Data Communications Company

Migration Authorisation Mechanism V4.~~1~~0 draft

SMETS1 TMAD Child Document

Table of Contents

1   Introduction

In accordance with Clause 4.35 of the Transition and Migration Approach Document (TMAD) Appendix AL of the Smart Energy Code (SEC), DCC is required to prepare this document; the Migration Authorisation Mechanism (MAM). The MAM prescribes the arrangements for each Responsible Supplier to send a Migration Authorisation to DCC. It also makes provision for certain information exchanges relating to the Migration of SMETS1 Installations containing Dormant Meters.

For clarity, any provision within the MAM is secondary to provisions documented in the TMAD. Any detail remains in the TMAD and is not repeated here.

2   Context/Background

This focus of this document is the arrangements that allows:

- Responsible Suppliers to provide Migration Authorisations to DCC (including allowing prioritisation of SMETS1 Installations and the provision of Supplier/Network Operator Certificate IDs)

- DCC to notify Responsible Suppliers of the device configuration/firmware upgrade schedule for Dormant Meters in accordance with Clause 4.29 of the TMAD;

- DCC to notify Responsible Suppliers of the Dormant Meter Migration Schedule in accordance with Clause 4.30 of the TMAD; and

- Responsible Suppliers to respond to the Dormant Meter Migration Schedule with options to notify any SMETS1 Installation as a priority and/or to notify Supplier/Network Operator Certificate IDs in accordance with Clause 4.32 of the TMAD.

3   Scope and Assumptions

1. This document applies for all capability releases. DCC envisaged that the MAM will be amended to reflect further changes in the FOC cohort in 2021.

2. The scope of each Migration Authorisation provided by a Responsible Supplier under the regime prescribed in this document relates solely to SMETS1 Installations comprising Active Meters for which they are the Responsible Supplier (albeit the SMETS1 Installation may also include Active or Dormant Meters for which another Supplier Party is the Responsible Supplier). This document also covers matters related to DCC's scheduling of Dormant Meter Migrations, noting that, a deemed Migration Authorisation is granted by the Responsible Supplier for each Dormant Meter consistent with Clause 4.27 of the TMAD.

3. Migration takes place for all Devices comprising a SMETS1 Installation together.

4. Gas-only Installations are out of scope of this document.

5. Where required, a Responsible Supplier shall Digitally Sign an electronic CSV (Comma Separated Value) file using their IKI File Signing Key from the USB token and File Signing Utility.

6. Where required, a Responsible Supplier shall encrypt the CSV/Excel file using a file compression tool such as 7-Zip.

4   Migration Authorisation for Active Meter(s)

The core Migration Authorisation process is a weekly regime (starting on a Monday) requiring a submission from each Responsible Supplier that wants to migrate Active Meters in the following Migration Week by 1000 hours on the Thursday of the preceding week.

For clarity, where the Migration week is starting on Monday 5 August 2019, the Migration Authorisation shall be sent by 1000 hours on the Thursday 1 August 2019.

Each Responsible Supplier shall generate the Migration Authorisation file in the format as set out in section 7.2 of this document.

Each row of the Migration Authorisation CSV body shall contain one of the following:

- An MPAN for an Active ESMS for a single-fuel Installation;

- An MPAN for an Active ESMS and an MPRN for an Active GSMS for a dual-fuel Installation;

- An MPAN for an Active ESMS where a Dormant GSMS may exist as part of dual-fuel Installation (the Dormant MPRN must not be populated);

- An MPAN for an Active ESMS where a GSMS may exist with a different Supplier (the Responsible supplier shall provide Migration Authorisation only for the Active Meter); or

- An MPRN for an Active GSMS where an ESMS exists with a different Supplier (the Responsible supplier shall provide Migration Authorisation only for the Active Meter).

Responsible Suppliers can generate the Migration Authorisation file using the Macro Enabled Excel Spreadsheet in section 7.2.5 which will create CSV files complying with the format set out in section 7.2. To use this Excel spreadsheet solution, the Responsible Supplier needs to enable macros with Microsoft Excel to permit the file to operate as designed.

Each Responsible Supplier shall send the Migration Authorisation File to DCC securely as set out in Section 7.5.

