Smart Energy Code

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Solution Design Specifications

SECMP0018:

Standard Electricity Distributor Configuration Settings

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Summary

This modification aims to set default values for Electricity Network Parties' (ENPs) configuration settings for all Electrical Smart Metering Equipment (ESME). This will reduce the need for ENPs to apply settings immediately after the ESME is first installed and commissioned.

Impacts

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- All Supplier Parties, Electricity Network Parties and Other SEC Parties are impacted by this modification.
- There are no impacts on DCC Central Systems and/or Party interfacing systems.

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About this Document

This is the Solution Design Specification (SDS) document for SECMP0018, which contains the detailed

- Context;
- Business requirements; and
- Proposed solution.

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1. Context

This section sets out the context for SECMP0018.

Context

SMETS requires that ESME are able to record a range of voltage related information and send a range of voltage related Alerts. SMETS also lays out a number of Configuration Data Items that ESME must use to control such voltage related recording.

Great Britain Companion Specification (GBCS) specifies Use Cases which allow Electricity Distributors to set the values of the Configuration Data Items. However, GBCS does not specify 'default values', to be configured before ESME installation, for these Configuration Data Items, except for the configuration of voltage related Alerts and events[1]. Thus, until configured by an Electricity Distributor, an ESME will report voltage related data on the basis of potentially varying configuration values.

[1] Event configuration is planned to be introduced at GBCS 2.0 by ways of BEIS' CRP412.

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2. Business Requirements

This section sets out the detailed business requirements for the SECMP0018 Proposed Solution.

Functional Requirements

This modification is to require in GBCS that ESME:

- Are configured with specified default values for all voltage related and Maximum Demand Configurable Period Configuration Data Items and so have default values for:

  Detecting voltage related events; and

  Establishing the time period within which the value to be recorded as the Maximum Demand (Configurable Time) Active Power Import value is recorded as there are no current default values specified in GBCS 2.0 draft 2.

- Have default values for sending voltage related Alerts and logging events than those currently specified in GBCS 2.0 draft 2.

  Note that this Modification would be applied to GBCS after BEIS's Change Request Proposal (CRP) 412 and that CRP 412 sets out default values relating to the recording of Events in the Power Event Log and the sending of Alerts via the Wide Area Network (WAN). Thus, if both this Modification and CRP 412 were to be applied to GBCS at the same Technical Specifications Group (TSG) Version, the Alert and event default values in this Modification would be reflected in GBCS at that TSG Version. This is the proposers preferred implementation approach.

Note that these default values are different than the equivalent values currently in GBCS and so are not those that will be configured in ESME being built for go-live.

Implementation Obligations

Supplier licences require the installation of ESME that comply with SMETS; SMETS requires that ESME comply with GBCS. Therefore, the GBCS requirement for ESME to have the default configuration values specified in this Modification would be a requirement on Suppliers in relation to ESME they install, which complies with the version of GBCS in to which these changes have been incorporated.

Changes

To deliver the Functional Requirements:

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- The voltage related Alert and event default configurations in GBCS section 16.2 would be amended; and
- The other voltage related configuration data items' default values would be added to GBCS Annex 7 – 'Data Item Values to be set prior to installation of Devices'

The changes in this Modification would not affect the structure of any of the existing Use Cases, and so do not require changes to DCC User Interface Specification (DUIS), Meter Mapping Catalogue (MMC) or Data Service Provider (DSP) systems.

Compatibility

The default configuration values are allowable values at TSG1.0 and so do not give rise to any compatibility issues.

Configuration of events and Alerts as required here will only be fully possible once BEIS CRP412 is incorporated. However, the events in question can be recorded on TSG1.0 Devices and the Alerts in question can be generated by TSG1.0 Devices. Thus, again no compatibility issues arise.

Dependencies

This document is drafted on the basis that CRP412 has been incorporated in to the TSG version in which this Modification is included.

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3. Solution

This section details the required changes to SEC and wider documents that are proposed to implement the requirement for this SEC Modification. Please note that all numbering, message codes, alert codes and so on GBCS 2.0 Draft 2 and related document versions.

