Attachment A - Redlined BSCP520 v14.0 for CP1290

Section 1.1 **Scope and Purpose of the Procedure**

~~i)~~All energy transfers at points of connection and/or supply via circuits connected to the Licensed Distribution System shall be metered, except in a limited number of defined circumstances. These exceptions, known as Unmetered Supplies (UMS), shall be at the discretion and approval of the Unmetered Supplies Operator (UMSO) of the Licensed Distribution System Operator (LDSO). The UMSO shall only consider providing an UMS at an exit point ~~where:~~ in accordance with Statutory Instrument 2001 No. 3263- ~~the electrical load is of a predictable nature;~~

~~and~~

~~i)either:~~

~~a)the electrical load is less than 500W;~~

~~or~~

~~b)it is financially or technically impractical to install a meter due to:~~

- ~~the anticipated metering costs in the particular case being significantly higher than the usual metering costs associated with that size of electrical load;~~
- ~~technical difficulties associated with providing such a meter in the particular case; or~~
- ~~operation of law so as to prohibit or make excessively difficult the provision of such a meter in the particular case;~~

~~and~~

~~ii)where the UMSO has received sufficient information to enable the Non Half Hourly EAC to be accurately determined.~~

~~Where the criteria above are met, the LDSO shall provide the UMSO service.~~

Section 1.1.1-1.1.3 no changes

Section 1.2 **Main Users of Procedure and their Responsibilities**

This BSCP should be used by Suppliers, Half Hourly Data Collectors (HHDCs), Non Half Hourly Data Collectors (NHHDCs), Meter Administrators (MAs) and each UMSO.

Appendices 4.1 and 4.2 should be used by Customers, to identify ~~charging code~~Charge Codes, load ratings, Sswitch~~ing~~ regime codes, etc.

Section 1.2.1 **UMSO responsibilities**

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

a) where the inventory is subject to HH trading, providing a copy of the summary inventory to the appointed MA of an EM. Agreed updates to the summary inventory will be similarly passed to the appointed MA;

b) providing Unmetered Supply Certificates;

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

d) where the inventory is subject to NHH trading, calculating initial and revised EACs and submitting them to the appointed Supplier and NHHDC;

e) agreeing with the Supplier the type of EM (i.e. whether passive or dynamic) to be used in the LDSO's area and the location of any associated photo-electric cell unit (PECU) arrays;

f) informing Suppliers and MA of the weighted average latitude and longitude information for the installed Apparatus for each MSID where an EM is being used;

g) providing any other additional information required to enable the Supplier to determine the Distribution Use of System (DUoS) charges;

h) for supporting the Trading Query / Trading Dispute process as required by Section W of the Code;

i) for responding to any queries raised by the Panel, Supplier, the Supplier Volume Allocation Agent, the Data Collector, the Meter Administrator and / or the BSC Auditor;

j) providing Suppliers with the data that will enable them to fulfil their obligations under the Code;

k) notifying Suppliers on discovering that any Settlement data for which the UMSO is responsible is potentially incorrect or missing;

l) retaining Settlement data in accordance with this BSCP and Party Service Line (PSL) 100 'Non Functional Requirements for Licensed Distribution System Operators and Party Agents'~~retaining all the data that is necessaryfor the Supplier to fulfil its Code obligations e.g. history of summary inventories, history of EACs. Data must be retained for a minimum of 40 months~~;

m) ensuring that the Customer continues to comply with the conditions for an Unmetered Supply;

n) issuing an annual spreadsheet containing all UMS EACs for each MSID split by Settlement Register (using the appropriate Average Fraction of Yearly Consumption) to Suppliers each June, and providing confirmation to BSCCo. that this process has occurred; and

o) resending the correct EAC(s) to the NHHDC upon instruction by the Supplier if Supplier identifies a

discrepancy between EACs received from NHHDCs to those received from the UMSO.

Section 1.2.2- 1.2.4 no changes

Section 1.2.4.1 **Recording of Data**

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

- the Settlement Days for which the MA is appointed by the Supplier;
- the relevant SVA Metering System Number;
- the Identifier for the HHDC;
- the ~~LDSO~~ UMSO providing the Unmetered Supply Certificate for that Metering System;
- the geographical position defined by the ~~LDSO~~ UMSO for that SVA Metering System Number or, where these are defined by the ~~LDSO~~UMSO, the geographical positions for related subdivisions of the summary inventory for that SVA Metering Number;
- the indicator defined by the ~~LDSO~~ UMSO as to whether a PECU array is required for that SVA Metering System Number or for related ~~subdivisions~~ Sub-Meters of the summary inventory where these subdivisions are defined by the ~~LDSO~~UMSO; and
- the energisation status associated with the SVA Metering System Number in Supplier Meter Registration Service;
- the indicator defined by the ~~LDSO~~ UMSO as to whether a Central Management System is required for that SVA Metering System Number or for related ~~subdivisions (also known as s~~Sub-M~~m~~eters~~)~~ of the summary inventory where these ~~subdivisions~~ Sub-Meters are defined by the ~~LDSO~~UMSO.