Responsible Suppliers shall send the Migration Authorisation file to DCC by 1000 hours each Thursday for the following Migration Week.

Late submission of Migration Authorisations may be processed by DCC but this is not guaranteed as set out in Clause 4.37 of the TMAD.

DCC will verify the Digital Signature and shall reject the Migration Authorisation and notify the Responsible Supplier, if Digital Signature verification fails, the DCC shall follow the process set out in the Migration Error Handling and Retry Strategy (see https://www.smartdcc.co.uk/document-centre/tmad-child-documents/migration-error-handling-and-retry-strategy-mehrs/).

DCC will validate (using the data held by the SMSO) that the submitted MPxNs are for Active Meters and will report on the outcome of the validation to the Responsible Supplier using S1MIG-010 - Migration Authorisation Validation Responses report (including Active Indicator) defined in the Migration Reporting Regime (MRR). Successfully validated MPxNs will be considered for Migration.

Where supply at an installation is split across two active suppliers, the Migration Control Centre will co-ordinate the migration by designating a week in which the active suppliers submit a Migration Authorisation including any "split supply" devices. The Migration Control Centre will publish a calendar on a regular basis, which will be dependent on demand, to indicate the dates on which split supply devices should be submitted. The Migration Control Centre will not be held responsible for any devices which fail to migrate due to one supplier within the installation failing to submit details within the designated week.

If DCC receives a valid Migration Authorisation from a Responsible Suppliers for a SMETS1 Installation that contains one Active and one Dormant Meter, the DCC shall notify the Responsible Supplier of the Active Meter by 2359 hours on the Thursday that falls three days prior to the Migration Week using S1MIG-010 - Migration Authorisation Validation Responses report as set out in the TMAD clause 4.37. If the Migration Authorisation is received after 1000 hours on the Thursday for the following Migration Week, DCC may not be able to notify the Responsible Supplier by 2359 hours on the same day.

5 DCC notification for Dormant Meter Device Configuration / Firmware upgrade

In accordance with the Clause 4.29 in the TMAD, DCC will notify the Responsible Supplier for a Dormant Meter in advance of any device configuration/firmware upgrade. DCC shall discharge this obligation by including the information set out in section 7.3 in an Excel spreadsheet to notify the Responsible Supplier for Dormant Meter. A template file is available in section 7.3.4.

DCC shall send the Excel spreadsheet to the Responsible Supplier identified by SEC Party Signifier within the file using DCC SharePoint [Folder: "Notification\Inbox"].

On file upload, an email notification will be sent to the Responsible Supplier.

6 DCC notification for Dormant Meter Migration Schedule

In accordance with the Clause 4.30 in the TMAD, DCC will notify the Responsible Supplier for an Installation containing only Dormant Meter in advance of the Migration of the SMETS1 Installation of which the Dormant Meter is a part. DCC shall discharge this obligation by including the information set out in section 7.4 in an Excel spreadsheet to notify the Responsible Supplier for Dormant Meter. A template file is available in Section 7.4.4.

DCC shall send the Excel spreadsheet to the Responsible Supplier identified by SEC Party Signifier within the file using DCC SharePoint [Folder: "Notification\Inbox"].

On file upload, an email notification will be sent to the Responsible Supplier.

The Responsible Supplier can use the same Excel spreadsheet to notify DCC of the Supplier Certificate IDs and or Priority in accordance with TMAD Clause 4.32. These Certificate IDs shall be linked with the Device during Commissioning by the Commissioning Party (except for Supplier Certificate in Installations containing Meters with more than one Responsible Supplier). Where there are two Affiliated Responsible Suppliers for the Smart Metering Systems that comprise part of the same SMETS1 Installation, the Responsible Supplier for the Electricity Smart Metering System may specify the Supplier and/or Network Operator Certificate IDs that it wishes the DCC

to include in Commissioning Requests in respect of the Gas Smart Metering System, in which case the Responsible Supplier for the Gas Smart Metering System shall be deemed to have specified those Supplier and/or Network Operator Certificate IDs for the purpose for clause 4.32 in the TMAD, except where GroupID = "EA", or "EB" or "EC"

Network Operator Certificate IDs also can be notified using the same Excel spreadsheet. DCC Alert N42 shall be raised on association of SMKI Certificates with the Device.