SEC main body change

None

SMETS changes

None

CHTS changes

None

GBCS changes - ESME Default Configuration: Voltage Parameters and Thresholds

To add the remaining voltage related default configurations, amend GBCS Annex 7 by adding the green highlighted text, rows and table, data items and values that shall be configured in Devices prior to installation as per the following tables:

- Table 28a for the required values; and
- Table 28b listing the Device Language Message Specification (DLMS)/ Companion Specification for Energy Metering (COSEM) data elements and content.

Note that the item “Maximum Demand Configurable Time Period” contained in table 28a is not related to voltage default values; it implements a subset of requirements raised as part of the now withdrawn SECMP0003.

Device	Data Item	Reference	Value	Notes
ESME (all variants)	Maximum Meter Balance Threshold	SMETS 5.7.4.27	300,000,000 millipence	NA
ESME (all variants)	Randomised Offset Limit	SMETS 5.7.4.33	600 seconds	The Randomised Offset [INFO] Is the product of the Randomised Offset

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Device	Data Item	Reference	Value	Notes
				Limit(5.7.4.33) and the Randomised Offset Number(5.7.1.5) rounded to the nearest second. This value is used to delay the Tariff Switching Table times, the Auxiliary Load Control Switch switching times, and HAN Connected Auxiliary Load Control Switch switching times
ESME (all variants)	RMS Extreme Over Voltage Threshold	SMETS 5.7.4.35	265.0 volts	GBCS Use Cases specify a resolution to tenths of volts
ESME (all variants)	RMS Extreme Over Voltage Measurement Period	SMETS 5.7.4.34	180 seconds	NA
ESME (all variants)	RMS Extreme Under Voltage Threshold	SMETS 5.7.4.37	190.0 volts	NA
ESME (all variants)	RMS Extreme Under Voltage Measurement Period	SMETS 5.7.4.36	180 seconds	NA
ESME (all variants)	RMS Voltage Sag Threshold	SMETS 5.7.4.40	190.0 volts	NA
ESME (all variants)	RMS Voltage Sag Measurement Period	SMETS 5.7.4.38	180 seconds	NA
ESME (all variants)	RMS Voltage Swell Threshold	SMETS 5.7.4.41	265.0 volts	NA
ESME (all variants)	RMS Voltage Swell Measurement Period	SMETS 5.7.4.39	180 seconds	NA
ESME (all variants)	(Phase[1]) Average RMS Voltage Measurement Period	SMETS 5.7.4.6 (5.19.1.3)	1800 seconds	NA
ESME (all variants)	(Phase[1]) Average RMS	SMETS 5.7.4.5 (5.19.1.2)	212.0 volts	NA

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Device	Data Item	Reference	Value	Notes
	Under Voltage Threshold			
ESME (all variants)	(Phase[1]) Average RMS Over Voltage Threshold	SMETS 5.7.4.4 (5.19.1.1)	258.0 volts	NA
Polyphase ESME	Phase[2] Average RMS Voltage Measurement Period	SMETS 5.19.1.3	1800 seconds	NA
Polyphase ESME	Phase[2] Average RMS Under Voltage Threshold	SMETS 5.19.1.2	212.0 volts	NA
Polyphase ESME	Phase[2] Average RMS Over Voltage Threshold	SMETS 5.19.1.1	258.0 volts	NA
Polyphase ESME	Phase[3] Average RMS Voltage Measurement Period	SMETS 5.19.1.3	1800 seconds	NA
Polyphase ESME	Phase[3] Average RMS Under Voltage Threshold	SMETS 5.19.1.2	212.0 volts	NA
Polyphase ESME	Phase[3] Average RMS Over Voltage Threshold	SMETS 5.19.1.1	258.0 volts	NA
ESME (all variants)	Maximum Demand Configurable Time Period:	SMETS 5.7.4.26		
	- start time		16:00 in hh:mm	
	- end time		20:00 in hh:mm	

Table 28a: Data items and values to be configured prior to installation of Devices

Data Item	Reference	COSEM class ID	OBIS Code	Attribute ID	Attribute Name	COSEM datatype	Encoded value	Decoded value
Maximum Meter Balance Threshold	SMETS 5.7.4.27	9000	0-0:94.44.2.20	4	value_passive	double-long	0x11E1A300	300,000,000
Randomised Offset Limit	SMETS 5.7.4.33	1	0-0:94.44.0.1	2	value	long-unsigned	0x0258	600