The MA shall record and use such Market Domain Data (MDD) as is considered appropriate by the Panel (having regard to the MA's functions) and shall, in particular, use only ~~Market Domain Data~~MDD for those items in relation to which there is a ~~Market Domain Data~~MDD entry or other information provided by the UMSO where such information does not conflict with MDD.

Section 1.2.4.2 no changes

Section 1.2.4.3 **Resolution of Queries and Disputes**

The MA shall respond to queries raised by the Supplier, UMSO, the Supplier Volume Allocation Agent, the HHDC, the BSC Auditor and the LDSO.

In the event of any dispute as to whether an item of ~~Market Domain Data~~MDD is appropriate or, as the case may be, affects the accuracy of Settlement, the decision of the Panel shall be final.

Section 1.2.4.4-1.2.4.7 no changes

Section 1.2.5 Approval **of Categories of Apparatus, Charge Codes~~Load Rating~~ and ~~Time Switch Regime~~Switch Regimes ~~Codes~~**

The Panel, or its nominated representatives, approve additions or alterations to the categories of Apparatus ~~(charging code)~~, Charge Codes and their associated load rating (and dimming level load rating if applicable), and the ~~Time Switch Regime~~Switch Regimes ~~(TSR) codes~~. Proposals for approval, and for load research (regarding associated load ratings and/or dimming level load rating) to be initiated, will be recommended by the Unmetered Supplies User Group (UMSUG) to the Panel for approval. However the UMSUG Chair~~man~~ can agree Temporary~~Provisional~~ Codes for new Apparatus until they are formally approved by the Panel. ~~Where the UMSUG chairman does not believe it is possible to obtain approval of Codes because there is insufficient information to justify seeking approval for the proposed values, these Codes shall be termed Temporary.~~ The UMSUG will report to BSCCo for issues relating to profiles, ~~TSR~~Switch Regimes~~s~~, SSCs and EACs, and to the Panel for matters relating to Equivalent Meters and protocols.

The Balancing and Settlement Code Company (BSCCo) will be responsible for co-ordinating the notification of information between the Panel and UMSUG, together with notification of Panel decisions.

Section 1.3.1 **Inventory of Unmetered Apparatus**

One of the criteria for agreeing an UMS is that the Customer shall be required to provide and maintain an accurate, detailed inventory as agreed with the UMSO.

Any requirement for additional classifications of Apparatus, load rating information and ~~switching regimes~~Switch Regimes shall be referred to the UMSUG Chair~~man~~.

Following approval by the Panel, the UMSO shall implement any revisions applicable to changes of classifications of Apparatus, ~~switching regimes~~Switch Regimes and load ratings (including dimming level load rating where appropriate) relating to UMS.

The UMSO and MA shall also implement any ~~Provisional Codes or~~ Temporary Codes issued by the UMSUG Chair.~~man~~

~~Access to the inventory data shall be made available, on request, to the BSCCo, BSC Auditor, the Supplier or their Party Agents.~~

Section 1.3.2 no changes

Section 1.3.3 **Identification of SSCs, Profile Classes and Fays**

The number of SSCs and the associated Profile Class, Average Fraction of Yearly Consumption (AFYC) and ~~TSR~~Switch Regimes can be identified from the summary inventory, using the following as a basis:-

a) flat UMS (category A);

b) dusk to dawn UMS (category B);

c) half night and pre-dawn UMS (category C);

d) dawn to dusk UMS (category D); and

e) UMS with a specific TPR (category E) shall be allocated to the appropriate Profile Class, SSC and AFYC.

The ~~Appendices~~ Operational Information Document (OID) provides guidance on the allocation of Apparatus to the different categories and details for categories A to E.

Section 1.3.4-1.3.7 no changes

Section 1.3.8 **Half Hourly Trading**

The Supplier shall appoint Party Agents and send the registration details to SMRA. In addition the Supplier shall nominate the MA as the Meter Operator Agent (MOA).

~~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 unit (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 a passive EM or dynamic PECU EM~~ appointed for an MSID for all non CMS controlled equipment. 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. Where a CMS is required, the UMSO shall create and send a control file to the MA detailing the Apparatus that is to be managed by the CMS.

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

Section 1.4 **Other Sections within the BSCP**

The remaining sections in this document are:

Section 2 - This section is no longer in use.