For an Installation with more than one Responsible Supplier, the Responsible Suppliers shall each receive a Device Commissioned Alert and DCC will use SRV6.21 to associate each Responsible Supplier's certificate IDs with the SMETS1 Device if the following are true

- The Installation has only Active or only Dormant devices (not a mixture of both).

- The supplier uses DUIS 3

- The required certificates have been provided in the Migration Authorisation (or in response to Dormant Migration Schedule Notification)

In a mixed site scenario (where both Active and Dormant devices are in the same Installation), the Device Commissioned Alert will be sent to the supplier as per TMAD clause 6.5. The DCC would not be able to associate the Suppliers' SMKI Certificate IDs with the dormant Device during Commissioning by the Commissioning Party irrespective of which version of DUIS the Responsible Supplier is using. In such circumstances, the Responsible Supplier will need to use the SRV6.21 Request Handover of DCC Controlled Device Service Request, to associate their SMKI Certificate IDs with the SMETS1 Device following the receipt of Device Commissioned Alert.

If the Responsible Supplier wishes to send an updated Dormant Meter Migration Schedule that includes Certificate IDs and/or Priority Flags, the Responsible Supplier must send the file to the DCC securely as set out in Section 7.5 by 1000 hours on the Thursday in the week preceding the Migration Week. Where there are two Affiliated Responsible Suppliers for the Smart Metering Systems that comprise part of the same SMETS1 Installation, the Responsible Supplier for the Electricity Smart Metering System may provide the Network Operator Certificate ID in respect of the Gas Smart Metering System, in which case the Responsible Supplier for the Gas Smart Metering System shall be deemed to have specified that Network Operator Certificate ID, except where GroupID = "EA", or "EB" or "EC".

In accordance with Clause 4.48 of the TMAD, DCC shall associate appropriate Network Operator Certificate IDs (Critical and Non-Critical) with the SMETS1 ESME, if Responsible Supplier has not provided the same in this notification response and the relevant Certificate IDs have been notified by the Electricity Distributor as set out in Clause 4.47 of the TMAD.

7 Communication Format

The sub-sections below give details of the file specifications for the files used in Migration Authorisation Mechanism.

7.1 General characteristics of csv files

Where CSV (Comma Separated Values) files are used as file format, general characteristics that apply are as follows:

- fields will be comma separated;

- the file, before the certificate information and digital signature is added, will conform to RFC 4180 standard for comma separated files, http://tools.ietf.org/html/rfc4180, used by Excel;

- only ASCII characters will be used (which are identical to the first 128 UTF-8 characters);

- text fields need not be enclosed within opening and closing double quotation marks unless the content includes a comma (","); if included they will be stripped out when the file is processed;

- date/time and numeric fields need not be enclosed within double quotation marks;

- field lengths shown are maximum and exclude any opening and closing double quotation marks or comma separators;

- values that are less than the maximum field length will not be padded;

- blank fields, meaning no value between 2 commas, or no value except opening and closing double quotation marks for text fields, will be regarded as data being omitted for that field; and

- the line feed character shall be normalised to 0x0A.

7.2   Migration Authorisation (for Active Meters)

All data sent for use in the DCC Systems for the purposes of Migration Authorisation shall be in the format of a CSV file.

The CSV file specification for Migration Authorisations are provided in this section.

7.2.1   File name

Migration Authorisation CSV shall be named in this format:

File Type	File name format	Example
Migration Authorisation (MA)	MA_<3 char SMSO Name>_<23 char User Id>_<YYYYMMDD>_<HHMMSS>.csv If CSV file is created using the Macro Enabled Excel Spreadsheet, file name will be generated in above format.	MA_CGI_70-B3-D5-1F-30-00-A0-01_20181207_134412.csv Note: The User ID(EUI-64 ID) in the filename or in the file header is used for file handling only. This User ID is not associated with the SMETS1 Device. Only the User ID in the subject of SMKI Certificate gets associated with the SMETS1 Device.