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Data Item	Reference	COSEM class ID	OBIS Code	Attribute ID	Attribute Name	COSEM datatype	Encoded value	Decoded value
RMS Extreme Over Voltage Threshold	SMETS 5.7.4.35	71	0-0:17.0.1.255	4	threshold_normal	double-long-unsigned	0x00000A5A	2650
RMS Extreme Over Voltage Measurement Period	SMETS 5.7.4.34	71	0-0:17.0.1.255	6	min_over_threshold_duration	double-long-unsigned	0x00000B4	180
RMS Extreme Under Voltage Threshold	SMETS 5.7.4.37	71	0-0:17.0.2.255	4	threshold_normal	double-long-unsigned	0x0000076C	1900
RMS Extreme Under Voltage Measurement Period	SMETS 5.7.4.36	71	0-0:17.0.2.255	6	min_over_threshold_duration	double-long-unsigned	0x00000B4	180
RMS Voltage Sag Threshold	SMETS 5.7.4.40	71	0-0:17.0.3.255	4	threshold_normal	double-long-unsigned	0x0000076C	1900
RMS Voltage Sag Measurement Period	SMETS 5.7.4.38	71	0-0:17.0.3.255	6	min_over_threshold_duration	double-long-unsigned	0x00000B4	180
RMS Voltage Swell Threshold	SMETS 5.7.4.41	71	0-0:17.0.4.255	4	threshold_normal	double-long-unsigned	0x00000A5A	2650
RMS Voltage Swell Measurement Period	SMETS 5.7.4.39	71	0-0:17.0.4.255	6	min_over_threshold_duration	double-long-unsigned	0x00000B4	180
(Phase[1]) Average RMS Voltage Measurement Period	SMETS 5.7.4.6 (5.19.1.3)	7	1-0:32.24.0.255	4	capture_period	double-long-unsigned	0x00000708	1800
(Phase[1]) Average RMS Under	SMETS 5.7.4.5	1	1-0:32.31.0.4	2	value	double-long-unsigned	0x00000848	2120

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Data Item	Reference	COSEM class ID	OBIS Code	Attribute ID	Attribute Name	COSEM datatype	Encoded value	Decoded value
Voltage Threshold	(5.19.1.2)							
(Phase[1]) Average RMS Over Voltage Threshold	SMETS 5.7.4.4 (5.19.1.1)	1	1-0:32.35.0.4	2	value	double-long-unsigned	0x00000A14	2580
Phase[2] Average RMS Voltage Measurement Period	SMETS 5.19.1.3	7	1-0:52.24.0.255	4	capture_period	double-long-unsigned	0x00000708	1800
Phase[2] Average RMS Under Voltage Threshold	SMETS 5.19.1.2	1	1-0:52.31.0.4	2	value	double-long-unsigned	0x00000848	2120
Phase[2] Average RMS Over Voltage Threshold	SMETS 5.19.1.1	1	1-0:52.35.0.4	2	value	double-long-unsigned	0x00000A14	2580
Phase[3] Average RMS Voltage Measurement Period	SMETS 5.19.1.3	7	1-0:72.24.0.255	4	capture_period	double-long-unsigned	0x00000708	1800
Phase[3] Average RMS Under Voltage Threshold	SMETS 5.19.1.2	1	1-0:72.31.0.4	2	value	double-long-unsigned	0x00000848	2120
Phase[3] Average RMS Over Voltage Threshold	SMETS 5.19.1.1	1	1-0:72.35.0.4	2	value	double-long-unsigned	0x00000A14	2580

Table 28b: DLMS COSEM values to be configured in Devices at manufacture.

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GBCS Changes – ESME Default Configuration: WAN Alert and Power Event Log

SMETS and GBCS define the Alerts which are generated by the ESME when the measurement values for voltage related parameters either exceed or fall below set thresholds. These Alerts are recorded in the Power Event Log and sent to the Distribution Network Operator (DNO).

CRP412 introduces the ability for DNOs to send Service Requests to the ESME and configure whether these Alerts should be stored in the Power Event Log and whether they should be send via the WAN.

DNO require that all ESME have the same default configuration with regards to the sending and storing of Alerts prior to installation. This configuration must be set by the ESME manufacturer during the manufacturing process.

The following table lists all DNO related Alerts as defined in GBCS, table 16.2. For each Alert the default configuration required by the DNO for sending the WAN Alert and storing the Alert in the Power Event Log is given. This table needs to be added to GBCS, Annex 7 as new table 28c.

Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
0x8004	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 2 (current value above threshold; previous value below threshold)	Y	Y

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Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
0x8005	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 3 (current value above threshold; previous value below threshold)	Y	Y
0x8006	Average RMS Voltage below Average RMS Under Voltage Threshold (current value below threshold; previous value above threshold)	Y	Y
0x8007	Average RMS Voltage below Average RMS Under Voltage Threshold on Phase 1 (current value below threshold; previous value above threshold)	Y	Y
0x8008	Average RMS Voltage below Average RMS Under Voltage Threshold on Phase 2 (current value below threshold; previous value above threshold)	Y	Y
0x8009	Average RMS Voltage below Average RMS Under Voltage Threshold on Phase 3 (current value below threshold; previous value above threshold)	Y	Y
0x8020	RMS Voltage above Extreme Over Voltage Threshold (voltage rises above for longer than the configurable period)	Y	Y
0x8021	RMS Voltage above Extreme Over Voltage Threshold on Phase 1 (voltage rises above for longer than the configurable period)	Y	Y
0x8022	RMS Voltage above Extreme Over Voltage Threshold on Phase 2 (voltage rises above for longer than the configurable period)	Y	Y
0x8023	RMS Voltage above Extreme Over Voltage Threshold on Phase 3 (voltage rises above for longer than the configurable period)	Y	Y

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Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
0x8024	RMS Voltage above Voltage Swell Threshold (voltage rises above for longer than the configurable period)	N	N
0x8025	RMS Voltage above Voltage Swell Threshold on Phase 1 (voltage rises above for longer than the configurable period)	N	N
0x8026	RMS Voltage above Voltage Swell Threshold on Phase 2 (voltage rises above for longer than the configurable period)	N	N
0x8027	RMS Voltage above Voltage Swell Threshold on Phase 3 (voltage rises above for longer than the configurable period)	N	N
0x8028	RMS Voltage below Extreme Under Voltage Threshold (voltage falls below for longer than the configurable period)	Y	Y
0x8029	RMS Voltage below Extreme Under Voltage Threshold on Phase 1 (voltage falls below for longer than the configurable period)	Y	Y
0x802A	RMS Voltage below Extreme Under Voltage Threshold on Phase 2 (voltage falls below for longer than the configurable period)	Y	Y
0x802B	RMS Voltage below Extreme Under Voltage Threshold on Phase 3 (voltage falls below for longer than the configurable period)	Y	Y
0x802C	RMS Voltage below Voltage Sag Threshold (voltage falls below for longer than the configurable period)	N	N
0x802D	RMS Voltage below Voltage Sag Threshold on Phase 1 (voltage falls	N	N

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Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
	below for longer than the configurable period)		
0x802E	RMS Voltage below Voltage Sag Threshold on Phase 2 (voltage falls below for longer than the configurable period)	N	N
0x802F	RMS Voltage below Voltage Sag Threshold on Phase 3 (voltage falls below for longer than the configurable period)	N	N
0x8085	Average RMS Voltage below Average RMS Over Voltage Threshold (current value below threshold; previous value above threshold)	Y	Y
0x8086	Average RMS Voltage below Average RMS Over Voltage Threshold on Phase 1 (current value below threshold; previous value above threshold)	Y	Y
0x8087	Average RMS Voltage below Average RMS Over Voltage Threshold on Phase 2 (current value below threshold; previous value above threshold)	Y	Y
0x8088	Average RMS Voltage below Average RMS Over Voltage Threshold on Phase 3 (current value below threshold; previous value above threshold)	Y	Y
0x8089	Average RMS Voltage above Average RMS Under Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x808A	Average RMS Voltage above Average RMS Under Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y