Section 3 - Interface and Timetable Information: - this section defines in detail the requirements of each business process, as displayed in Section 2. ~~Neither the UMSO or t~~The MA cannot send ~~or receive~~ flows using the Data Transfer Service (DTS).

The UMSO can only send and receive flows using the DTS by utilising the LDSO role code. Where

Section 3 identifies either the UMSO and/or the MA being the sender/and or recipient of a 'D' flow, the data items to be provided will be as included in the BSC SVA Data Catalogue, however the method of sending the information will be manual e.g. e-mail. In any event the method shall be agreed between Parties/Party Agents in advance.

Section 4 - Appendices: - this section provides supporting information to this BSCP.

Section 1.5 **Balancing and Settlement Code Provision**

This BSCP has been produced in accordance with the provisions of the Balancing and Settlement Code (the Code), and in particular the provisions of Section S8 'Unmetered Supplies' which, amongst other things, state that:

- the UMSO shall determine whether a supply of electricity to a particular inventory of Apparatus should be treated as an Unmetered Supply;
- for Unmetered Supplies the UMSO shall issue an Unmetered Supplies Certificate;
- the UMSO will agree an Inventory of Apparatus with the Customer and will prepare a summary inventory from the detailed Inventory;
- if requested, the UMSO shall advise the Panel of the Equivalent Meter(s) to be used on its Distribution System, and will provide 1 year's written notice to the Panel if the Equivalent Meter is to be changed. The Panel will provide details of the Equivalent Meter used by an UMSO to a Supplier if requested;
- for each Profiled (NHH) Unmetered Supply the UMSO shall calculate an EAC and notify the Supplier or Supplier Agent of the value of the EAC;
- following a material change to the Inventory of Apparatus to which a UMS Certificate relates the UMSO shall provide:
  - a new summary Inventory of Apparatus (for an Equivalent (HH) Unmetered Supply); or
  - a new EAC (in the case of a Profiled (NHH) Unmetered Supply); and
- changing the treatment of an Unmetered Supply from an Equivalent (HH) Unmetered Supply to a Profiled (NHH) Unmetered Supply (or vice versa) shall only be made if the relevant Unmetered Supply Certificate is cancelled and a new Unmetered Supply Certificate is issued in its place.

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

Section 1.6 no changes

Section 1.7.1 **Acronyms**

The terms used in this BSCP are defined as follows:

AFYC	Average Fraction of Yearly Consumption
BSC	Balancing and Settlement Code
BSCCo	Balancing and Settlement Code Company
BSCP	Balancing and Settlement Procedure
CMS	Central Management System
~~CPC~~	~~Change Proposal Circular~~
DUoS	Distribution Use of System
EAC	Estimated Annual Consumption
EFD	Effective From Date
EM	Equivalent Meter
GSP	Grid Supply Point
HH	Half Hourly
HHDA	Half Hourly Data Aggregator
HHDC	Half Hourly Data Collector
Id	Identifier
kVArh	Kilovolt Ampere Reactive Hour
~~K~~kWh	Kilowatt Hour
LDSO	Licensed Distribution System Operator
LF	Load Factor
LLF	Line Loss Factor
MA	Meter Administrator
MDD	Market Domain Data
METD	Metering Equipment Technical Details
MOA	Meter Operator Agent
MSID	Metering System Identifier
NHH	Non-Half Hourly
NHHDA	Non-Half Hourly Data Aggregator
NHHDC	Non-Half Hourly Data Collector
OID	Operational Information Document
PECU	Photo Electric ~~Cell~~ Control Unit

SMRA	Supplier Meter Registration Agent
SMRS	Supplier Meter Registration Service
SSC	Standard Settlement Configuration
SSD	Supply Start Date
SVA	Supplier Volume Allocation
TPR	Time Pattern Regime
~~TSR~~	~~Time Switch Regime~~
UMS	Unmetered Supplies
UMSO	Unmetered Supplies Operator of the LDSO
UMSUG	Unmetered Supplies User Group
UTC	Co-ordinated Universal Time
W	Watts
WD	Working Day

Section 1.7.2 **Definitions**

Full definitions of the above acronyms and other defined terms used in this BSCP are, where appropriate, included in the Code. For clarification, definitions are provided below for terms specifically associated with UMS:-

"Apparatus" means all equipment in which electrical conductors are used, supported or of which they may form part;

"Applicant" means a person applying for Equivalent Meter approval.

"Astronomical Almanac" means the Astronomical Almanac published annually by ~~Her Majesty's~~the Station~~e~~ary Office or other suitable publication;

"Central Management System" means a system that is able to dynamically control and manage the electrical load used by Apparatus registered as an Unmetered Supply.