Table 7.2.1:Migration Authorisation File Name

7.2.2   CSV Header

The first line of the file, must be a line containing one of the Supplier's User ID (EUI64 ID), as specified in Table 7.2.2. This should be the Critical Supplier ID associated with the ESME. It will be expressed as 23 characters in 8 octet pairs separated by hyphens, in the form A1-B2-C3-D4-E5-D6-E7-H8. In the case of a site where two Supplier's User ID are present, the Organisational Number (identified by the least significant nybble of the fifth octet and sixth octet) within each Supplier's User ID will be used to identify Active-Active split supply sites; if the Organisational Number is the same for both Supplier's User ID then it will not be processed as a split site but as a non-split active site.

The second line of the file must be a YES or NO value indicating whether or not the Responsible Supplier wishes DCC to Commission its SMETS1 Devices as part of the Migration.

The third line of the file must be the 3 character SMSO name for the meter points mentioned in this file. Any Responsible Supplier that has Active Meters across multiple SMSOs shall generate a separate Migration Authorisation for each SMSO.

Each line in the file must use 0x0A as end of line character.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
User ID	Mandatory	Text	23	16 char EUI64 number separated by the hyphens. "A1-B2-C3-D4-E5-F6-G7-H8" This User ID is used for handling and managing the MA file only and should be the User ID associated with the ESME in sites comprising of only Active Meters. To associate User ID with SMETS1 EMSE and SMETS1 GSME, Responsible Supplier shall provide SMKI Certificate with appropriate User ID.
New line (0x0A)				
Commissioned by DCC	Mandatory	Text	3 (MAX)	YES or NO only (in upper case)
New line (0x0A)				
SMSO	Mandatory	Text	3	3-character SMSO name in uppercase from the list below BRG - British Gas CGI – Instant EnergyEDM – EDMI MDS – Morrison Data Services NPW - NPower SCM – Secure Meters TRL – Trilliant

7.2.3 CSV Body

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
MPAN	See description	Text	13	Mandatory for Active ESME
MPRN	See description	Text	10	Mandatory for Active GSME.
Migrate on	Optional	Date	8	UTC Date in YYYYMMDD format Note: If "Migrate on" date is specified, the DCC will not attempt to migrate the Installation on any other day of the Migration Week except in circumstances where the Active Meter forms part of a SMETS1 Installation that also comprises another Active Meter for which a different Supplier Party is the Responsible Supplier.
Migration Week	Mandatory except where Migrate on populated	Date	8	UTC Date in YYYYMMDD format. Date of the Monday of the Migration week.
Priority	Optional	Char	1	"Y" (in upper case) if the priority is set.
ESME Supplier Certificate Id (Critical) – Serial Number	Mandatory if MPAN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Supplier Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
ESME Supplier Certificate Id (Non-Critical) – Serial Number	Mandatory if MPAN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Supplier Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
Id (Critical) – Serial Number				
ESME Network Operator Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate Id (Non-Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Critical) – Serial Number	Mandatory if MPRN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Non-Critical) – Serial Number	Mandatory if MPRN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Non-Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
GSME Supplier Certificate Id (Critical) – Serial Number	Mandatory if MPRN is specified.	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Non-Critical) – Serial Number	Mandatory if MPRN is specified.	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
New line (0x0A)				

Table 7.2.3: Migration Authorisation Body

7.2.4 CSV Footer

No footer required.

7.2.5 File template

The latest template file (in the format SMETS1 Migration Authorisation vX.X.xlsm) in the below link can be used to generate the Migration Authorisation CSV file.

https://www.smartdcc.co.uk/document-centre/tmad-child-documents/migration-authorisation-mechanism/

7.2.6 Sample MA File

An example of Migration Authorisation CSV file (.csv) can be found in the below location. The file is provided as text file (.txt) to ensure it renders in notepad, and not in CSV default Excel which may display the data format differently.

https://www.smartdcc.co.uk/document-centre/tmad-child-documents/migration-authorisation-mechanism/

7.3 Dormant Meter Notification for Device configuration / firmware upgrade

DCC shall provide the device configuration/firmware upgrade schedule for Dormant Meters using an Excel spreadsheet file in the following format.

