Discussion Request 1218		MCC Implementation for 3-phase and CT Metered Customers			
Status	Issued to Market	**Priority**	TBD	**Status Date**	26/01/2022

Date	Version	Reason for Change	Version Status
15/10/2021	1.0	Issued to the Market	Final
19/01/2022	1.1	Re-versioned	Final

Part 1 DETAIL OF DISCUSSION REQUEST / MARKET CHANGE REQUEST	
Requesting Organisation(s)	ESBN
Request Originator Name	Kevin O'Connor
Date Raised	30/09/2021

Classification of Request	
Change Type	Schema Impacting

Detail of Request
Reason for Request

Background

Phase 1 of the National Smart Metering Programme (NSMP) was completed in March 2021 and delivered the installation of 250,000 Smart Electricity Meters. With the Market Schema Release V13 delivered as part of this phase, all system, business, and market changes were completed to allow 30-minute interval data to flow to Suppliers via the Market Systems and for Active Import Interval Data to be used in all market processes including DUoS Billing and Market Settlement Aggregation.

Phase 2 of the Programme was approved by the CRU Position Paper entitled 'Smart Meter Upgrade Phase 2 Scope' (CRU/21/074) in July 2021, and section 2.2 refers to the implementation of 'less common MCC codes' for the V14 Release at the end of Phase 2.

Smart MCCs approved MCC12, MCC13, MCC14, MCC15, MCC16, MCC17, MCC18, MC19 and MCC20 were identified at a high level in the schema. MCC12 and MCC16 were implemented in Phase 1 (Schema V13.00) for the bulk of DG1 and DG2 locations, which make up most of the existing meter inventory.

Phase 2 will deliver the installation of an additional 1 million Smart Electricity Meters (including this meter cohort) by the end of September 2023. With the Market Schema Release V14 at the end of September 2023, it will require new Smart MCCs to be enabled in the meters along with solutions for 3-phase and CT meters. New Meter Category Codes will need to be introduced to support each of the new Smart meter variety that is indicated by this DR1218 , and separate Code Change Requests will be raised when the necessary information is available.

To implement a design for the next meter cohort, the following will need to be in place:

- Current Transformer (CT) metering (single and 3-phase)
- 3-phase whole current metering
- Smart MCCs MCC17 & MCC13 to provide a Smart data service for those customer locations that require the following:
  o Register data service for kWh/kVArh (MCC17) and
  o An interval data service for kW/kVAr plus 24 kWh/kVArh register (MCC13).

This DR provides details of the Retail Market Design changes associated with MCC Implementation for 3 Phase and CT metering for DG5 metered customers.

Proposed Solution

This details the changes required to the Retail Market Design to enable the utilisation of Smart MCCs - MCC13 & MCC17 for 3 phase and CT ~~metering for DG5~~ metered customers.

The scope of this DR also includes:
- 3phase and CT metering (which extends beyond MCC04,MCC05 or MCC08 and also beyond MCC50, MCC50+)
- Extension beyond the two new wattless MCCs: MCC13 and MCC17
- MCC01at 3 phase and MCC01at CT metering
- MCC02 replacement to MCC16 (single phase, 3 phase and CT metering)

There are 2 MCCs being updated for the V14 release (MCC13 and MCC17), they will be delivered by adding the required detail to the Market Documentation. A placeholder currently exists in the Schema for these MCCs. The Customer Groups availing of New Smart MCC13 and MCC17 ~~are DG5, LV connected Commercial/ Industrial customers~~ are those with existing wattless registers and new connections requiring wattless (MCC17).

The MCCs can be described as the following:

MCC17
- Active Day Off Peak Import kWh
- Active Night Off Peak Import kWh
- Active Peak Import kWh
- Reactive Wattless Import kVArh

As this is Register based, expected frequency of reading data is to be provided on the bi-monthly billing cycle.

MCC13
- Active HH Import kW
- Reactive HH Import kVAr
- Active Cumulative Import kWh
- Reactive Cumulative Import kVArh

As this is Interval based, expected frequency reading data is be provided daily.

The legacy MCCs MCC04, MCC07 and MCC08 (and other legacy MCCs requiring a Reactive Import data register) will be provided with a Standard Smart Tariff (SST) MCC as part of the proposed ~~ESBN deployment~~ customer led approach.

Please refer to the comments section below for additional detail on impacted MCCs, MCC status by Programme Phase and v14 Customer Journey .

The proposal is to follow the same general design approach as that of MCC16/MCC12 for Schema V13. The new MCCs will be requestable as part of the following processes: CoS, CoLE, New Connections, Change of Customer Details and Re-energisation.