"Charge Code" means a 13 digit numeric code assigned to unmetered Apparatus that specifies the associated circuit watts and other technical information for the Apparatus.

"Dawn" means 30 minutes before S~~s~~unrise;

"Dusk" means 30 minutes after S~~s~~unset;

"Equivalent Meter" means the hardware and software ~~described in Appendix 4.5~~as defined in Section 1.2.6;

"Equivalent Meter UMS" means HH Unmetered Supplies;

~~"FLARE Software" means the software originally owned and licensed by Eastern Group plc to create the~~

~~Equivalent Meter data;~~

~~"LAMP Software" means the centrally developed software owned and licensed by St Clements Services Limited to create the Equivalent Meter data;~~

"MA System" means~~, in the context of a CMS based Equivalent Meter,~~ the software and hardware operated by the Meter Administrator and used to calculate half hourly consumption.

"PECU array" means the hardware described in Appendix 4.5;

"Percentage Dimming Level" means the percentage of its full load circuit loading (watts) at which the Apparatus is operating.

~~"Profiled UMS" means NHH Unmetered Supplies;~~

~~"Provisional Code" means a code that has been agreed by the UMSUG chairman and is awaiting formal approval.~~

"Sub-Meter" means that within an Equivalent Meter there is more than one PECU array or more than one summary inventory associated with an MSID;

"Summary Inventory" means a summarised version (prepared and/or agreed by the UMSO) of the detailed inventory provided to the UMSO by the Customer including the CMS Control File (as described in 4.5.2.3) where appropriate.

"Sunrise" means the time when the suns apparent disc is below and tangential to the horizon at sea level and to the east of the observer;

"Sunset" means the time when the suns apparent disc is below and tangential to the horizon at sea level and to the west of the observer;

"Switch Regime" means a 3 digit numeric code assigned to unmetered Apparatus that specifies the switching times and other technical information for the Apparatus

"Temporary Code" means a temporary 13 digit numeric code assigned to unmetered Apparatus that specifies the associated circuit watts and other technical information for the Apparatus and ~~means a code that the UMSUG chairman~~ has been issued by the UMSUG chair for use, prior to formal approval from the Panel~~believes it is not possible to obtain approval for because there is insufficient information to justify seeking approval~~.

Section 2-3.9 no changes

Section 3.10 **SVAA sends Market Domain Data**

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.10.1	If required.	Request MDD.	UMSO. MA	SVAA.		Electronic or other method, as agreed.
3.10.2	When published by SVAA.	Send MDD.	SVAA. BSCCo	UMSO. MA.	D0269 Market Domain Data Complete Set. D0270 Market Domain Data Incremental Set. MDD Circular	Electronic or other method, as agreed.
3.10.3	Within 4 working hours of receipt of MDD.	Send acknowledgement that data has been received.	UMSO. MA.	SVAA.	P0024 Acknowledgement.	Electronic or other method, as agreed.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
~~3.10.4~~	~~When MDD files are received.~~	~~Acknowledge Market Domain Data files on receipt.~~	~~MA.~~			~~Automatic acknowledgement generated by the gateway of the MA in respect of MDD transferred over the Managed Data Network or as agreed.~~
3.10.~~4~~5	If file not readable and / or incomplete.	Send notification and await receipt of MDD.	UMSO. MA.	SVAA.	P0035 Invalid Data.	Electronic or other method, as agreed.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.10.~~5~~6	On receipt of new ~~Market Domain Data~~MDD.	Ensure ~~that~~ all ~~Market Domain Data~~MDD affecting the accuracy of Settlement ~~which~~ is ~~manually entered by the MA is validated against the source data supplied by the Supplier Volume Allocation Agent before the data is recorded by the MA and used in performing its functions~~accurately entered and used in performing its functions.	UMSO. MA.			Internal Process
3.10.~~6~~7	After receiving notification.	Send corrected MDD. Return to 3.10.2.	SVAA.	UMSO. MA.	Refer to 3.10.2 for data flows.	Electronic or other method, as agreed.

Section 3.11 no changes

Section 3.12 **Approval of New Switch~~ing~~ Regimes and / or ~~Charging Code~~Charge Code**s

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.12.1	When required	Discuss and agree new charge code and/or switching regime	UMSUG		Details of new apparatus	Internal Process

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.12.2	Following 3.12.1	Relay recommendation	UMSUG	BSCCo	Details of new Ceharge Ceode and/or Sswitching Rregime recommendation	Meeting minutes
3.12.3	Following 3.12.2	Publish Temporaryprovisional Ceharge Ceodes and/or switching regime on BSC Website[1]	BSCCo		Details of new Ceharge Ceode and/or Sswitching Rregime recommendation	Internal Process
3.12.4	Following 3.12.3	Raise and progress MDD change in accordance with BSCP509 in relation to proposed new switching regimesSwitch Regimes and/or charging codeCharge Codes.	BSCCo		BSCP509	Internal Process
3.12.5	Following 3.12.4 if Change to MDD is approved	If MDD change approved, publish approved Ceharge Ceodes and/or switching regimesSwitch Regimes on BSC Website..	BSCCo		BSC Website	Internal Process