7.3.1 File Header

This file header is populated by the DCC.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
Name	Mandatory	Text	Variable	Name of the Supplier
New line				
SEC Party Signifier	Mandatory	Text	Variable	List of 6-characters SEC Party Signifier values separated by comma.
New line				
Market Participant ID	Mandatory	Text	Up to 4 characters	List of Market Participant ID (from Meter Registration Data) separated by comma. Market Participant ID is the unique identifier by which each Market Participant is identified. The Market Participant ID is 3 characters for Gas and 4 characters for Electricity.
New line				
SMSO	Mandatory	Text	3	3-character SMSO code in uppercase from the list below BRG - British Gas CGI – Instant Energy EDM – EDMI MDS – Morrison Data Services NPW - NPower SCM – Secure Meters TRL – Trilliant

Table 7.3.1: FW Upgrade Notification Header

7.3.2 File Body

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
MPAN	Optional	Text	13	ESME Meter Point
MPRN	Optional	Text	10	GSME Meter Point. MPRN values must have any leading zeros trimmed.
Not Before	Mandatory	Date	8	DDMMYYYY format
Not After	Optional	Date	8	DDMMYYYY format
CH Serial Number	Optional	Text	Variable	Device Serial Number of CH
CH Manufacturer				Manufacturer Name of CH
CH Model				HW Model Details of CH
CH Existing FW				Existing FW Version of CH
CH Target FW				Target FW Version of CH
ESME Serial Number				Device Serial Number of ESME

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
ESME Manufacturer				Manufacturer Name of ESME
ESME Model				HW Model Details of ESME
ESME Existing FW				Existing FW Version of ESME
ESME Target FW				Target FW Version of ESME
GSME Serial Number				Device Serial Number of GSME
GSME Manufacturer				Manufacturer Name of GSME
GSME Model				HW Model Details of GSME
GSME Existing FW				Existing FW Version of PPMID
GSME Target FW				Target FW Version of PPMID
PPMID Serial Number				Device Serial Number of PPMID
PPMID Manufacturer				Manufacturer Name of PPMID
PPMID Model				HW Model Details of PPMID
PPMID Existing FW				Existing FW Version of PPMID
PPMID Target FW				Target FW Version of PPMID
New line				

<div align="center">

Table 7.3.2: FW Upgrade Notification Body

</div>

7.3.3 File Footer

No Footer required.

7.3.4 File template

The template file (SMETS1 Dormant Meter Firmware Upgrade Schedule Notification vX.X.xlsx) in the below location shall be used by the DCC to notify Responsible Suppliers of the Dormant Meter device configuration/firmware upgrades schedule.

https://www.smartdcc.co.uk/document-centre/tmad-child-documents/migration-authorisation-mechanism/

7.4 Dormant Meter Notification for Migration schedule

DCC shall provide the Migration schedule for Dormant Meters using an Excel spreadsheet file in the following format.

7.4.1 File Header

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
Name	Mandatory	Text	Variable	Name of the Supplier Party.
New line				
SEC Party Signifier	Mandatory	Text	Variable	List of 6-characters SEC Party Signifier values separated by comma.

New line				
Market Participant ID	Mandatory	Text	Up to 4 characters.	List of Market Participant ID from Meter Registration Data separated by comma. Market Participant ID is the unique identifier by which each Market Participant is identified. The Market Participant ID is 3 characters for Gas and 4 characters for Electricity.
New line				
SMSO	Mandatory	Text	3	3-character SMSO code in uppercase from the list below BRG - British Gas CGI – Instant Energy EDM – EDMI MDS – Morrison Data Services NPW - NPower SCM – Secure Meters TRL – Trilliant