The scope and content of the proposed changes, involving changes to Market Messages, Data Items, Data Definitions and Data Codes are detailed below.

Notes:
- The Customer Journey for planned exchanges from legacy meters will be consistent with DR1215.
- MCC17is not requestable through MM030 as this will require a technical assessment.
- Transition between MCC12/16 and MCC13/17 can occur (change in supply). Design will account for this, functions and rules to be built. This requires a technical assessment and approval by local engineering staff (site visit) (e.g a decreased connection that does not require wattless).

Scope of Change

Design Documentation	Business Process	DSO Backend System Change	MP Backend System Change	Tibco	Supplier EMMA	Schema	Webforms	Extranet/ Market Website
☒	☒	☒	☒	☒	☒	☒	☒	☒

Market Messages

Message No.	Market Procedure	Changes to Message structure	Changes to MSG data elements	Impact on validations
010	Registration Request	N	Y	Y
013	Customer Details Change	N	Y	Y
014R	Customer Details Rejection	N	N	Y
016	Change of Legal Entity	N	Y	Y
017	Meter Point Status Change Request	N	Y	Y
030	Meterworks Request	N	Y	Y
101	New Connection Registration Acceptance	N	Y	N
101P	New Connection Provisional Acceptance	N	Y	N
101R	New Registration Rejection	N	Y	N
102	Change of Supply Registration Acceptance	N	Y	N
102P	Change of Supplier Provisional Acceptance	N	Y	N
102R	Change of Supplier Registration Rejection	N	Y	Y
105	Change of Supplier Confirmation	N	Y	N
114	Change of Customer Details Confirmation	N	Y	N
116	CoLE Confirmation	N	Y	N
116R	CoLE Rejection	N	N	Y
117R	Meter Point Status Request Rejection	N	N	Y
130R	MeterWorks Request Rejection	N	N	Y
301	Meter Point Characteristics	N	Y	N
301N	Proposed Meter Point Characteristics	N	Y	N
320	Validated CoS Reading	N	Y	N
320W	Withdrawn CoS Reading	N	Y	N
331	Interval Meter Technical Details	N	Y	N
332	Non-Interval Technical Meter Details	N	Y	N
332W	Withdrawn Read Non-Interval Meter Technical Details	N	Y	N
343	SMART Import Interval Meter Daily Readings	N	Y	N
345	SMART HH Cumulative Register Readings	N	Y	N

Data Definitions

No change.

Data Codes

New Meter Configuration Codes on MM010, MM013, MM016, MM017, MM101, MM102, MM105, MM114, MM301, MM320, MM331, MM332, MM101P, MM102P, MM102R, MM301N, MM320W, MM332W
MCC13: HH2CH_2CR_IPW:
MCC17: SST IMP + W

New Register Type Codes on MM331, MM343, MM345
71: Import HH kVAr
75: Import 24hr kVArh

Market Message Implementation Guides

Message Guide	Affected Yes/No
Meter Registration	Yes
Meter Works	Yes
Data Processing	Yes
Customer and Data Agreements	Yes

Market Process Diagrams – MPDs

Market Process Number	Market Procedure	Affected Yes/No
Change of Supplier	MPD 04 – SoLR – Process Design Document	Yes
New Connections	MPD 05 – New Non-Interval Metered Connection	Yes
Meter Works	MPD 11 – Changes to Meter Configuration	Yes
Meter Works	MPD 13 – Planned Meter Exchange	Yes
Data Processing and Data Aggregation	MPD 15 .1 Data Processing for Half Hourly Interval Metering	Yes

Guidance Documentation

Document	Version	Affected Yes/No
No Impact		

Briefing Document

Briefing Document	Affected Yes/No
HH Validation Estimation and Substitution Summary	Yes
Meter Configuration Code Guidance Notes	Yes
Periodic Consumption and Initial EUF Values for Smart Non-Interval Sites	Yes
Supplier Communications Resulting from DUoS Billing and Invoicing	Yes
Periodic Consumption and EUF Parameter Values	Yes
Market Schema Guide (COBL)	Yes
Comms Technically Feasible (CTF) Briefing Document	Yes
Initial Periodic Consumption Values Non-Quarter Hourly Meter Readings	Yes

User and Technical Documents

Reference	Name	Version	Affected Yes/No
TBC			

Comments

Additional impacts:

- Webform - TBC description of the new data codes
- RMP Extranet - to accommodate new data codes
- Downloadable files (tbc exactly which) - to accommodate new data codes
- MPRN Enquiry Webservice - to accommodate new data codes
- RMDS website glossary to be updated to include any additional terms

All Market Design Documentation for SMART Metering Retail Market Design Workshops affected by this DR can be found on the RMDS Secure Website (Impacted Briefing documents affected by this DR will be uploaded to the RMDS Secure Website later).