[1] Provisional Temporary Ceharge Ceodes and/or switching regimesSwitch Regimes will be used in Settlement for new apparatus, to ensure all energy used is accounted for.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
3.12.6	Following 3.12.4 if change to MDD is not approved.	If changes to the ~~charging code~~Charge Codes/~~switching regimes~~Switch Regimes are not approved, decision should be relayed to UMSUG. Assess C~~c~~harge C~~c~~odes and/or S~~s~~witch~~ing~~ R~~r~~egime including any additional testing evidence required and proceed as 3.12.1	BSCCo ~~UMSUG~~	UMSUG	SVG decision	~~Post / Fax /~~ Email

Section 3.13- 3.15 no changes

Section 4.1 Categories of Unmetered Apparatus

Note that the categories of Unmetered Apparatus can be found in the OID and associated ~~charging code~~Charge Codes may~~can~~ be found on the BSC Website in the Operational Information Charge Code spreadsheet.

Section 4.2 **Switch~~ing~~ Regime ~~Codes~~s**

Note that Switch Regime is described in the OID and a complete list may be found on the BSC Website in the Operational Information Switch Regime spreadsheet.~~Note that the switching regime codes can be found on the BSC Website.~~

Section 4.3 **Allocation of~~Profiled~~ Unmetered Supplies to Profile Classes and Standard Settlement~~ Description and Codes~~ Configurations**

UMS Description	Category	Standard Settlement Configuration		Profile Class	Time Pattern Regime (TPR) Id		TPR Start Time	TPR End Time	Average Fraction of Yearly Consumption (AFYC)
		GSP Groups Other Than _P	GSP Group _P (North Scotland)		GSP Groups Other Than _P	GSP Group _P (North Scotland)			
Continuous	A	0428	0925	Non-domestic LF >40%	00258	00307	22.00	06.00	36% of EAC
					00259	00259	06.00	22.00	64% of EAC

UMS Description	Category	Standard Settlement Configuration		Profile Class	Time Pattern Regime (TPR) Id		TPR Start Time	TPR End Time	Average Fraction of Yearly Consumption (AFYC)
Dusk to dawn	B	0429	0926	Domestic unrestricted	00260	00308	19.00	09.00	76% of EAC
					00261	00261	09.00	19.00	24% of EAC
Half night and pre-dawn	C	0430	0928	Domestic unrestricted	00264	00310	16.00 and 05.00	01.00 09.00	98% of EAC
					00265	00265	01.00 and 09.00	05.00 16.00	2% of EAC

UMS Description	Category	Standard Settlement Configuration		Profile Class	Time Pattern Regime (TPR) Id		TPR Start Time	TPR End Time	Average Fraction of Yearly Consumption (AFYC)
Dawn to dusk	D	0431	0927	Domestic unrestricted	00262	00309	16.00	04.00	4% of EAC
					00263	00263	04.00	16.00	96% of EAC

Section 4.4- 4.5.2 no changes

Section ~~4.5.1.2~~ 4.5.2**PECU Array Operating Procedure**

Overview

Before a Supplier can provide the Customer with a Half Hourly Unmetered Supply the PECU array installations must be operational and a MA appointed. The PECU arrays must conform to the specification as set out in the paragraph Specification for PECU arrays.

Types of PECUs

There are different types of PECUs, with different operating characteristics. Therefore, so that the operation of the PECU arrays reflect reality:-

PECUs used in the PECU array are to be ex-circuit as per the age of the population they are representing, i.e. not new cells

The PECUs in the PECU array are to be proportional to the various types in the area covered by the PECU array.

PECU Representation in Equivalent Meter

The operation of each PECU is deemed to be proportional to the population on the PECU array of that type of cell, e.g. if there are 8 cells of one type, then the operation of each one will represent the operation of one eighth i.e. 12.5% of the load controlled by that type of cell.

Multiple PECU Arrays

If more than one PECU array is used per Inventory, then the operation of a PECU cell is deemed to be proportional to the population of that type of PECU controlled load within the area covered by that PECU array. Therefore, where more than one PECU array is used per inventory, the inventory must identify which PECU array is controlling each item.

PECU Array Maintenance and Upkeep

Each PECU array shall be installed, maintained and operated in accordance with Good Industry Practice and the accuracy of its clock be maintained within +/- 20 seconds.