Table 7.4.1: Dormant Meter Migration Schedule Header

7.4.2 File Body

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
MPAN	See description	Text	13	ESME Meter Point
MPRN	See description	Text	10	Optional for Electricity only Installation. MPRN values must have any leading zeros trimmed.
Not before	Mandatory	Date	10	DD/MM/YYYY
Not after	Mandatory	Date	10	DD/MM/YYYY
CHF Device ID	Mandatory	EUI 64	Variable	Device ID in EUI 64 format
GPF Device ID	Optional			
ESME Device ID	Optional			
GSME Device ID	Optional			
IHD Device ID	Optional			
PPMID Device ID	Optional			
CAD Device ID	Optional			
CH Serial Number	Optional	Text	Variable	Device Serial Number
ESME Serial Number	Optional			
GSME Serial Number	Optional			
IHD Serial Number	Optional			
PPMID Serial Number	Optional			
Priority	Optional	Text	1	Y or Empty.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
ESME Supplier Certificate Id (Critical) – Serial Number	Mandatory if MPAN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Supplier Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
ESME Supplier Certificate Id (Non-Critical) – Serial Number	Mandatory if MPAN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Supplier Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate Id (Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate Id (Non-Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
ESME Network Operator Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Critical) – Serial Number	Mandatory if MPRN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Non-Critical) – Serial Number	Mandatory if MPRN is specified	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Supplier Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GPF Network Operator Certificate Id (Non-Critical) – Serial Number	Optional	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
GPF Network Operator Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Critical) – Serial Number	Mandatory if MPRN is specified.	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Non-Critical) – Serial Number	Mandatory if MPRN is specified.	Integer	Up to 44 chars	X509SerialNumber as set out in Clause 10.1 of the TMAD.
GSME Supplier Certificate Id (Non-Critical) – Issuer Name	Mandatory if Serial Number is specified	Text	Variable	X509IssuerName as set out in Clause 10.1 of the TMAD.
New line				

Table 7.4.2: Dormant Meter Migration Schedule Body

Yellow highlighted fields can be populated by the Responsible Supplier to indicate Priority and to provide SMKI Certificate IDs.

7.4.3 File Footer

No Footer required.

7.4.4 File template

The template file (in the format DMMS template SMETS1 Dormant Meter Migration Schedule Notification vX.X.xlsm) in the below link shall be used by the DCC to notify Responsible Suppliers of the Dormant Meter Migration schedule. Responsible Suppliers can use the same file to respond to DCC with priority indicator and Certificate details.

https://www.smartdcc.co.uk/document-centre/tmad-child-documents/migration-authorisation-mechanism/

7.5 Secure file exchange

CSV files that are generated by Suppliers shall be Encrypted and Digitally Signed using the mechanism below.

7.5.1 Encrypting files

The Responsible Supplier shall compress the file with AES-256 bits Encryption. The Encryption Key shall be the MD5 Hash value of the CSV file as set out in Section 7.5.2.

The Supplier may use 7-Zip utility tool (https://www.7-zip.org/) or similar to compress the CSV/Excel file with Encryption and a password(Encryption Key). Detailed steps using the 7-Zip tool are shown here:

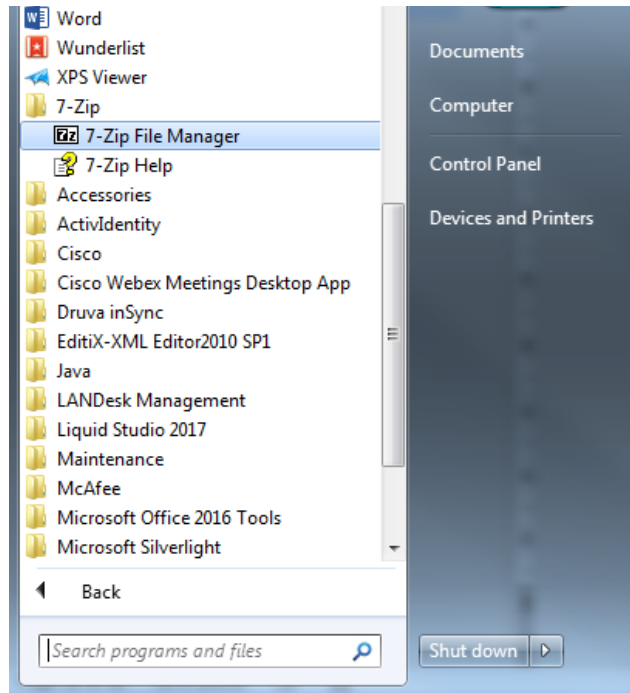i. Open 7-Zip File Manager software once 7-Zip (open source – free software) file archiver tool is installed.

