.5.2.3 Functions of a Centrally-Managed Meter

A centrally-managed EM is one that is able to control and manage an Unmetered Supply dynamically, and which uses the detailed switching and load information recorded and reported by a Central Management System to allocate Half Hourly consumption data. The management system may be operated by the MA or the Customer, however the MA retains the overall Settlement responsibility for the quality of the data submitted by the Customer via the CMS, and is also directly responsible for the calculation of Unmetered consumption.

The functions of a centrally-managed EM are spread across three elements: the hardware apparatus used to communicate with/control the Unmetered Supply, the management system used to control the Unmetered Supply, and the calculation system used by the MA to determine and allocate the Half Hourly consumption. Where the management and calculation systems are combined into a single application, both sets of functional requirements shall apply unless otherwise stated.

a) The calculation system shall allow the Meter Administrator to add, delete and modify all information required to define each MSID and relate it to the Customer, LDSO, Supplier and Data Collector.

b) The Meter Administrator shall be able to add, delete and modify detailed inventory data for each MSID both manually and electronically. This inventory shall include the following:

- Unit Identity;
- Charging code;
- Time Switch Regime;
- Total number of units for each charging code/Time Switch Regime combination

The Unit Identity shall be a unique 12-digit number in which the first 8 digits are the National Street Gazetteer (NSG) code for the road and the last 4 digits the number allocated to that item.

The charging code maintained by the Meter Administrator for a centrally-managed meter shall be the normal code for a lamp running at full load. The Time Switch Regime shall be a set value of 999 to denote the use of central management software for that MSID.

c) The management system shall record the operational switching times and load information for each unit and shall make this data available to the Meter Administrator in the form of an operational event log on at least a daily basis. The log shall include the Unit Identity, the exact time and date at which the load was switched and the charging code applied to the unit.

[NOTE: in this approach, a charging code would be established in the Operational Information Document for each power level required by the Customer, with the relevant charging code being reported in the operational event log and effectively overruling the base charging code provided in (b) above]

OR

The management system shall record the operational switching times and load information for each unit and shall make this data available to the Meter Administrator in the form of an operational event log on at least a daily basis. The log shall include the Unit Identity, the exact time and date at which the load was switched, the load applied to the unit in kWh, and the reactive power in kVArh.

[NOTE: this approach would rely on the CMS to provide detailed operational power values for the supply. The charging code provided in (b) would still apply, but it would act more as a reference to the type of equipment installed than as a description of its operational use. Bypassing the Operational Information Document in this way means that if the LDSO requires reactive power information, this data would also need to be provided by the CMS as it would not available through any other route.]

OR

The management system shall record the operational switching times and load information for each unit and shall make this data available to the Meter Administrator in the form of an operational event log on at least a daily basis. The log shall include the Unit Identity, the exact time and date at which the load was switched and the percentage of the base power level specified in the charging code applied to the unit.

[NOTE: in this approach the MA would use the combination of the power percentages in the operational event log and the base power load in the charging code provided in (b) to determine the consumption.]

d) The management system shall allow the Meter Administrator to access switching times and load information on request.

e) Where the management system and calculation system are operated as separate applications, the switching time and load information shall be provided to the Meter Administrator in the following standard format:

Filename: mmmmmmmyyyymmdddvv.log

where:

mmmmmmm = Meter Number (alphanumeric),
yyyymmdd = date to which the events pertain
vvv = version number
log = file extension

File header: HMMMMMMMDYYYYMMDDVVV

where:

H = header identifier, H
MMMMMMM = Meter Number (alphanumeric)
YYYYMMDD = date to which the events pertain
VVV = version number

File body: UUUUUUUUUUUUYYYYMMDDHHMMSSCCCCCCC

where:

UUUUUUUUUU = Unit identity
YYYYMMDD = date of the switch event
HHMMSS = exact time of the switch event
CCCCCCC = charging code

OR, where load information is being provided directly,

UUUUUUUUUUUUYYYYMMDDHHMMSSPPPPPPPPRRRRRRRR

where:

PPPPPPPP = power applied to unit, in kWh
RRRRRRRR = active power applied to unit, in kVArh

OR, where the system reports percentages of a base charging code,

UUUUUUUUUUUUYYYYMMDDHHMMSSPPP

where:

PPP = percentage of base power (i.e. undimmed power level) applied to the lamp

File trailer: TNNNNN

where:

T = trailer identifier, T
NNNNN = total number of lines including header and trailer.

f) Where the management system and calculation system are operated as separate applications, and the management system is capable of calculating or measuring half hourly consumption, this data shall be provided to the MA in the same format as that described in section 4.5.3 'Equivalent Meter Output File Format'.

g) The calculation system shall calculate, by an approved method, the import kWh and import kVAr consumption in each half hour period in UTC for each MSID using the switching times and circuit Watts/charging codes/power level information reported in the operational event log.

h) The calculation system shall provide an output file in the format shown in 4.5.3 below for collection by the appointed HHDC.

i) The calculation system shall generate an exception list detailing any Unit Identities reported in the inventory list but which are not contained in the operational event log. The exception list shall be produced for each day of the report for which any Unit Identities are missing, and shall be provided to the UMSO and Customer on a monthly basis as a matter of routine, and additionally upon request from the UMSO or Customer.

j) In the event that all or part of the operational event log is not available for any reason, the calculation system shall apply a data representative of a switching regime in which the full load, as indicated by the charging code, is applied at dusk and switched off at dawn. This regime shall be applied for each of the affected Settlement Days affected.

k) As soon as complete data from the previous days becomes available, the calculation system shall recalculate the half hourly consumption and submit the revised data to the HHDC. Furthermore, where any data has been found to be in error, revised data may also be submitted to the HHDC once it becomes available.

l) The management and calculation systems shall provide secure access for HHDCs, Suppliers and Customers to only that data which is relevant to them.

m) The management and calculation systems shall provide an audit trail of changes to data held.

n) The calculation system shall be synchronised to UTC.

Requirements for management system

In addition to the functions listed above, the management system used as part of a centrally-managed EM must comply with the following:

o) All parts of the management system shall be synchronised to UTC either by connection to internet time servers or a radio clock, accurate to within ± 20 seconds per month.

p) Where the detailed inventory is to be maintained using the management system, provision shall be made for the system to hold details of the UMSO for each inventory item, such that inventories for more than one UMSO may be maintained.

Changes to SVA Data Catalogue

A change is required to the Equivalent Meter Type data item that appears in the P0068 UMS Technical Details flow issued by the UMSO. The description of the data item should be made more generic so as to reference any equivalent meter types that have been approved for use.

Equivalent Meter Type

Description:	Type of meter equivalent for unmetered supply, used for providing Settlement consumption data ~~via systems operating with LAMP or FLARE software.~~
Units:	None.
Valid set:	~~Lamp~~Equivalent Meters as approved by the Panel. ~~Flare~~
Domain:	Text
Logical Format:	CHAR(5)
Default Value:	not required
Acronym:	
Notes:	Name of equivalent meter used for unmetered supply, e.g. Lamp, Lailoken or Flare