The MA shall monitor the performance of the PECU Arrays to ensure that that the single cells are representative of the total population of the cells within the summary inventory.

Where the monitoring of the PECU Arrays indicates that the switching light level of a single cell is out of line with other cells of identical type in the same PECU Array,

the single cell should be replaced.

Annually, the MA shall ensure that the PECU Arrays continue to reflect the requirements of the Unmetered Supplies Certificate. The MA shall notify the Supplier of the results of the annual review.

~~Where the LDSO has indicated, pursuant to paragraph 1.2.4.1, 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 ad-hoc extracts of the operational event data received from such system to the LDSO on request.~~

~~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.~~

PECU Array Failure

If a single PECU on the PECU array stops operating, then the remaining operating cells of that type will represent a correspondingly higher proportion of the load.

If communications with a PECU array are lost, then data from the adjacent PECU array will be used. In the event of total PECU array data failure, the relevant time switch profile, adjusted to the burning hours assumption used by the UMSO for that PECU regime will be used; these assumptions will be refined as actual data becomes available. In the event of data recovery within the Settlement period the MA will rerun EM and submit the corrected meter readings to the HHDC.

The EM will log all switching actions to the nearest minute.

Note: There can be more than one cycle of operation within 24 hours. The EM will monitor failed PECUs. The MA must replace failed PECUs within 5 WD. The MA shall ensure that the Customers provide replacement cells of the age and type requested by the MA.

Section ~~4.5.2.1~~ 4.5.3.1 **Functions of a Passive Meter.**

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

b) The Meter Administrator shall be able to add, delete and modify summary inventory data for each MSID both manually and electronically. ~~-~~Summarised inventory data shall comprise:

MSID;

Effective From Date;

Inventory title and/or reference;

~~Charging Code~~Charge Code;

~~Time Switch Regime~~Switch Regime;

Total number of units of each ~~charging code~~Charge Code/~~TSR~~Switch Regime combination.

c) The Meter Administrator shall be able to add, delete and modify ~~approved and interim charging code~~Charge Codes and their associated circuit watts and circuit Volt Amperes reactive (VA~~va~~rs) for both full load circuit loading and dimmed load ratings as appropriate.

d) The Meter Administrator shall be able to add, delete and modify ~~approved and interim TSR~~Switch Regimes and their associated operating times.

e) The system shall use the ~~weighted average~~ average latitude and longitude information ~~of the Apparatus in the inventory~~ and a sunrise/sunset algorithm to calculate the time of sunrise and sunset for each day within two minutes of the sunrise and sunset times as derived from the Astronomical Almanac.

f) The system shall calculate, ~~by an approved method~~as defined in 4.5.1, the import kWh and import k~~va~~VArh~~*~~ in each half hour period in UTC for each MSID.

g) The system shall provide secure access for HHDCs, Suppliers and Customers to only that data which is relevant to them.

h) The system shall provide an output file in the format shown in ~~the clause below~~4.5.4 for ~~collection provision by~~to the appointed HHDC.

i) The system shall provide an audit trail of changes to data held.

~~* except for the currently approved version of FLARE, which does not have this facility.~~

Section 4.5.3.2 **Functions of a Dynamic Meter using PECU Data**

In addition to the functions of a passive meter listed above, the following are required for a dynamic meter using PECU data:-

a) The system shall be able to use any one PECU array for the calculations of more than one MSID.

b) The system shall be able to use more than one PECU array for the calculations of one MSID.

c) In the event that a PECU in a PECU array fails to operate, the system shall compensate in its calculations by dividing that portion of load allocated to the faulty cell between the functioning cells of the same type as the failed cell.

d) If PECU array data is not available for any day then data from an alternative specified array shall be

used for the calculations. If that data is not available then a default PECU ~~switching regimes~~Switch Regime~~s~~ shall be used. The~~se~~ regime~~s~~ will be defined by the MA as an offset~~s~~ from sunrise and sunset, derived as for a Passive Meter.

e) The system shall maintain details for each PECU in a PECU array relating to location, type, manufacturer, date of manufacture and model number.

f) The system shall be able to download data from the PECU array.

g) The system shall monitor PECUs on the array and advise the MA of any failed units.

h) The system shall monitor the array second counter for time keeping and advise the MA when the deviation exceeds the warning level.

i) The MA shall be able to produce switching times from a decoded PECU array file.

j) The system ~~shall~~may provide a facility to apply time switch operations in accordance with a normal distribution about the nominal switching times. The standard deviation of the normal distribution shall be set by the MA.

k) The system shall provide facilities to retrospectively recalculate data for re-submission to Data Collectors.

l) The system shall be synchronised to UTC.