Figure 7.5.1: 7-Zip tool

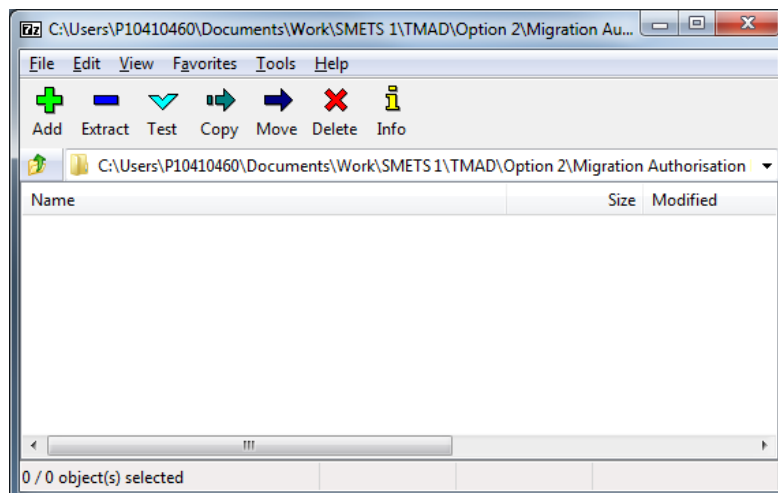ii. Drag the CSV file or Excel file to 7-Zip File Manager window.

Figure 7.5.2: 7-Zip File Manager

iii. Ensure Archive format is zip and Encryption method is AES-256 as shown in Figure 7.5.3Figure 7.5.3.
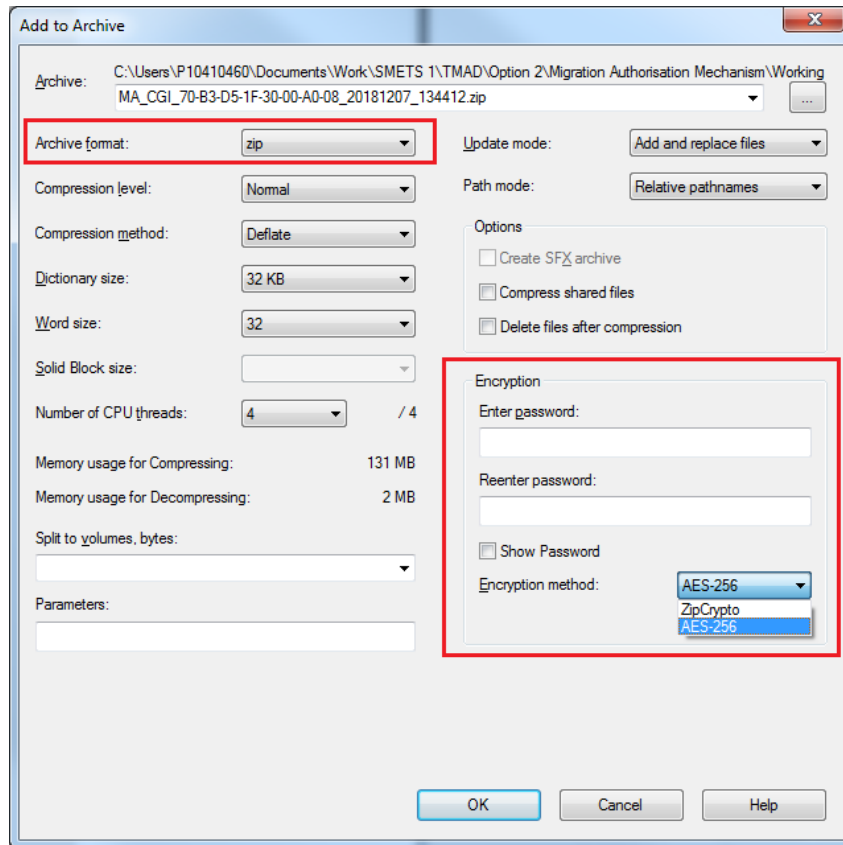
Figure 7.5.3: Select Archive format and Encryption method

Set the generated password (see Password generation in Section 7.5.2) and click OK to create an encrypted zip file.