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Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
0x808B	Average RMS Voltage above Average RMS Under Voltage Threshold on Phase 2 (current value above threshold; previous value below threshold)	Y	Y
0x808C	Average RMS Voltage above Average RMS Under Voltage Threshold on Phase 3 (current value above threshold; previous value below threshold)	Y	Y
0x808D	RMS Voltage above Extreme Over Voltage Threshold (voltage returns below for longer than the configurable period)	Y	Y
0x808E	RMS Voltage above Extreme Over Voltage Threshold on Phase 1 (voltage returns below for longer than the configurable period)	Y	Y
0x808F	RMS Voltage above Extreme Over Voltage Threshold on Phase 2 (voltage returns below for longer than the configurable period)	Y	Y
0x8090	RMS Voltage above Extreme Over Voltage Threshold on Phase 3 (voltage returns below for longer than the configurable period)	Y	Y
0x8091	RMS Voltage above Voltage Swell Threshold (voltage returns below for longer than the configurable period)	N	N
0x8092	RMS Voltage above Voltage Swell Threshold on Phase 1 (voltage returns below for longer than the configurable period)	N	N
0x8093	RMS Voltage above Voltage Swell Threshold on Phase 2 (voltage returns	N	N

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Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
	below for longer than the configurable period)		
0x8094	RMS Voltage above Voltage Swell Threshold on Phase 3 (voltage returns below for longer than the configurable period)	N	N
0x8095	RMS Voltage below Extreme Under Voltage Threshold (voltage returns above for longer than the configurable period)	Y	Y
0x8096	RMS Voltage below Extreme Under Voltage Threshold on Phase 1 (voltage returns above for longer than the configurable period)	Y	Y
0x8097	RMS Voltage below Extreme Under Voltage Threshold on Phase 2 (voltage returns above for longer than the configurable period)	Y	Y
0x8098	RMS Voltage below Extreme Under Voltage Threshold on Phase 3 (voltage returns above for longer than the configurable period)	Y	Y
0x8099	RMS Voltage below Voltage Sag Threshold (voltage returns above for longer than the configurable period)	N	N
0x809A	RMS Voltage below Voltage Sag Threshold on Phase 1 (voltage returns above for longer than the configurable period)	N	N
0x809B	RMS Voltage below Voltage Sag Threshold on Phase 2 (voltage returns above for longer than the configurable period)	N	N

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Event / Alert Code	Event / Alert Code Meaning	Default Configuration - Send WAN Alert Y = Send Alert N = Do not send Alert	Default Configuration - Store Alert in Power Event Log Y = Store in log N = Do not store in log
0x8002	Average RMS Voltage above Average RMS Over Voltage Threshold (current value above threshold; previous value below threshold)	Y	Y
0x8003	Average RMS Voltage above Average RMS Over Voltage Threshold on Phase 1 (current value above threshold; previous value below threshold)	Y	Y
0x809C	RMS Voltage below Voltage Sag Threshold on Phase 3 (voltage returns above for longer than the configurable period)	N	N
0x8010	Over Current	N	N
0x8011	Over Current L1	N	N
0x8016	Over Current L2	N	N
0x8013	Over Current L3	N	N
0x8014	Power Factor Threshold Below	N	N
0x8015	Power Factor Threshold Ok	N	N

Table 28c: WAN Alert and Power Event Log settings to be configured prior to installation of Devices

GBCS changes – ESME Default Configuration: Maximum Demand Configurable Time Period

The ESME supports the Maximum Demand Configurable Time Period as per SMETS requirements. The DUIS Service Request Variant 6.18.1 allows Service Users to set the start time and the end time; but all other items listed in GBCS Use Case ECS37 cannot be set by the DNO as part of the Service Request.

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In order to establish the same default behaviour in all ESME with regards to the Maximum Demand Configuration Time Period, OBIS code 0-0:12.0.0.255 must be configured accordingly during the ESME manufacturing process using the details listed in the below table. It is proposed to add this table to GBCS, Annex 7 as new Table 28d.

Note that Service Request Variant (SRV) 6.18.1 results in Use Case ECS37 being send to the meter with all fields populated using the values given in the GBCS Use Case except for start time and end time. Upon reception the meter will overwrite the default values configured at manufacturing with those sent in ECS37. Once this has occurred the default values set at manufacturing cannot be re-instated.

This behaviour has been shared with DNOs and has been found to satisfy the needs. Further actions were not deemed necessary, e.g. the creation of a new Service Request which allows DNOs to fully configure the details contained in ECS37 using the DUIS interface (as proposed earlier in SECMP0003).