Section 4.5.3.3 **Functions of a Dynamic Meter using CMS Data**

A dynamic meter may use the detailed switching and load information recorded and reported by a Central Management System to allocate Half Hourly consumption data. In this case the CMS itself may be operated by the MA or the Customer, however the MA system (the system that is used to calculate the consumption), must be operated by a Meter Administrator Qualified in accordance with BSCP537, who retains the overall Settlement responsibility for the quality of the data submitted by the Customer via the CMS.

In addition to the functions of a passive meter listed above, the following requirements apply. Each requirement may relate to the CMS, the MA system or both. Where the two systems are combined into a single application, all requirements shall apply unless otherwise stated.

a) The MA system shall allow the Meter Administrator to add, delete and modify control information for each MSID both manually and electronically. This control file shall be provided to the Meter Administrator by the UMSO in the following format:

Filename: controlmmmmmmmyyyymmdd.log

where:

mmmmmmm = Sub-Meter ID (alphanumeric)

yyyymmdd = date of inventory

log = file extension

with all characters in lower case

File header: HMMMMMMMYYYYMMDDVVV

where:

H = header identifier, H

MMMMMMM = Sub-Meter ID (alphanumeric)

YYYYMMDD = effective from date

VVV = version number

File body: UUUUUUUUUUUUNNNNNNRRRCCCCCCCCCCCCC

where:

UUUUUUUUUUUU = CMS Unit Reference (alphanumeric)

NNNNNN = Number of items

RRR = Switch Regime (999 or 998)

CCCCCCCCCCCCC = Charge Code

File trailer: TNNNNN

where:

T = trailer identifier, T

NNNNN = total number of lines including header and trailer

The CMS Unit Reference shall be a 12-digit alphanumeric field that acts as a unique identifier of the unit under CMS control and to which the Charge Code and Switch Regime pertains. The structure of the CMS Unit Reference is to be agreed between the Customer and the UMSO, and may make use of existing information provided in the Detailed Inventory (e.g. National Street Gazetteer road codes) in combination with other data in order to ensure its uniqueness.

The Number of Items is the same as that contained in the Detailed Inventory and shall identify the number of items (e.g. lamps) associated with each CMS Unit Reference.

The Charge Code maintained by the Meter Administrator shall be the normal code for the lamp running at full load. The Switch Regime shall be set to 999 to denote the use of switched

equipment (i.e. dusk to dawn), or 998 to denote continuous burning for that MSID.

The CMS controller devices operating each item of equipment should be summed and provided as a row(s) in the file body. Each different type of CMS controller shall have its own Charge Code and will be assigned a continuous Switch Regime of 998 and a CMS Unit Reference of 'Control'

b) The CMS shall record the operational switching times and power levels set for each unit and shall make this data available to the Meter Administrator in the form of an operational event log on a daily basis. The log shall include the CMS Unit Reference, the time and date at which the load was switched and the power level expressed as a percentage of the circuit watts defined in the Operational Information Document for the relevant Charge Code. Where the CMS is unable to record and report the power level set for any unit, e.g. because of a control failure, it may include the unit in the operational event log but note the failure by use of an information flag.

c) Where the CMS and MA system are operated as separate applications, the switching time and load information shall be provided to the Meter Administrator in the following standard format text file. Where the CMS and MA system are integrated, the application must be able to produce the file on request for testing and audit purposes, however other methods may be used for transferring data between the two applications on a routine basis:

Filename: mmmmmmmyyyymmddvvv.log

where:

mmmmmmm = Sub-Meter ID (alphanumeric)

yyyymmdd = date to which the events pertain

vvv = version number

log = file extension

with all characters in lower case

File header: HMMMMMMMYYYYMMDDVVV

where:

H = header identifier, H

MMMMMMM = Sub-Meter ID (alphanumeric)

YYYYMMDD = date to which the events pertain

VVV = version number

File body: UUUUUUUUUUUUHHMMSSPPP.PPI

where:

UUUUUUUUUUUU = CMS Unit Reference (alphanumeric)

HHMMSS = time in hours, minutes and seconds, in UTC throughout the year

PPP.PP = percentage of base power i.e. undimmed power level applied to the lamp, to 2 decimal places

I = information flag (alphanumeric)

File trailer: TNNNNN

where:

T = trailer identifier, T

NNNNN = total number of lines including header and trailer

The information flag in the file body shall be used to provide any further information relating to the data contained within operational event log. The codes to be used for this flag, and any other information regarding the population of the operational event log, shall be detailed in the Operational Information document.