7.5.2   Generate Password

Once the CSV/~~Excel~~ file is created, a password (Encryption Key) for the zip encryption tool shall be generated.

The password must be the MD5 HASH value of the CSV/~~Exce~~l file encoded as hexadecimal values with 32 characters and must be stored in a CSV file (.csv) as in Table 7.5.1~~Table 7.5.1~~. An example of the password file is attached here and accompanies this document.

RECORD/FIELD NAME	OPTIONALITY	FIELD TYPE	FIELD LENGTH	DESCRIPTION
User ID	Mandatory	Text	23	16 char EUI64 number with hyphen in between.
New line				
CSV File Name	Mandatory	Text	Variable	Name of the file that is being encrypted.
New line				
MD5 HASH Value	Mandatory	HEX	32	32-character HEX encoded MD5 Hash value without any space/separator in between.

Table 7.5.1: Password file format

Sample
MAPASSWORD_CGI

Figure 7.5.4: Password File - example

If the Macro Enabled template file is used to generate Migration Authorisation CSV file, a password file is generated automatically and the password (MD5 hash of the CSV file) also gets copied to clipboard for use in the file compression tool.
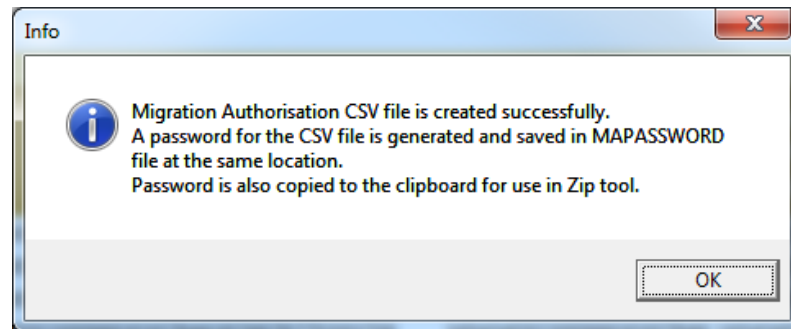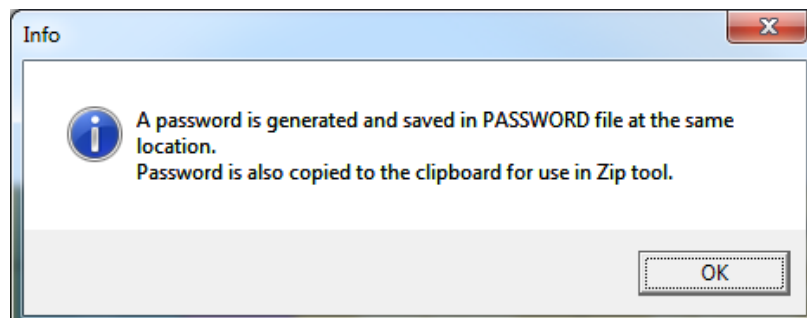

Figure 7.5.5: MA Password generation confirmation

If the DCC's Macro Enabled template file is used to respond to Dormant Meter Migration Schedule, the "Generate Password for Encryption" button can be used to create the password (MD5 hash of the spreadsheet) which also gets copied to clipboard for use in the file compression tool.

Figure 7.5.6: Password generation confirmation

7.5.3 Digitally Sign files

Suppliers shall use the File Signing Utility (FSU Tool) and IKI File Signing Key in USB token to Digitally Sign the password file.

7.5.4 Sharing files

The encrypted zip file shall be uploaded to DCC SharePoint.

- For Migration Authorisation CSV ZIP File, the Responsible Supplier shall upload the file to "Migration Authorisation" folder. and email the corresponding Digitally Signed password file to DCC's Migration Control Centre via migration@smartdcc.co.uk

- For Dormant Meter Migration schedule response, the Responsible Supplier shall upload the file to "Notification\Outbox" folder.

- The Responsible Supplier shall email the Digitally Signed password file to DCC's Migration Control Centre via migration@smartdcc.co.uk.