Attribute	COSEM datatype	Tag	Length	Value	Meaning
entries:entries[1..2]	Array	0x01	0x02		An array with two entries, the first turns on monitoring and the second turns it off
entries:entries[1]. schedule_table_entry. Index	long-unsigned	0x12		0x0001	The first entry which turns monitoring on
entries:entries[1]. schedule_table_entry. enable	Boolean	0x03		0x01	True, so the entry always executes
entries:entries[1]. schedule_table_entry. script_logical_name	octet-string(6)	0x09	0x06	0x00000A8064FF	0-0:10.128.100.255 which, as per Table 7.3.8, is the script table controlling monitoring
entries:entries[1]. schedule_table_entry. script_selector	long-unsigned	0x12		0x0001	Meaning start monitoring at the time in this entry
entries:entries[1]. schedule_table_entry. switch_time	octet-string(4)	0x09	0x04	0x10000000	16:00:00:00 - the time at which monitoring is to turn on
entries:entries[1]. schedule_table_entry. validity_window	long-unsigned	0x12		0xFFFF	The script is processed at any time after power failure

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Attribute	COSEM datatype	Tag	Length	Value	Meaning
entries:entries[1]. schedule_table_entry. exec_weekdays	bit-string(7)	0x04	0x07	0xF8	0xF8 = 0b11111000, which means execute this script on Monday to Friday inclusive
entries:entries[1]. schedule_table_entry. exec_specdays	bit-string(0)	0x04	0x00		No special day processing
entries:entries[1]. schedule_table_entry. begin_date	octet-string(5)	0x09	0x05	0xFFFF0A1FFF	0xFFFF (means any year), 0x0A (means tenth month, so October), 0x1F (means 31st), and 0xFF (means any day of the week)
entries:entries[1]. schedule_table_entry. end_date	octet-string(5)	0x09	0x05	0xFFFF021CFF	0xFFFF (means any year), 0x02 (means second month, so February), 0x1C (means 28th), and 0xFF (means any day of the week)
entries:entries[2]. schedule_table_entry. index	long-unsigned	0x12		0x0002	The second entry which turns monitoring off
entries:entries[2]. schedule_table_entry. enable	Boolean	0x03		0x01	True, so the entry always executes
entries:entries[2]. schedule_table_entry. script_logical_name	octet-string(6)	0x09	0x06	0x00000A8064FF	0-0:10.128.100.255 which, as per Table 7.3.8, is the script table controlling monitoring
entries:entries[2]. schedule_table_entry. script_selector	long-unsigned	0x12		0x0002	Meaning stop monitoring at the time in this entry
entries:entries[2]. schedule_table_entry. switch_time	octet-string(4)	0x09	0x04	0x14000000	20:00:00:00 - the time at which monitoring is to turn off
entries:entries[2]. schedule_table_entry. validity_window	long-unsigned	0x12		0xFFFF	The script is processed at any time after power failure
entries:entries[2]. schedule_table_entry. exec_weekdays	bit-string(7)	0x04	0x07	0xFE	0xFE = 0b11111110, which means execute this script every day

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Attribute	COSEM datatype	Tag	Length	Value	Meaning
entries:entries[2]. schedule_table_entry. exec_specdays	bit-string(0)	0x04	0x00		No special day processing
entries:entries[2]. schedule_table_entry. begin_date	octet-string(5)	0x09	0x05	0x000001FFFF	From the start of time
entries:entries[2]. schedule_table_entry. end_date	octet-string(5)	0x09	0x05	0xFFFFFFFFFF	For all time

Table 28d: Tag, length and values to be populated in attribute 2 of OBIS code 0-0:12.0.0.255 (which relates to the SMETS 'Maximum Demand Configurable Time Period ') to be configured prior to installation of ESME.

SEC Appendix E changes

None

DUIS changes

None

MMC changes

None

Other SEC document changes

None

Changes to documents outside of SEC

None

Appendix 1: Glossary

The table below provides definitions of the terms used in this document.

Acronym	Definition
BEIS	Business, Energy and Industrial Strategy
CRP	Change Resolution Proposal
DCC	Data Communications Company
DNO	Distribution Network Operator
DSP	Data Service Provider
DUIS	DCC User Interface Specification
ENP	Electricity Network Provider
ESME	Electrical Smart Metering Equipment
GBCS	Great Britain Companion Scheme
MMC	Meter Mapping Catalogue
SDS	Solution Design Specification
SMETS	Smart Metering Equipment Technical Specification
SRV	Service Request Variant
TSG	Technical Specifications Group
WAN	Wide Area Network

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