Any revisions to previously-reported data (e.g. after repair of a fault or re-establishment of communications) shall be provided either through a complete refresh of the relevant file or through the use of incremental updates containing only that data which has changed or was not previously reported. The approach to be used, and the way in which updated information should be identified, shall be as agreed between the CMS operator and the MA.

d) The MA system shall calculate, by an approved method, the import kWh and import kVArh consumption in each half hour period in UTC for each MSID using the switching times and power level information reported in the operational event log.

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

~~f)~~e) The MA system shall generate an exception list detailing any CMS Unit References reported in the control file 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 CMS Unit References 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.

~~g)~~f) In the event that all or part of the operational event log is not available for any reason, the MA system shall apply data representative of the Switch Regime indicated in the control file provided by the UMSO (i.e. 999 or 998). This regime shall be applied for each of the affected Settlement Days affected.

~~h)~~g) The MA system shall recalculate the half hourly consumption once data from previous days becomes available and shall submit this revised data to the HHDC. Furthermore, where any data

has been found to be in error, revised data should also be submitted to the HHDC once it becomes available.

~~i) The CMS and MA system shall provide secure access for HHDCs, Suppliers and Customers to only that data which is relevant to them.~~

~~j)~~h) The CMS and MA system shall provide an audit trail of changes to data held.

i) 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.

j) The Meter Administrator shall provide ad-hoc extracts of the CMS operational event data received from such system to the UMSO on request.

~~k) The CMS and MA system shall be synchronised to UTC either by connection to internet time servers or a radio clock, accurate to within ± 20 seconds per month.~~

Section 4.5.4-4.8.1 no changes

Section 4.8.2 **Table of Meter Administrator Performance Standards**

Seri	Sender	Process	Sub-process / Data Flow	Recipient	Performance Measure	Service levels	Reporting Method
1	Meter Administrator.	3.1~~43~~ Equivalent meter Fault Reporting.	Fault repairs.	Data Collector.	Time to rectify material faults (i.e. those which affect data quality.	(i) 95% rectified within 2 working days of notification or discovery of fault. (ii) 99% rectified within 15 working days of notification or discovery of fault.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.
2	Meter Administrator.	3.10.~~34~~ ~~Market Domain Data~~MDD.	Acknowledgement.	Supplier Volume Allocation Agent.	Acknowledge receipt.	100% of acknowledgements within 4 working hours in accordance with BSC Procedure BSCP508.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.

Seri	Sender	Process	Sub-process / Data Flow	Recipient	Performance Measure	Service levels	Reporting Method
3	Meter Administrator.	3.4.5~~3~~ Termination of Appointment of Meter Administrator.	Provision of Sufficient Data.	Incoming Meter Administrator.	Complete, valid, correct format and accurate within Timescales.	(i) 95% within 5 working days in accordance with BSC Procedure BSCP520 (ii) 99% within 15 working days in accordance with BSC Procedure BSCP520.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.
4	Meter Administrator.	3.1.13~~4~~ Metering Obligation.	Operation of Equivalent Meter.	Unmetered Supplies Operator.	Within 5WD validate Summary Inventory against OID. ~~Request summary inventory.~~	(i) 95~~100~~% of requests within 5~~1~~ working days (ii) (ii) 99% within 15 working days in accordance with BSC Procedure BSCP520. ~~of failure to receive summary inventory by 5 working days after appointment.~~	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.
5		3.1.15 Metering Obligation.	Operation of Equivalent Meters.	Supplier.	Notify failure to provide information for Initial Settlement.	100% within 1 working day of Initial Settlement Run.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.

Seri	Sender	Process	Sub-process / Data Flow	Recipient	Performance Measure	Service levels	Reporting Method
6		~~3.4.6~~4.5.2 Metering Obligation.	Provision of PECU array.		Compliance with BSCP520.	100% to BSCP520.	Provision of data under PSL100 section 10.2.1.
7	Meter Administrator.	3.7.5 Metering Obligation.	Confirmation of energisation status change.	Data Collector, Supplier.	Complete, valid, correct format and accurate within Timescales.	(i) 95% within 5 working days 3 in accordance with BSCP520; (ii) 99% within 15 working days in accordance with BSCP520.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.
8	Meter Administrator.	3.9.1.2~~4~~ Interface to Other Agents.	Metering Equipment Technical Details.	Data Collector.	Complete, valid, correct format and accurate within Timescales.	(i) 95% within 5 working days 3 in accordance with BSCP520; (ii) 99% within 15 working days in accordance with BSCP520.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.

Seri	Sender	Process	Sub-process / Data Flow	Recipient	Performance Measure	Service levels	Reporting Method
9		3.14~~13~~.4 Interface to Other Agents.	Error Rectification.	Data Collector.	Notification of data availability following re-run.	95% within 1 working day of re-run; 99% within 5 working days of re-run.	Report, sent by the Supplier. Provision of data under PSL100 section 10.1.2.