ROI Market Message Guide - Data Processing_v14 Working Draft
ROI Market Message Guide - Customer and Data Agreements_v14 Working Draft
ROI Market Message Guide - Meter Registration_v14 Working Draft
ROI Market Message Guide - Meter Works_v14 Working Draft
MPD 04 - SoLR Process_v14 Working Draft
MPD 05 New Non Interval Metered Connection_v14 Working Draft
MPD 11 Changes to Meter Configuration_V14 Working Draft
MPD 13 Planned Meter Exchange_v14 Working Draft
MPD 15.1 Data Processing for Half Hourly Interval Metering_v14 Working Draft
Market Schema Guide

MCC status by Programme Phase & v14 Customer Journey
Please note: The below table is to provide additional context; in the future it may be subject to change.

Requestable	Active but not Requestable	Not included in v14 design
✔	✘	N/A

Requestable – *As defined in page 5 Periodic Consumption and EUR Parameter Values (rmdservice.com)*

MCC	Description	*Requestable status		v14 Customer Journey		
		Today	v14	On Exchange	Smart Data Services request	New Connections
MCC01	'On exchange' MCC for MCC01	✔	✔	MCC01	MCC12/ MCC16	MCC01
MCC02	Import Active (D/N)	✔	✘	MCC16	MCC12	MCC16
MCC03	Import Active (24H + Night Storage Heating)	✔	✘	TBC	TBC	TBC
MCC04	Import Active (D/N) and Reactive Register	✔	✘	MCC17	MCC13	MCC17
MCC05	Import Active (D/N), Reactive Register and Max Demand	✘	✘	N/A	N/A	N/A
MCC06	Import Active (D/N + Normal/Peak Cum), Reactive Register and Max Demand	✔	✔	N/A	N/A	N/A
MCC07	Import Active (24H + Night Storage Heating) and Reactive Register	✔	✘	MCC17	MCC13	MCC17
MCC08	Import Active (24H) and Reactive Register	✔	✘	MCC17	MCC13	MCC17
MCC09	UNMETERED	✔	✔	N/A	N/A	N/A
MCC10	Import Active and Reactive (QH) and MIC	✔	✔	N/A	N/A	N/A
MCC11	Import & Export Active and Reactive (QH) and MIC	✔	✔	N/A	N/A	N/A
MCC50	Non-Standard	✘	✘	Case-by-case basis	Case-by-case basis	Case-by-case basis
MCC51	D/N+ Night Storage Heating	✘	✘	TBC	*MCC12	MCC16
MCC53	2 X D/N	✘	✘	TBC	*MCC12	MCC16
MCC57	24H+D	✘	✘	MCC16	*MCC12	MCC16
MCC58	24H+D/N	✘	✘	TBC	*MCC12	MCC16
MCC59	24H+D/N+ Wattless	✘	✘	MCC17	*MCC13	MCC17
MCC60	24H+D/N+ Night Storage Heating	✘	✘	TBC	*MCC12	MCC16
MCC61	2x24H	✘	✘	MCC01	*MCC12	MCC16
MCC62	2x24H+ Night Storage Heating	✘	✘	TBC	*MCC12	MCC16
MCC63	2x24H+D	✘	✘	MCC16	*MCC12	MCC16
MCC64	2x24H+ Wattless	✘	✘	MCC17	*MCC13	MCC17
MCC65	3X24H	✘	✘	MCC01	*MCC12	MCC16
MCC67	3X24H+D	✘	✘	MCC16	*MCC12	MCC16
MCC70	3X24H+ Night Storage Heating	✘	✘	TBC	*MCC12	MCC16
MCC71	4X24H	✘	✘	MCC01	*MCC12	MCC16
MCC72	3X24H+ Wattless	✘	✘	MCC17	*MCC13	MCC17
MCC73	4X24H+ Night Storage Heating	✘	✘	TBC	*MCC12	MCC16
MCC74	5X24H	✘	✘	MCC01	*MCC12	MCC16
MCC75	24H+2X Night Storage Heating	✘	✘	TBC	*MCC12	MCC16
MCC76	4X24H+ Wattless	✘	✘	MCC17	*MCC13	MCC17

*Where CTF is proven
TBC – Any legacy MCCs with D/N or Night storage heating are subject to a programme decision which will be customer or ESBN led.
Nonstandard / Case by Case – Not obvious what the meter configuration is at the installation, each site will need to be evaluated (site visit) to reach end state.

Part 2 - Performance and Data Changes	
Market Messages volume, processing etc.	
Data	
Details of Data changes e.g., cleansing	

Approved by	CRU